

# TASMANIAN YEAR BOOK

1911



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# Tasmanian Year Book 1996

Denis W. Rogers, Acting Deputy Commonwealth Statistician

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Twenty-fifth edition 1995

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# Preface

THE TASMANIAN YEAR BOOK has been produced since 1967, annually until 1986, later becoming biennial. This is the twenty-fifth edition. Since its inception the Year Book has been an invaluable source of reference information about the State of Tasmania, providing a permanent record of the economic and social developments of the time. Subjects covered by its chapters include Tasmania's physical environment, its history and structure of government and details of the wide range of economic and social statistics collected by the Australian Bureau of Statistics. It is designed to be readily understood by all who wish to acquire a broad knowledge of the State as well as those who have a practical use for the statistics.

In order to assist this understanding, tables and text have been chosen to best illuminate the various topics covered. For the user who requires time series of statistics, a collection of summary tables is included at the back of the book. As far as possible, the latest available statistics and significant developments which occurred over the years 1994 and 1995 have been included in each chapter. More detailed, and in many cases more up-to-date, statistics of the various topics covered by this book may be obtained by reference to the list of related publications included at the end of each chapter. Copies of these publications are available for sale from the Tasmanian ABS Office, which is located at 175 Collins St, Hobart, or may be obtained by writing to the Deputy Commonwealth Statistician, GPO Box 66A, Hobart 7001.

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November 1995

# General information

## SYMBOLS

The following symbols, where used, mean:

n.e.c.	not elsewhere classified
n.e.i.	not elsewhere included
n.p.	not available for separate publication but included in totals where applicable
n.y.a.	not yet available
p	preliminary—figure or series subject to revision
r	figure or series revised since previous issue
..	not applicable
—	nil or rounded to zero
—	break in continuity of the series (where drawn across a column between two consecutive figures)

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

Where reference is made to Acts of the Commonwealth or State Parliaments, the year quoted refers to the year in which the principal Act was passed; all subsequent amendments are inferred.

## LOCAL NAMES OF CERTAIN REGIONS

Tasmanians describe certain regions in a manner confusing to visitors; nevertheless this book employs local usage in most contexts. The chief peculiarities are:

The *north* coast from approximately Port Sorell, west to Cape Grim is called the *North-West Coast*.

The *north* coast from approximately Low Head, east to Cape Portland is called the *North-East Coast*.

The *West Coast* may refer to areas inland.

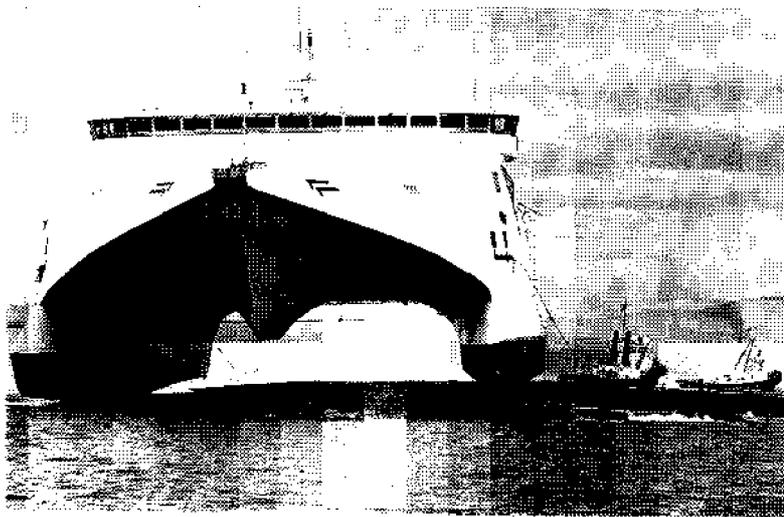
The *Midlands* refers to the rural area east of the Central Plateau, along the *Midland Highway*.

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# 1 | History



The stern of the catamaran *Condor II* is pulled by tugs in an attempt to move it off Black Jack Rocks in October 1994.

*The Mercury*

ABORIGINAL PEOPLE have been in Australia for at least 50,000 years. They probably came from Java and perhaps China, crossing the sea to the Australian continent on some kind of watercraft.

The precise date of the first human occupation of Tasmania is not known but Aboriginal people arrived more than 35,000 years ago. By 12,000 years ago, they had become isolated from the rest of Australia by the rising sea flooding the Bass Plain. The creation of Bass Strait brought about the cultural and physical isolation of the Tasmanian Aborigines. The size of the population when Europeans arrived in Tasmania is thought to have been between 5,000 and 10,000.

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. It was the Dutch, with their trading posts in Java, who were the first Europeans to explore the coasts of both Australia and Tasmania in the early seventeenth century.

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- 1606** Dutch Captain William Jansz crossed Torres Strait unawares while exploring the islands of New Guinea in the *Duyfken*, and coasted along the west of Cape York Peninsula.
- 1616** Dirk Hartog journeyed along the west coast of Australia after sailing too far east on the route from the Cape of Good Hope to Java.
- 1642** Abel Janszoon Tasman, commanding *Heemskirk* and *Zeehan*, sighted the west coast of Tasmania which he named Van Diemen's Land after the Governor of Batavia, who had funded the expedition. Landings were made on the Forestier Peninsula and near Blackman Bay on the East Coast.
- 1772** The landing of a party from the expedition of Marion du Fresne at Marion Bay resulted in an affray with Aborigines.
- 1773** Tobias Furneaux, in the *Adventure*, became separated from James Cook in the *Resolution* and landed a party at Adventure Bay, Bruny Island.
- 1777** James Cook anchored the *Resolution* in Adventure Bay on his third southern expedition.
- 1788** The settlement at Port Jackson in New South Wales put Tasmania on a major sailing route, with the first fleet passing south of the island on its way. In the same year, William Bligh put into Adventure Bay with the *Bounty* on the way to Tahiti.
- 1789** John Henry Cox, on a sealing expedition from England, sailed the *Mercury* from Cox Bight to Maria Island.
- 1792** The next visitor was Admiral Bruny d'Entrecasteaux, commanding *Recherche* and *Esperance* and searching for La Perouse. He discovered the channel separating Bruny Island from the Tasmanian mainland, and was the first to sail up the Derwent River. William Bligh, on a second voyage to the Pacific to secure breadfruit, charted the south-east coast.
- 1793** D'Entrecasteaux returned for water to Adventure Bay. John Hayes, commanding the Duke of Clarence expedition, explored the Derwent River.
- 1798** Matthew Flinders and George Bass circumnavigated Tasmania. Now it was established that Tasmania was an island, authorities in London and Sydney felt that steps should be taken to block the French from making any claims to possession.
- 1802** Nicholas Baudin, commanding the *Geographe* and *Naturaliste*, explored the south-east coast. The expedition's navigator, Freycinet, charted Tasman and Forestier peninsulas.
- 1803** Lieutenant John Bowen selected Risdon Cove as Tasmania's first settlement.
- 1804** Lieutenant-Governor Collins, unhappy with the Risdon site, moved the settlement to Sullivans Cove. Lieutenant-Colonel William Paterson's settlement party landed at Port Dalrymple (Lamar Estuary).
- 1806** Tamar settlement was moved from York Town to the Launceston area.
- 1807** Thomas Laycock's party crossed the island overland from Port Dalrymple to Hobart. The first Norfolk Island settlers were shipped to Hobart in the *Lady Nelson*.
- 1810** Issue of the newspaper *Derwent Star*.
- 1812** Lieutenant-Governor Thomas Davey arrived. The northern settlements at Port Dalrymple were made subordinate to Hobart. The *Indefatigable* brought the first shipload of convicts direct from England.
- 1815** Hobart and Port Dalrymple were declared free ports for the importing of goods. Davey proclaimed martial law against bushrangers. James Kelly circumnavigated the island in a whaleboat.
- 1816** *Hobart Town Gazette* was first issued.

## Early Tasmanian settlements

### The First Settlement at Risdon (1803)

The original explorers of Tasmania (including the French) had largely concentrated their attention on the south-east and, in particular, on the sea approaches to the Derwent. Faced with the necessity for establishing a settlement to assert British sovereignty, Governor King had a number of possible sites to consider, including King Island, Port Phillip and Port Dalrymple (the Tamar Estuary). His eventual choice was the area of the Derwent and he reported his intention to the Admiralty as follows:

'My reasons for making this settlement are the necessity there appears of preventing the French gaining a footing on the east side of these islands; to divide the convicts; to secure another place for obtaining timber with any other natural productions that may be discovered and found useful; the advantages that may be expected by raising grain; and to promote the seal fishery.'

Commissioned to make the Derwent settlement, Lieutenant John Bowen sailed from Sydney with the *Albion* and *Lady Nelson*; both were at anchor at Risdon by 11 September 1803 when Bowen went ashore. The slenderness of Governor King's resources is apparent from the fact that the settlers—free, convict and military—numbered only 49, and that the *Albion* was a British whaler under temporary charter.

The responsibility for the choice of the Risdon site attaches ultimately to Bass who had made detailed investigations of the Derwent in 1798 from the *Norfolk*. He had reported as follows:

'The land at the head of Risdon Creek, on the east side, seems preferable to any other on the banks of the Derwent'.

It was not surprising, therefore, that Bowen's commission from Governor King directed him to locate the new settlement in the Risdon area. In actual fact, the site proved unsuitable due to the inadequate stream and the poor landing place; these handicaps were aggravated by the wretchedness of the people at Bowen's disposal.

On 9 August 1804, the *Ocean* sailed for Port Jackson with Lieutenant Bowen and most of his people; Lieutenant-Governor Collins at the new settlement at Hobart had decided to close down the Risdon camp and retain only thirteen convicts and one free settler.

### Settlement at Sullivans Cove (1804)

Lieutenant-Colonel David Collins was ordered to establish a settlement on Port Phillip Bay to secure the strategic Bass Strait for the British. However, he was unhappy with that locality and decided to transfer the settlement to the Derwent River because of its reputation as a safe harbour and the fact that Risdon had already been settled.

On 15 February 1804, Collins, with the first detachment from Port Phillip in the *Ocean* and *Lady Nelson*, anchored off the new settlement at Risdon. A quick inspection satisfied him that the site was quite unsuitable and he made his own reconnaissance, eventually selecting the area on the western bank known as Sullivans Cove and ordering that the expedition should be disembarked with all its stores in the vicinity of Hunters Island. Collins had selected gentle slopes for his settlement, located a fine stream running from Mt Wellington and found, near the mouth of the stream, an anchorage which would accept the draught of any vessel of his day (or of the modern era).

The strength of the colony was increased to 433 people in June 1804 when the *Ocean* returned from Port Phillip, where it had taken aboard the balance of the original expedition. From the camp on Sullivans Cove, the city of Hobart has grown.

### Settlement on the Tamar (1804)

While David Collins was still in Port Phillip Bay, wondering where to settle, he sent his namesake, William Collins, on a voyage of exploration to the Tamar estuary. By the time William Collins returned with good reports of the Tamar for settlement, David Collins was preparing for the expedition to the Derwent.

*continued on next page*

A short while later, Governor King received a despatch from Lord Hobart (Secretary of State for the Colonies) which recommended the establishment at Port Dalrymple. Lieutenant-Colonel William Paterson was nominated as Lieutenant-Governor of the new colony. After a first attempt was forced back by adverse winds, the party of 181 soldiers and convicts in four ships arrived at Outer Cove (George Town) on 4 November 1804.

Although he penetrated as far as the fertile site of Launceston, Paterson made the decision to set up his headquarters at the head of West Arm and founded York Town, while still maintaining small establishments at Outer Cove, Low Head and Green Island. In deciding on York Town, one can only imagine that Paterson was guided purely by the strategic necessity, as was Collins at Sorrento, of being near Bass Strait, and that he gave little thought to the problem of soil fertility and cultivation.

In March 1806, Paterson was willing to admit that York Town was a most unsuitable site and, accordingly, he moved his

**NUMBER VICTUALLED AT SULLIVAN'S COVE, 26 FEBRUARY 1804 (a)**

	Men	Women	Children
Military estab.	26	1	..
Civil estab.	6	..	..
Settlers	13	5	13
Convicts	178	9	8
Other (b)	3	..	..
<b>Total</b>	<b>226</b>	<b>15</b>	<b>21</b>

(a) Excludes details of the Risdon camp.

(b) Including one Aboriginal person from Port Jackson.

headquarters to the present site of Launceston.

Paterson, before setting out on his expedition, had been involved in an argument as to his status, but Governor King had resolved the matter by dividing Tasmania at the 42° parallel and making Collins and Paterson sovereign in their respective halves, but subordinate to him as Governor.

- 1817** William Sorell assumed office as Lieutenant-Governor.
- 1820** John Thomas Bigge conducted an inquiry into colonial administration.
- 1822** A penal settlement was established at Macquarie Harbour.
- 1823** A British Act for the better administration of justice in NSW and Van Diemen's Land was passed.
- 1824** The Supreme Court was inaugurated. Lieutenant-Governor George Arthur arrived.
- 1825** The first Launceston newspaper, the *Tasmania and Port Dalrymple Advertiser*, was published. Tasmania was constituted a colony independent of NSW. With the island a separate colony, a Lieutenant-Governor, who was responsible to the Colonial Office in London, was appointed. Appointed Executive and Legislative councils were established.

- 1828** Martial law was proclaimed against Aborigines.
- 1829** A settlement was established at Emu Bay (Burnie).
- 1830** Beginning of the 'Black Line', the military campaign to round up Aborigines. George Augustus Robinson began his mission to conciliate the Aborigines. Juries were used for the first time in civil cases. Publication of *Quintus Servinton*, the first novel to be published in Australia. Port Arthur was established as a penal settlement.
- 1831** The British Government's new land regulations, discontinuing free grants of land and replacing them with land sales, were approved.
- 1832** The first shipment of Aborigines to Flinders Island occurred. A Caveat Board was established to settle land disputes and to confirm titles. Maria Island was closed as a penal settlement.

- 1833** Macquarie Harbour penal settlement was closed due to its inaccessibility and harsh natural environment. Convicts were transferred to Port Arthur.
- 1834** The Henty brothers from Launceston occupied land in the Portland Bay area, becoming the first Victorian white settlers.
- 1835** John Batman sailed from Launceston to Port Phillip as agent for the Port Phillip Association. Tasmania was divided into counties and parishes. Tasmania's population was estimated to be 40,283.
- 1837** Sir John Franklin assumed office as Lieutenant-Governor.
- 1838** Sessions of the Legislative Council were opened to the public.
- 1840** Convict transportation to NSW ceased; the numbers transported to Tasmania consequently increased. The population was estimated to be 45,999.
- 1841** A Probation System of convict discipline replaced the Assignment System. The Rossbank Observatory for magnetic and meteorological observations was established in Hobart.
- 1842** Tasmania was created a separate Anglican diocese. Hobart was made a city. Peak year for convict arrivals (5,329).
- 1843** Governor Sir John Franklin was recalled. He was succeeded by Sir John Eardley-Wilmot.
- 1844** Norfolk Island penal settlement was transferred from NSW to Tasmanian control.
- 1845** Six members of the Legislative Council (the 'Patriotic Six') resigned when the Governor used what they considered unconstitutional means to impose increased duties on various goods.
- 1846** Eardley-Wilmot was recalled. Launceston Church Grammar and The Hutchins schools were founded.
- 1847** Sir William Denison, the new Lieutenant-Governor, re-appointed the 'Patriotic Six'.
- 1848** Tasmania was now the only place of transportation in the British Empire.
- 1850** The Anti-Transportation League was established. Population, 68,870.
- 1851** The passage of the *Australian Constitution Act 1850* by the British Parliament was followed in 1851 by the establishment of a new Legislative Council in which 16 members were elected and 8 were nominated by the Lieutenant-Governor thus establishing limited representative government.
- 1852** Payable gold was first found near Fingal. Elections were held for the first municipal councils in Hobart and Launceston.
- 1853** The last convicts to be transported arrived. Van Diemen's Land's first postage stamp (Penny Blue) was issued and used until replaced by an Australian Commonwealth design in 1913.
- 1854** Bad floods disrupted the Colony. By the *Constitution Act 1854*, two Houses of Parliament (the House of Assembly and the Legislative Council) were established. Both Houses were to be elected.
- 1855** Sir Henry Fox Young succeeded Denison and was accorded the title of Governor. The *Constitution Act*, enabling responsible government, was passed.
- 1856** Van Diemen's Land was renamed Tasmania. The advent of responsible self-government was followed by the opening of a new bi-cameral Parliament with the first government in the House of Assembly led by W. T. N. Champ. The representative of the Crown now carried the title of Governor.
- 1858** A Council of Education was set up and the *Rural Municipalities Act* passed.
- 1859** Charles Gould was appointed to undertake a geological survey of western Tasmania. A telegraph link was established with Victoria.

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- 1860** Population, 89,821.
- 1861** Colonel Thomas Gore Browne was appointed Governor.
- 1862** A scheme for a railway between Launceston and Deloraine was promoted.
- 1864** The first successfully transported salmon and trout ova were hatched.
- 1868** Primary education was made compulsory.
- 1869** Sir Richard Dry, the first Tasmanian-born Premier (1866–69), died. A new telegraph cable was laid to Victoria.
- 1870** The remaining Imperial troops were withdrawn. Population was 99,328.
- 1871** Tin was discovered at Mt Bischoff. The Launceston–Deloraine railway opened.
- 1872** A contract was let for building the Tasmanian Main Line Railway.
- 1873** The Tasmanian Main Line Railway Co. commenced construction, marking the start of an economic recovery.
- 1874** There were riots in Launceston in protest at rates levied for the Launceston–Deloraine railway.
- 1876** Race meetings commenced at Elwick. Truganini died. The Main Line Railway opened for traffic.
- 1877** Port Arthur was closed as a penal settlement.
- 1878** Mineral exploration of the West Coast was increased.
- 1879** A rich lode of tin was discovered at Mt Heemskirk.
- 1880** The first telephone was installed in Tasmania with a line from Hobart to the Mount Nelson Signal Station.
- 1881** Population, 115,705.
- 1883** The 'Iron Blow' at Mt Lyell was discovered.
- 1885** A Russian war scare was followed by activity in improvement of defences. The Mt Lyell Prospecting Association was formed.
- 1890** The University of Tasmania was established.
- 1891** The Van Diemen's Land Bank collapsed; a deep depression ensued.
- 1892** The Mt Lyell Mining Co. was established.
- 1896** Tattersalls Lottery was established by George Adams.
- 1897** Bushfires ravaged Tasmania, killing six people and hundreds of animals, and destroying an unrecorded number of houses.
- 1898** Tasmanians voted four to one in favour of Federation at a poll.
- 1899** The *Southern Cross* (Borchgrevinck) expedition departed Hobart for the Antarctic.
- 1900** The Tasmanian contingent to fight in the Boer War departed.
- 1901** The Commonwealth was proclaimed; polling was held for the first elections to the federal Senate and House of Representatives. Population 172,475 (Census).
- 1903** Suffrage (voting rights) was extended to women.
- 1905** Experiments in wireless telegraphy between Tasmania and the mainland were undertaken.
- 1907** A new Public Library, which was built with a gift from Andrew Carnegie, opened in Hobart.

- 1909** Irish blight wiped out the State's potato crop. The State's first Labor Government, under John Farle, was elected.
- 1912** A fire at the North Lyell Mine, Queenstown, trapped miners underground, and 42 died.
- 1914** The first aeroplane flight in Tasmania occurred. Tasmania's first contingent to fight in the Great War departed. The Hydro-Electric Department was formed: the Government purchased a private hydro-electric power scheme and commenced a policy of encouraging high-energy-using companies to set up in Tasmania.
- 1915** Serious bushfires occurred.
- 1917** The electrolytic zinc works at Risdon and the Snug carbide works were established.
- 1918** The Great War ended.
- 1919** Frozen meat was exported for the first time.
- 1920** Edward, Prince of Wales, visited. Cadbury's purchased a site at Claremont for a chocolate factory.
- 1921** Population 213,780 (Census).
- 1922** The Waddamana power station was completed. Women became eligible for election to Parliament on the same terms as men.
- 1924** Superphosphate was first manufactured in Tasmania by the Electrolytic Zinc Co. at Risdon.
- 1925** Osmiridium fields were discovered at Adamsfield.
- 1927** An inquiry was held into a proposed bridge over the Derwent at Hobart.
- 1929** Automatic telephone facilities were introduced to Hobart. There were serious floods and economic depression.
- 1930** Export prices fell to half the 1928 levels. The Australian pound was devalued so that £1 sterling equalled £1/5s.
- 1931** The Depression continued—the federal basic wage was cut by 10%. An austere Premier's Plan included a conversion loan to reduce the rate of interest on internal federal debt by 22.5%. Senior Ministers, including J. A. Lyons from Tasmania, resigned from the Scullin Government. Following the carrying of a vote of no-confidence in the Government, elections were held at which the Scullin Labor Government was swept from office. Lyons led the opposition United Australia Party to victory.
- 1932** Joseph Lyons was sworn in as Prime Minister.
- 1933** A Commonwealth Grants Commission was appointed to inquire into the affairs of claimant States.
- 1934** Thirty-five years of continuous Labor Government in Tasmania began with the election of the A. G. Ogilvie Ministry. The second phase of hydro-electric development commenced at Tarraleah and Butlers Gorge.
- 1936** Tasmania was linked with Victoria by a new sub-marine telephone cable.
- 1937** A poliomyelitis epidemic occurred. Economic recovery resulted in five shillings 'prosperity loading' being added to the federal basic wage.
- 1938** A paper mill using native hardwoods was established at Burnie. The first turbines began operating at the Tarraleah power station.
- 1939** World War II began. Prime Minister Lyons died in office.
- 1940** Tasmanians sailed for the Middle East with the Australian 6th, 7th, and 9th Divisions.
- 1941** Newsprint production began at Boyer on the Derwent. Tasmanians sailed for Malaya with the Australian 8th Division.

- 1942** Uniform federal income tax commenced.
- 1943** The floating-arch Hobart Bridge opened for traffic.
- 1944** Pay-as-you-earn (PAYE) income taxation was introduced from 1 July.
- 1945** World War II ended.
- 1946** The Legislative Council rejected a bill to grant Federal Government price control powers for three years. Crash of DC3 airliner at Seven Mile Beach with 25 deaths.
- 1947** 'Displaced persons' began arriving from Europe. Population 257,078.
- 1948** A forty-hour week was awarded to most workers from 1 January. The High Court rejected as unconstitutional the *Commonwealth Bank Nationalisation Act 1947*. Tasmanians voted 'No' almost two to one in a referendum denying Federal Government power over prices and rents. The Legislative Council's denial of Supply forced the dissolution of the House of Assembly; the Cosgrove Ministry was returned to power.
- 1949** Compulsory chest x-rays were introduced in the fight against tuberculosis.
- 1950** Federal petrol rationing ended. Dissolution of the House of Assembly was granted by the Governor and the Cosgrove Ministry was returned to power.
- 1951** In a referendum to give Federal Government powers in regard to communism, the 'No' vote prevailed, although Tasmanians expressed a slight preference for 'Yes'.
- 1952** A single licensing authority was established for hotels, clubs etc. The State's free hospital scheme ceased on acceptance of a Commonwealth insurance scheme.
- 1953** The Arbitration Court abandoned the system of quarterly adjustment of the federal basic wage. State wages boards suspended quarterly basic wage adjustments.
- 1954** A bill was passed to resolve deadlocks in the House of Assembly. The Metropolitan Transport Trust was formed.
- 1955** The Bell Bay aluminium plant and the Trevallyn and Tungatinah power schemes were opened.
- 1956** The State Wages Board restored the 'cost-of-living' adjustments effective from 1 February but later suspended them. The EZ Company's sulphate of ammonia plant was opened.
- 1957** The Legislative Council rejected a bill giving aid to private schools.
- 1958** The Rivers and Water Supply Commission was established, and the Public Service Tribunal was established as an industrial authority. The army food science establishment commenced operations at Scottsdale.
- 1959** The first election to fill 35 seats in the enlarged House of Assembly resulted in Labor being re-elected. The *Princess of Tasmania* commenced a roll-on roll-off ferry service from Melbourne to Devonport.
- 1960** Liapootah power station was commissioned. The Zeehan–Strahan railway closed. The Inland Fisheries Commission was created. The first Tasmanian telecasts began.
- 1961** The *William Holyman*, a cargo container vessel, entered Bass Strait trade. The Legislative Council rejected equal pay legislation.
- 1962** The Catagunya power scheme turbines began producing electricity. State Wages Boards granted three-weeks annual leave. State subsidies were announced for municipal fluoridation schemes.
- 1963** The federal Court increased margins by 10% and granted three-weeks annual leave. The Universities Commission

recommended a medical school for the Tasmanian University.

**1964** The Tasman Bridge opened for traffic. Hobart's water supply was fluoridated. Glenorchy was raised to city status.

**1965** Provisional driving licences were introduced. A dental nurse scheme for schools was implemented.

**1966** Decimal currency was introduced on 14 February. The Burnie-Launceston coaxial cable was completed. Equal pay for certain State Public Service females was granted. Breathalyser tests were approved for use by police. Subscriber-trunk-dialling (STD) was introduced. The Commonwealth Public Service removed marriage bar to female employment.

**1967** The bushfire disaster of 7 February resulted in 62 deaths and over 1,000 houses were destroyed. The federal Arbitration Commission abolished the basic wage and substituted a total wage concept but the basic wage was retained in State awards. The Mt Cleveland tin mining town of Luina was completed. Daylight saving was introduced to conserve power.

**1968** The Batman Bridge across the lower Tamar was opened. The Federal Government granted a subsidy for apples and pears exported to the UK and other countries. Full adult suffrage for Legislative Council elections from 1 July 1969 was introduced. Capital punishment was abolished. Savage River iron ore project was officially opened.

**1969** A State election resulted in the election of 17 ALP, 17 Liberals and one Centre Party member (Mr Kevin Lyons). Mr Lyons combined with the Liberals to form a coalition government, ending a 35-year Labor rule in Tasmania. The Full Bench of the Federal Arbitration Commission granted equal pay to females performing equal work. The copper smelter at Mt Lyell was closed; concentrate was sent to Japan and Port Pirie (SA) for treatment.

**1970** The first shipment of pyrites from Rosebery was railed to the Burnie sulphuric acid plant. The EZ Co. commenced a

\$6.3 million residue treatment plant. Parliament introduced permanent daylight saving.

**1971** APPM Ltd's Wesley Vale paper plant was opened. Population 390,413.

**1972** Kevin Lyons resigned his cabinet portfolios and ended the Liberal-Centre Party Coalition. The ANL vessel *Princess of Tasmania* made her final trip to Tasmania. APPM Long Reach woodchip plant commenced production.

**1973** The Bell Bay rail link; the first legal casino in Australia, Wrest Point; and the \$121 million Mersey-Forth HEC scheme were officially opened. Storeys Creek tin mine closed down. The *Blythe Star* was lost at sea. Tasmania voted in line with other Australian States on prices and incomes referenda: 'No' to both.

**1974** Workers under State Wages Boards' awards were granted four weeks annual leave; women under State Wages Boards' determinations were awarded equal pay. The Gordon Dam was completed. A no-fault third party insurance scheme was implemented.

**1975** The bulk ore carrier *Lake Illawarra* rammed the Tasman Bridge resulting in a 128-metre gap and 12 deaths. Tasmanian suburban rail services ceased. The TAB began operating. Transmission of colour television programs commenced in Tasmania. Hotels were allowed to open for Sunday trading.

**1976** Sea cargo to and from Tasmania was subsidised by a freight-equalisation scheme.

**1977** The Federal Government confirmed Kingston as the site for Australia's new Antarctic Division Headquarters. The Tasman Bridge was re-opened.

**1978** The Tasmanian railways came under full control of the Australian National Railways Commission. All regular passenger train services in Tasmania ceased.

**1979** The State Government expanded the South-West Conservation area to

more than 20% of the State's total area. The State's first Ombudsman was appointed. Tasmania's Parliamentary Hansard was introduced. A claim that a new Labor MHA in Franklin, Michael Aird, had breached the Electoral Act by spending more than the statutory limit of \$1,500 on his election expenses began the so-called 'Electoral' or 'Constitutional Crisis'. The HEC released a report which recommended a \$1.36 billion power development scheme involving the Lower Gordon, Franklin and King rivers.

**1980** The Australian Heritage Commission included Tasmania on the Register of the National Estate setting strict guidelines for future development including the highly controversial Franklin and Lower Gordon rivers. Public pressure resulted in the State Government deciding to save the Franklin River by opting to flood the Gordon at its junction with the Olga, the Gordon-above-Olga power scheme, and to construct four separate schemes on the King River. The Upper House Select Committee recommended the HEC's proposed Gordon-below-Franklin scheme and rejected the Government proposed Gordon-above-Olga scheme legislation.

The Australian Maritime College at Beauty point was opened. Hobart was selected as the site for the permanent headquarters of the Commission for the Conservation of Antarctic Marine Living Resources.

**1981** Bushfires at Zeehan destroyed 40 homes. The State Government placed a State-wide ban on Saturday afternoon trading by companies employing more than 100 people. A referendum concerning the State's next power development resulted in a large informal vote but most supported the Gordon-below-Franklin option.

**1982** The Southwest National Park, the Franklin-Lower Gordon Wild Rivers National Park and the Cradle Mt-Lake St Clair National Park were nominated by the Federal Government for the World Heritage List; both proposed dam sites lay within the nominated area. The World Heritage Commission placed the areas on its list despite the opposition of the State Government. The Liberal Party formed a Government in its own right for the first time

in Tasmania's history. Legislation for the \$453 million Gordon-below-Franklin power scheme passed through Parliament. The federal Labor Party announced a no-dams policy for a Federal Labor Government.

**1983** The Labor Party led by Bob Hawke won the federal election. Regulations under section 69 of the *National Parks and Wildlife Act 1975*, gazetted by the Federal Government, made any further work on the Gordon-below-Franklin dam illegal. A Commonwealth writ, seeking an injunction to permanently stop work on the proposed Gordon-below-Franklin dam, and a Tasmanian writ seeking a declaration from the High Court that regulations under which the Commonwealth was acting were constitutionally invalid, were filed in the High Court. The High Court ruled that the Gordon-below-Franklin dam could not go ahead.

**1984** The \$48.5 million Bowen Bridge, and the Wrest Point Convention Centre were opened. Fire caused approximately \$1 million damage to Hobart's historic Theatre Royal. Bob Hawke and Robin Gray signed an agreement for \$270 million compensation to Tasmania for the loss of the Gordon-below-Franklin power scheme.

**1985** The municipalities of St Leonards and Lilydale amalgamated with the City of Launceston. The 10% Commonwealth air fare subsidy for travel between Tasmania and Melbourne was abolished. The Bass Strait ferry *Empress of Australia* was replaced by the *Abel Tasman*. The CSIRO Marine Laboratories opened in Hobart.

**1986** Archaeologists discovered Tasmanian Aboriginal rock paintings in the Southwest, believed to be about 20,000 years old. The Liberal Government was re-elected with a majority of three seats; a record 15 MHAs lost their seats. The State Government abandoned its controversial fast-track development legislation which deprived Tasmanians of the right of appeal against major planning projects. The municipalities of Gormanston and Queenstown amalgamated to create the new municipality of Lyell. Population 436,353.

**1987** A High Court decision banned logging in the Lemnathyme and Southern forests of Tasmania. Aboriginal hand stencils dating back to the last Ice Age were discovered in a cave in the Cracroft Valley in southern Tasmania. The controversial Hobart Sheraton Hotel was officially opened. Tasmania's Bicentenary Tall Ship the *Lady Nelson* was launched. The Australian Conservation Foundation prepared to take the Federal Government's Helsham logging inquiry in Tasmania to court to overturn the decision by the Helsham Commission of Inquiry to free four forest areas in the Lemnathyme and Southern forests from High Court protection. Australia's Antarctic supply ship *Nella Dan* sank off Macquarie Island.

**1988** The crews of approximately 200 sailing, cruise and naval ships from approximately 20 countries visited Hobart as part of the bicentennial celebrations. The State Government lost its High Court challenge to the validity of the Federal Government's legislation preventing logging in the Lemnathyme and Southern forests. The Tasmanian Sporting Hall of Fame was opened. The Helsham Inquiry found that five areas of the Lemnathyme and Southern forests qualified for World Heritage listing. Federal Cabinet announced that it would not insist on World Heritage listing if Tasmania agreed to protect 80% of the Helsham Inquiry area, the Lemnathyme and Southern forests. A compensation payment of \$40 million was offered and the Tasmanian Government accepted the decision.

**1989** An outbreak of legionnaire's disease in Burnie resulted in three deaths and 26 confirmed cases of the disease. A State election was held: the Liberal Party won 17 seats, Labor 13 and the Independents 5. After negotiations with the two major parties the Independents signed an accord with the Labor members to form government. Robin Gray formed a Liberal minority government.

A Melbourne man was charged with offering a \$110,000 bribe to newly elected Bass Labor MHA Mr Jim Cox to vote in support of the Gray Government when Parliament resumed on 28 June. Launceston businessman, Edmund

Rouse, was also arrested. The Gray Liberal Government faced a vote of no-confidence by the Independent and Labor MIAs in Parliament. Debate on the motion resulted in Gray's government being defeated. Michael Field was sworn in as Tasmania's Premier after the resignation of Gray. Government House was opened to the public for the first time.

**1990** Petrol station rostering ceased.

Launceston businessman Edmund Rouse pleaded guilty to attempting to bribe Tasmanian Labor MHA Jim Cox and Anthony Aloj pleaded guilty to helping Edmund Rouse in the attempt. The Labor-Green Accord ended when the Government announced the adoption of the Forests and Forest Industry Strategy. The World Rowing Championships were held at Lake Barrington. Airline deregulation began. North Broken Hill-Peko's scheelite mine on King Island closed. A modified petrol rostering system began.

**1991** Tasmania felt the effects of the recession as unemployment continued to climb above 11%. A number of big employers collapsed, including the Wander Ovaltine factory at Devonport, Pioneer's Electrona silicon smelter and Australian Paper Manufacturers' plant at Port Huon. Tristee Engineering at Glenorchy was placed in receivership and the Renison tin mine on the West Coast closed, putting 350 miners out of work.

William Carter QC conducted a royal commission into the Rouse bribery attempt. His report found that Liberal leader Robin Gray had been involved in the bribery attempt. Largely as a result of the commission findings and his party's slump in the opinion polls which followed, Gray was replaced as Liberal leader by Ray Groom.

A new 100 kmh maximum speed limit was introduced as part of a 10-point plan for uniform road laws throughout Australia. The petrol roster ended. The *SeaCat Tasmania* began on the Bass Strait service but was to be taken off during the winter off-peak season.

The combined SBT and Tasmania banks began trading as the Trust Bank. The Insurance Council of Australia said that domestic burglary claims in Tasmania had skyrocketed by more than 1,000 in 1990-91. Street gangs began to

form in Hobart and there were more unprovoked and vicious muggings in Hobart streets. Legislation for fixed four-year terms for the House of Assembly and forest resource security passed State Parliament.

**1992** The State election was held on 1 February and the Liberal Party won office: Liberals, 19 seats; Labor, 11 seats; and Green Independents, 5 seats. Unemployment reached 12.2% and there were ongoing budget cuts and a squeeze on public-sector pay rises. The Independent Commission to Review Tasmania's Public Sector Finance, headed by Charles Curran, recommended asset sales, the reintroduction of a redundancy program and a debt-reduction program. Industrial relations legislation gave workers the choice of either working under the existing award system or switching to enterprise agreements. The State axed 1,100 jobs. Angry workers forced the temporary closure of the House of Assembly during their anti-industrial relations legislation and job-cuts rallies. Those going on strike included 2,000 APPM mill workers at Burnie and 5,000 State school teachers.

The Government paid the bribery royal commission legal costs of 10 witnesses including Robin Gray, Edmund Rouse and David McQuestin. An Act was passed to allow mining and exploration in national parks declared since 1989. Tough anti-protest laws were introduced to control forest hostilities, a ban was placed on any new World Heritage Areas, it was made more difficult for national parks to be declared and the Wesley Vale pulp mill was put back on the agenda. Federal forest resource security legislation to complement State legislation was defeated.

Tasmania's Repatriation General Hospital was integrated into the public hospital system. The last group of Royal Hobart Hospital trained nurses graduated, ending a 116-year tradition of training in the RHH nursing school, and marking the end of hospital-based nursing training in the State. The University of Tasmania was named as the National Centre for Aquaculture, to be established in Launceston. The inaugural Targa Tasmania car rally took place. The ordination of seven women as priests took place at Hobart's St David's Cathedral.

**1993** Unemployment reached 13.4%. Pasmenco-EZ shed 380 jobs, the Ovaltine and Sanitarium factories in Hobart announced that they were closing; there was job shedding at APPM; Blundstone announced that it was expanding, but in New Zealand; and Mount Lyell announced that it would close in December 1994. The \$53 million Henty gold mine was opened.

In the federal election held on 13 March, Labor won four of the five House of Representatives seats. Tasmanian Greens leader, Bob Brown, resigned from State Parliament to contest the federal election. He was replaced as leader by Lyons MHA Christine Milne. The number of Government departments was reduced from 17 to 12 by creating a few 'super' departments. The number of local government councils was reduced from 46 to 29.

Teachers received a pay rise to give them parity with other States. The Government had argued against parity with other States and used the teachers' pay issue to double the State tax on cigarettes and to increase abalone royalties. The Government gave the mining industry the same resource security as previously given to forestry by introducing strategic zones legislation. The Federal Government closed Benders Quarry near Lune River, because of damage to caves. The Government extended Federal Hotels' poker machine monopoly until 1 January 1997, after which machines were to be progressively introduced into hotels and clubs (but still owned by Federal). Tasmania's daylight saving period was permanently entrenched in legislation.

In response to continuing criticism and rising community concern about crime, a major package of measures against crime and violence was introduced by the Government. The measures included proposals to fingerprint juveniles, a ban on drinking in public places, reduction in remission periods for convicted criminals, more police, and the introduction of a crime-stoppers program to increase security on commercial premises. The SeaCat service across Bass Strait was withdrawn altogether. The *Spirit of Tasmania* began the Melbourne-Devonport ferry run, with casino-style gambling allowed on board. Speed cameras were introduced on Tasmanian roads.

Legislation was passed to allow stores to open one Saturday afternoon a month and to increase the size of stores that could trade at weekends. Legislation was also passed to allow a cable car up Mt Wellington and a restaurant on the summit. The project ultimately died because there were no financiers. The TGIO was sold to the Dutch-owned Fortis group. The Government announced a 40% pay rise for MPs and plans to cut the size of both houses of Parliament. MPs received their pay rise but rejected bills to cut their own numbers.

**1994** Freedom-of-information legislation came into force. Local government elections involving 18 councils State-wide trialled postal ballot rather than the traditional booth method of voting. The Local Government Board was established under the *Local Government Act 1993*. The National Party re-formed its State branch at a conference in Launceston. The Extremely Greedy 40% Extra Party was formed to combat the MPs pay rise.

The State Government refused to reform Tasmania's Criminal Code provisions which make homosexual acts between consenting adults illegal. The State Government's stand on the gay issue led to federal legislation to over-ride Tasmania's anti-gay laws. The Human Rights Committee of the United Nations upheld a complaint that Tasmania was breaching an international convention by having on its statute books a law making male homosexual sex a crime.

The report of a board of inquiry (chaired by The Hon. Trevor Morling, QC) into the size and constitution of State Parliament recommended no cut in the size of the House of Assembly, but that if there were to be a reduction then it would favour a unicameral Parliament. It also recommended that the Legislative Council be elected by proportional representation, based on a single State-wide Hare-Clark electorate, and that its power to block budgets and legislation be reduced. The big supermarkets Purity and Roelf Vos decided to defy Tasmania's shop trading laws. The breakthrough in shop trading came in November when a compromise package was designed in the Legislative Council: all-day Saturday shop trading from April 1995.

The State's latest and last power station, Tribute, which is part of the \$395 million

Anthony power development, was opened near Tullah, an end to 80 years of dam building. The Federal Environment Minister ruled out intervention to stop the Heemskirk-to-Zeehan link road, which runs through the Arthur-Pieman protected area which the Greens call the Tarkine. The road became an issue again when the State Government revived the project in the Budget but was then forced to pass a regulation breaking its own planning laws to allow work to go ahead. The Wilderness Society launched its proposals for new World Heritage Area nominations—320,000 hectares bordering the existing WHA and the 350,000 hectare 'Tarkine' area.

The police force was divided because of internal conflict between Deputy Commissioner Richard McCreadie and others, who were forced to resign. Anti-battery hen campaigner Pam Clarke won a Supreme Court ruling that she had been wrongfully imprisoned over her long-running protests outside State Parliament.

The aluminium-hulled \$40 million catamaran ferry *Condor 11* grounded on Black Jack Rocks. It took seven attempts over seven weeks to get the catamaran off the rocks. HMAS Huon was decommissioned. The Duathlon World Championships and the Australian Wooden Boat Festival were held in Hobart. Maxi ketch *Tasmania*, skippered by Robert Clifford, became the first Tasmanian boat to take line honours when it won the fiftieth anniversary Sydney-Hobart Yacht Race.

### **1995** *January-June*

Tasmanians who received recognition in the Australia Day Honours list included Robert Clifford, AO (for service to the shipbuilding industry, particularly through the development and design of high-speed catamarans) and Christopher Koch, AO (for service to Australian literature as a novelist).

In December 1994 the Federal Resources Minister renewed all existing woodchip licences and granted two new ones. In response, Tasmanian Senator John Devereux resigned from the Labor Party and a backbench revolt threatened. The Prime Minister intervened with a promise to control future licence decisions and phase out woodchip exports from native forests by 2000. Controversy continued and on 27 January the Prime Minister said that 507 forest coupes, 72 of which were in Tasmania,

would be protected while studies of their conservation value went ahead. About 3,000 people marched in Launceston to protest against woodchip export licence delays and forest industry interferences by conservationists. The Federal Resources Minister later announced that some Tasmanian coupes were to be immediately released for logging.

European Carp discovered in lakes Crescent and Sorell posed a serious threat to Tasmania's trout fishery and lake ecosystems. The Government approved \$1,027,600 over two years to pursue carp eradication and control options. There was opposition, on the grounds that disease could put at risk the Tasmanian Atlantic Salmon industry and the recreational trout fishery, to the decision by the Federal Government to allow the import of Canadian salmon.

The Australian Women's Bowls Council Championships, involving 2,500 bowlers, was conducted at 25 bowling clubs in southern Tasmania. In April all-day Saturday shop trading commenced. The Phillip Avenue Home for Brain Trauma Victims in Montrose was opened. The Australian Heritage Commission placed the following on the interim Register of the National Estate: Tarkine Wilderness Area (about 350,000 ha); Ralphs Bay/Racecourse Flats Bird Habitat (about 250 ha); Wellington Range Area (about 19,000 ha); Bishopscourt, Hobart; Mount St Canice Complex; and Hagley Mill and Landscape. Special drought assistance measures continued throughout the winter.

The Government introduced new worker's compensation legislation designed to save \$28 million a year while cutting the number of accidents at work. Workers would retain access to the common law while employers would face heavy fines if they failed to create safe workplaces. The Government decided to link the salaries of members of the Tasmanian Parliament to 88.9% of those of federal MPs. A House of Representatives committee found that no further studies should be undertaken into the draining of Lake Pedder.

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## 2 | Environmental issues



James Hawkins, on Bellerive Beach, was one of about 500,000 Australians to participate in Clean Up Australia Day 1995.

*The Mercury*

AIR, WATER AND LAND—and the flora and fauna found in them—are major components of the natural environment. The natural environment is not a static system; it changes constantly through the actions of natural forces, regardless of human activity. However, human activity introduces additional factors in the process of environmental change.

The impact on the environment of activities such as agriculture, industry, urban development, mining and recreation is being increasingly examined as the community strives to integrate, or incorporate, environmental issues into decision-making.

### **Frameworks for environmental reporting**

Environmental reporting is now an important component of information and news available in the mass media, and popular and learned journals. The style and method of presentation of much environmental reporting in the past decade or more often owes

something to the *Framework for the Development of Environment Statistics* published by the United Nations Statistical Office (UNSO) in 1984.

This framework helps to define the scope, boundaries, and dimensions of the field referred to loosely as 'environment statistics'. It draws on four approaches to the organisation of the elements of environment statistics.

THE MEDIA APPROACH organises data on air, water, land and/or soil and the human environment to depict the state of the natural environment. In this way, there is an analysis of the environment at defined points rather than a focus on continuous assessment of environmental change. This approach tends not to emphasise 'human-natural environment' interactions.

THE STRESS-RESPONSE APPROACH involves an understanding of the processes of environmental change. It focuses on the stresses placed on the environment as a result of human activity, and the reactions of the environment to these as depicted in a series of indicators. With this approach, statistics are organised under the following categories: stressors, stresses, collective and individual responses, and stocks.

THE RESOURCE ACCOUNTING APPROACH traces the flow of natural resources from their extraction (harvest) from the environment, through successive stages of processing and final use, to their return to the environment as waste or to the economic sector for re-cycling.

THE ECOLOGICAL APPROACH looks at a variety of relationships between plants and animals and their environment. Within this, it deals with such aspects as ecological diversity, dynamics, biomass production, and the productivity of ecosystems.

The information in this chapter concentrates on the media approach, because more information relevant to this approach is available.

## FLORA AND FAUNA

A 1994 ABS survey showed that destruction of trees/ecosystem was a concern of 21.6% of Tasmanians (and 25.6% of Australians). This compared with 35.9% of Tasmanians (and 32.8% of Australians) concerned about destruction of trees/ecosystems in 1992. Some 9.9% of Tasmanians were concerned about extinction of species compared with 20.0% in 1992.

Flora and fauna remain vital to human society not only as resources but also for social and cultural reasons. As well, they play a vital role in nutrient recycling; soil regeneration; energy transfers; and air and water cleansing on which human survival and well-being depends.

Tasmania, including its lesser islands, supports a wide variety of flora and fauna. Isolated for at least 10,000 years, it has been protected from many of the introduced species that have been so harmful to the flora and fauna of mainland Australia. The dingo is absent; the fox has never become established; and feral dogs, goats and pigs, so damaging elsewhere in the country, are very restricted in their distribution here.

### Flora

Leigh and Briggs (1992) noted that Tasmania had 1,627 native plant species, 61 subspecies, 71 varieties and two forms. Of these taxa, six were presumed extinct and 40 threatened (of which 11 were endangered and 29 vulnerable).

Of Australia's native flora, 840 species were threatened, with 178 of these endangered and 662 vulnerable. Tasmania had 4.5% of Australia's threatened flora. This compared with Queensland, 34%; Western Australia, 29.6%; New South Wales, 25.2%; and Victoria and South Australia with about 8% each.

## Weeds

### WHAT IS A WEED?

Broadly speaking, a weed is a plant growing where it is not wanted. However, a more useful definition of a weed is a plant which interferes with human activities or which may intrude upon or genetically contaminate indigenous vegetation.

In the past, weeds have been viewed as problems for mainly farmers and home gardeners. However, there is a growing recognition that weeds cause problems elsewhere as indicated by the following:

- Pampas Grass and Blackberry are serious weeds of plantation forestry;
- Cumbungi and Parrot's Feather can block drainage and irrigation channels;
- ivy is a known cause of dermatitis;
- hemlock can poison animals and humans;
- willow trees alter river flows, change water environments and reduce access for fishing;
- toe-toe and broom are reducing the conservation value of the Southwest World Heritage Area;
- Japanese Kelp is invading marine eco-systems on the east coast of Tasmania;
- gorse is invasive of roadside strips, reducing the quality and extent of habitat for Tasmania's native plants, birds and animals. These roadside strips contain roadside flora, and provide important migratory routes for some bird species and other native fauna;
- interbreeding between plant species chosen for their ornamental value, and Tasmania's indigenous species could threaten the genetic integrity of the latter, for example interbreeding of *Eucalyptus globulus 'compacta'* and the indigenous *E. globulus*.

### DEGRADATION

In many instances, weeds are a symptom of land or environmental degradation. For example:

- thistles may grow densely in pasture after desirable species have been weakened or eliminated by drought, insect damage or overgrazing; and
- aquatic weeds may build up in dams and streams when artificial nutrients from fertilised pastures or dairy effluent contaminate the water.

In these situations, remediation would focus on eliminating the cause or causes, rather than the symptom, the weed itself.

### THE ECONOMIC COST OF WEEDS IN TASMANIA

An accurate estimate of the cost of weeds would include such things as the cost of weed control and the loss of primary production caused by weeds. Ideally it would also include the less tangible costs such as the loss of aesthetic and conservation values due to weeds or weed control measures.

An April 1994 estimate of the cost of weed control and loss of primary production was \$33 million per annum in Tasmania. This estimate has been used as part of the Tasmanian Weed Management Strategy to help focus attention on the magnitude of the problem.

### TASMANIAN WEED MANAGEMENT STRATEGY

The Tasmanian Government has established a Working Group to develop a strategic plan to increase the effectiveness of weed management in the State.

The Tasmanian Weed Management Strategy has been addressing existing and potential weed problems of major significance to primary industry, trade, human welfare, amenity, and biodiversity.

The Strategy covers weeds of all terrestrial and aquatic ecosystems in which plants may invade and/or have significant detrimental effects.

*continued*

#### LEGISLATIVE ASPECTS OF WEED CONTROL

The *Noxious Weeds Act 1964* (Tas.) empowers the Government to make land holders and occupiers control certain weeds. The *Seeds Act 1985* (Tas.) aims to reduce the spread of certain weeds through contamination of agricultural seeds. The *Fisberies Act 1959* (Tas.) controls the removal of marine weeds, such as Japanese Kelp. Other Acts that impact on weeds are the *Biological Control Act 1986* (Tas.) and the *Pesticides Act 1968* (Tas.). All of the above Acts are administered by the Department of Primary Industry and Fisheries.

The following exotic weeds have been declared noxious under the Noxious Weeds Act:

- *Acroptilon repens* (Creeping Knapweed)
- *Aspodelus fistulosus* (Onion Weed)
- *Berkbeya rigida* (African Thistle)
- *Carduus nutans* (Nodding Thistle)
- *Carthamus lanatus* (Saffron Thistle)
- *Cenchrus incertus* (Spiny Burrgrass)
- *Cenchrus longispinus* (Spiny Burrgrass)
- *Chondrilla juncea* (Skeleton Weed)
- *Cynara cardunculus* (Artichoke Thistle)
- *Emex australis* (Spiny Emex)
- *Equisetum spp.* (Horsetail)
- *Homeria spp.* (Cape Tulips)
- *Nassella trichotoma* (Serrated Tussock)
- *Onopordum spp.* (Onopordum Thistles)
- *Opuntia aurantiaca* (Tiger Pear)
- *Parthenium hysterophorus* (Parthenium Weed)
- *Pennisetum macrourum* (African Feathergrass)
- *Solanum elaeagnifolium* (Silver-leaf Nightshade)
- *Stipa caudata* (Espartillo)
- *Xanthium spp.* (Burrs)

Historically, weeds legislation has been aimed mainly at agriculture; however, several of the weeds listed above cause little if any direct detriment to agriculture. This policy reflects the current view that weeds legislation has relevance beyond agriculture.

Current Tasmanian Government policy recognises that weeds legislation has limited value in encouraging land owners to adopt long-term weed management strategies which can be achieved more effectively through community participation, such as Landcare.

#### TRAINING AND MANAGEMENT

Proper weed management requires the understanding of broad ecological concepts, as well as the knowledge of weed control methods. For example, the long-term control of thistles or capeweed in pastures is achieved more appropriately by encouraging competition from perennial pasture species rather than by use of herbicides.

Land managers must be able to obtain such information readily. Training must be available, adequately resourced and aimed at all people involved in weed management including operators of agricultural machinery and earth-moving equipment, landscape designers, nursery operators, and plant breeders.

Currently, bodies such as TAFE, the Tasmanian Rural Industry Training Board, the Department of Primary Industry and Fisheries (Whole Farm Planning Courses) and the Agriculture and Veterinary Chemicals Association (Avcare) provide training in weed identification, management and control for farmers, agribusiness and others.

Only 48.8% of these threatened Australian species had at least some of their population within national parks or proclaimed reserves. In Tasmania, 28 of the 40 threatened taxa, or 70%, were reserved.

#### *Threats to flora*

Whilst agriculture and grazing were major causes in depleting original populations, many endangered species now persist on remnant areas along roadsides, railway easements or on rocky outcrops too difficult to clear or cultivate.

Ironically some of the situations which allowed these species to survive, such as road easements, are now subject to changes which threaten the survival of the species. Two other current and future threats likely to affect a large number of species are competition, especially from alien mediterranean weeds, and low plant population numbers. For example, agricultural development has reduced the range of *Danthonia popinensis*, a tufted hairless perennial grass. It is now limited to a roadside strip about 100 metres long and about four metres wide in the lower Midlands, north of Kempton. This small, remnant site is threatened by roadworks and weed invasion.

Fire is another important feature affecting species. Some species are adapted to fire of various intensities and frequencies and are dependent on fire for their survival. For example, some low growing plants of coastal heaths are gradually replaced by taller growing shrubs if fire is excluded. *Tetrabecca gunnii*, an erect shrub up to 30 centimetres high occurring near Beaconsfield, is threatened by adverse firing and grazing regimes, over-collecting, land clearing and gravel extraction.

#### **Fauna**

~ *Contributed by Department of Environment and Land Management* ~

The vertebrate animals of Tasmania (mammals, birds, reptiles, frogs and fish), are of great national and international interest and an important component of Australia's natural heritage. They include the Tasmanian Devil, the world's largest extant marsupial carnivore, and species whose survival is currently threatened, such as the Orange-bellied Parrot and Pedder Galaxias. In addition to species that have evolved on the island, like the Green Rosella, snow skinks and Tasmanian Tree Frog, Tasmania serves as a refuge for many species which, over the past 200 years, have become increasingly rare or vanished from the rest of the continent. Some, such as the Bettong, Eastern Quoll and Pademelon are now restricted to Tasmania after disappearing relatively recently from south-eastern Australia. Others, for example the Eastern Barred Bandicoot, Spotted-tailed Quoll and Ground Parrot, are under threat on the mainland but relatively secure in Tasmania.

As well as being of scientific significance, Tasmanian vertebrates have intrinsic, social and economic values. They are an important part of the environment shared by all Tasmanians, and increasingly enjoyed by tourists. World-famous species, such as the Tasmanian Devil, are significant drawcards for tourism. Others, for example wallabies, possums, muttonbirds and ducks, are subject to recreational and commercial hunting. All Tasmanian vertebrates, whether common like Bennett's Wallaby or infrequently seen, like the Little Pygmy-possum, Long-tailed Mouse and Azure Kingfisher, are integral parts of Tasmania's natural heritage and their conservation is of great importance to all Tasmanians.

#### *Threats to fauna*

Since European settlement began in 1803, many changes to the Tasmanian landscape have occurred. Although these changes have benefited some species, many are now threatened

with extinction. An important part of the fight to save species from extinction is identification of the threatening process involved.

The proportion of Crown Land (about 60% of the State's surface area) and land reserved primarily for conservation purposes (for example, national parks), is much higher in Tasmania than any other State—natural assets of great benefit to conservation in this State. Land clearing, soil degradation and the impact of rabbits have been relatively less in Tasmania than on mainland Australia. Nevertheless, the vegetation of much of Tasmania has been altered on a large scale by activities such as agriculture and forestry. Whilst extensive areas of forest and buttongrass moorland in western Tasmania remain undisturbed, dry eucalypt forest and native grasslands in the midlands, north and east of the State have been subjected to extensive clearing and revegetation with introduced species, such as *Pinus radiata* and *Eucalyptus nitens* in plantations. A sensitive balance is sought to enable efficient agriculture and silviculture to proceed in harmony with conservation. The nexus is often uneasy, as with forestry plantations where control of native herbivores, by methods including poisoning, is necessary.

Although public concerns have been raised about use of the poison 1080, its application is carefully managed to ensure that it is carefully targeted and native vertebrate populations are not threatened. A greater threat to conservation is deliberate use of pesticides, and other readily available poisons, to illicitly and indiscriminately kill nuisance vertebrates; a practice that is apparently common in some areas.

Subdivision of land into small to medium-sized blocks for residential development poses a threat to conservation of native fauna in many municipalities. Large areas of native habitat are being divided, and reduced to isolated fragments, too small to sustain viable populations of native animals. Sensitive and careful land planning is needed to ensure adequate buffer zones and corridors of undisturbed vegetation, and sufficiently large undisturbed areas to ensure that the needs of native wildlife are met.

Hydro-electric development has resulted in large areas being flooded, river flows being altered and distributions of native fish being changed. Introduction of exotic trout species, such as Brown Trout and Rainbow Trout, sometimes in association with dam construction, has also had significant effects on aquatic ecosystems and in some cases threatened the existence of native fish species, such as Pedder Galaxias and Swan Galaxias.

The devastation by foxes has not been experienced on the island and impacts of many vertebrate pests (such as dingoes, feral pigs and feral dogs) are either absent or very limited. Nevertheless, feral animals do pose threats to native fauna. Feral goats have expanded their range in recent years, and action is now being taken to control them in many remote areas. Arguably the most destructive of feral pests in Tasmania is the cat. Feral cats are established in the wild in most parts of the State and prey on a wide range of native vertebrates, including frogs, lizards, birds and small mammals. Management programs are being undertaken to control cat populations on islands such as Macquarie and Great Dog islands, and research is being conducted into ways of controlling them on the Tasmanian mainland.

Raptors, such as the Wedge-tailed Eagle and Grey Goshawk, roam far and wide in search of prey and encounter many threats, including shooting and other forms of persecution by vandals and some landowners. Their nest sites, often in large eucalypt trees, have also been disturbed by various activities including forest clearance.

Pollution of waterways from industrial and domestic sources poses a threat to many vertebrates. Organic pollution from abattoirs and domestic wastes can result in eutrophication and oxygen depletion in waterways, whilst heavy metal pollution can result

from various activities including mining. It is suspected that heavy metal pollution may be linked with unusual ulceration of Platypus in some Tasmanian rivers.

Pollution is not confined to freshwater environments. Scraps of synthetic material discarded from fishing boats pose a serious threat to many marine birds, seals, turtles and fish. Seals and birds have been found around the Tasmanian coast entangled with a wide variety of discarded materials including bait straps and filament netting.

Through research into the conservation needs of Tasmania's vertebrates, and recognition of the processes that threaten them, efforts are being made to ensure that future Tasmanians will be able to appreciate and enjoy the remarkable wildlife and natural heritage of this island. Greatest success has been achieved through joint cooperative action involving the whole community.

Preparation and implementation of recovery plans for rare and threatened species is advanced and action has been taken to save several species. In addition, many programs have been initiated which involve the general public in the process of conservation, including proposals, developed with landowners, for legislation to protect vertebrates on private land; formation of regional Landcare groups; and a 'Land for Wildlife' project.

### Reserved areas and conservation

Tasmania has a total land area of approximately 6.8 million hectares, of which 4.2 million hectares, or 60.7%, is publicly owned. This land is managed by a number of agencies including the Forestry Tasmania, the Department of Environment and Land Management, and the Hydro-Electric Commission.

Public benefit and protection for natural and cultural values is maximised by providing a variety of reserves for different types of use. The competing demands of development, recreation, and conservation are inextricably linked, with competing demands addressed in management plans, Acts and regulations.

#### *National parks*

Legislation is important in ensuring the preservation of natural habitats, flora and fauna. The Tasmanian *National Parks and Wildlife Act 1970* repealed the *Scenery Preservation Act 1915* and the *Animals and Birds Protection Act 1928*. The Act made new provisions for the establishment and management of national parks and other reserves and the conservation of flora and fauna. These provisions included the development of land for conservation purposes, managing reserved land, preparing management plans, carrying out research and other activities relating

#### LAND TENURE, TASMANIA (including water bodies)

<i>Land tenure</i>	<i>Area (hectares)</i>
Aboriginal Site	1 066
Coastal Reserve	6 544
Commonwealth Land	29 551
Crown Reserve	167
Forest Reserve	20 240
Game Reserve	11 254
Historic Site	16 417
Hydro Electric Commission land	115 765
Lakeside Reserve	388
Municipal Reserve	564
National Park	1 363 355
Nature Reserve	38 851
Non-allocated Crown Land	717 802
Other Crown Reserve	28 520
Protected Archaeological Sites	801
Protected Area	206 783
River Reserve	413
State Forest	1 575 674
State Forest-Hydro	2 799
State Recreation Area	5 780
State Reserve	19 604
Total public land	4 162 338
Private property	2 690 489
<b>Total</b>	<b>6 852 827</b>

Source: Forestry Tasmania GIS at 1.1.93

**TASMANIA'S NATIONAL PARKS (a)**

<i>Name</i>	<i>Area (ha)</i>	<i>Year gazetted</i>	<i>Location</i>	<i>Description</i>
Asbestos Range	4 349	1976	North coast	Coastal heathland
Ben Lomond	16 527	1947	North-east	Alpine, skifields
Cradle Mountain-Lake St Clair (b)	161 108	1922	West central	Mountains, lakes
Douglas Apsley	16 080	1989	East coast	Dry sclerophyll forest
Franklin-Gordon Wild Rivers (b)	440 961	1939	South-west	Wilderness, rivers
Freyinet	11 930	1916	East coast	Coastal, granite
Hartz Mountains (b)	7 140	1939	South	Mountains, forest
Maria Island	11 550	1972	East coast	Wildlife, historic
Mount Field	16 265	1916	South central	Alpine skifields
Mount William	13 899	1973	North-east	Coastal, wildlife
Rocky Cape	3 064	1967	North-west	Coastal heath
Southwest (b)	608 298	1951	South-west	Rugged wilderness
Strzelecki	4 215	1967	Flinders Island	Mountains, coastal
Walls of Jerusalem (b)	51 800	1981	West central	Alpine plateau

(a) Figures supplied by Parks and Wildlife Service (of the Department of Environment and Land Management).

(b) Constitute the Tasmanian Wilderness World Heritage Area, together with Devils Gullet, Liffey Falls (part) and Marakooopa Cave State Reserves, Macquarie Harbour Historic Site, Farm Cove Game Reserve, Adamsfield, Central Plateau and Marble Hill Conservation Areas, Maxwell River and Wargata Mine Protected Archaeological Sites, three Forest Reserves on the Great Western Tiers and small areas of HEC and private land (totalling 1,383,640 ha) as of May 1992.

to the conservation of flora and fauna, providing education facilities, and enforcing regulations under the Act.

In the early 1970s the Mt William, Maria Island and Asbestos Range national parks were created and Macquarie Island was proclaimed as a nature reserve. The establishment of the Mt William National Park provided a secure habitat for the endangered Forester Kangaroo. Another endangered animal whose management was secured during this time was the Cape Barren Goose. These developments in conservation mirrored the growing world-wide community feeling for conservation of the environment.

#### *Tasmanian Wilderness World Heritage Area*

In 1982, the three large western wilderness national parks (the Cradle Mountain-Lake St Clair, Southwest, and Franklin-Gordon Wild Rivers national parks) were inscribed on the World Heritage list by the World Heritage Committee of UNESCO. A further listing in 1989 enlarged the original area by approximately 600,000 hectares.

The Tasmanian Wilderness World Heritage Area now comprises 1.37 million hectares, or some 33% of the public estate, of essentially wild, natural country in central and south-western Tasmania. It includes areas of very tall eucalypt forest, extensive cave systems, a core breeding area for the endangered Orange-bellied Parrot and ice-age Aboriginal cave-art sites.

World Heritage Area management activities include providing visitors with information, interpretation and assistance; search and rescue; fire prevention and suppression; maintaining a range of visitor facilities; walking track upgrading and maintenance; research; rehabilitation; environmental monitoring; and exotic species control.

#### *Other reserves*

Conservation areas assist the survival of wildlife by providing for habitat and safe migration as well as for natural predator-prey relationships and scavenging. Facilities for conducting recreational and educational activities are also provided.

Some of the areas protected include the breeding grounds of Cape Barren Geese, penguins, pelicans, seagulls, waterfowl and seals. Areas have also been set aside to protect Blackwood and sclerophyll forests, rare eucalypts, alpine vegetation, coastal grasslands and other rare plants.

During 1993–94 the following new reserves were declared.

Name of reserve	Area (ha)
Wellington Park	18 250
Tom Gibson Nature Reserve*	660
Tasman Island Nature Reserve*	108
Sith Cala Nature Reserve*	74
Duckholes Lagoons Nature Reserve*	29
Wildbird Wildlife Sanctuary	23
Chauncy Vale Wildlife Sanctuary (part)	17
<b>Total</b>	<b>19 161</b>

\* subject to the approval of Parliament  
Source: Department of Environment and Land  
Management, Annual Report 1993–94

### *The National Estate in Tasmania*

The Register of the National Estate is the list of those places of Australia's Aboriginal, historic and natural heritage which should be kept for present and future generations. The natural heritage ranges from sites and objects of scientific, archeological and social importance to outstanding geological features and landscapes. Extensive areas of coastline, forest, and wetlands are included in national parks, nature reserves and wilderness areas, as are smaller sites, some of which are important habitats for nature flora and fauna enabling preservation of rare and endangered species.

At 30 June 1994 there were 234 Tasmanian natural places listed in the Register and on the Interim List; 65% of these were endangered species habitats.

For each of the years 1991–92 through to 1994–95 the Commonwealth Government allocated between \$600,000 and \$700,000 to Tasmania under the National Estates Grants Program. As in other States and Territories, these funds are awarded to individuals or bodies to undertake projects that identify, conserve or provide better knowledge about places of National Estate significance.

During 1993–94, 27 projects from more than 100 applications were approved. These projects employed the equivalent of up to 20 full-time positions on such work as restoration of historic buildings, studies of Tasmanian endemic flora and fauna, and better management of Aboriginal sites.

### *Recreation, tourism and the environment*

In 1992 an ABS Survey revealed that 65.7% of all Tasmanians over the age of 15 had visited a national park during the preceding 12 months. This compared with a 1986 survey where 40.5% had done so.

The potential for recreation and tourism to contribute to the economic

### **ADULT VISITORS TO TASMANIA, 1994**

Activity	% of adult visitors
Bushwalking (less than 2 hrs)	35.4
Bushwalking (2 hrs to all day)	16.8
Bushwalking (overnight or longer)	2.9
River cruise	26.9
Caverneering/visiting show caves	12.5
Boating/sailing	5.8
4WD/recreational vehicle	4.8
Trout fishing	3.2
Rafting	0.8
Canoeing/sea kayaking	0.5
<b>Total number</b>	<b>456 400</b>

Source: Department of Tourism, Sport and Recreation—  
Tasmanian Visitor Survey 1994

wealth of Tasmania is huge. Therefore, it is important that impact on the environment be minimised so that options for future generations of tourists and Tasmanians, and the natural environment are not compromised.

## ATMOSPHERE

A survey conducted in June 1994 found that 27.0% of Tasmanians were concerned about air pollution, compared with 34.0% in 1992. Some 34.1% of Australians had the same concern.

The quality of air is affected by emissions from industrial processes, motor vehicles, and commercial and domestic sources, as well as natural sources such as smoke from bushfires, wind-blown dust and salt spray. Pollution also varies in its scale—from regional pollution, affecting a very wide area, to local pollution, where the effects are limited to the area surrounding the source. Obtaining measures of the extent of air pollution is difficult because of the number, variety and distribution of pollution sources. Consequently, monitoring tends to concentrate on determining the general air quality of a region. There are also significant variations due to local factors such as proximity to the source of the emission, topographical features, and local climatic factors such as prevailing wind direction.

In Tasmania the levels of sulphur dioxide, total suspended particulates and lead are regularly monitored by the Department of Environment and Land Management

Examples of regional air-monitoring studies include:

- The Launceston Air Study has been examining the concentration of components and distribution of woodsmoke in Launceston. This study has showed the need for more effective controls on slow combustion domestic woodheaters. New regulations covering the manufacture and sale of woodheaters were promulgated;
- The Bell Bay Environmental Baseline Monitoring Program, which involves both the Department and selected consultants, began accumulating environmental baseline data to assist industry planning; and
- The Tamar Valley Airshed Study is the first of a number of comprehensive environmental programs that will provide the basis for future industrial development in the Bell Bay area.

## WATER

### Freshwater

An ABS survey in June 1994 found that 24.6% of Tasmanians were concerned about freshwater pollution. Human activity depends on an adequate supply of water for agriculture, domestic and industrial use.

The health of our waterways relies on the quality of management of the surrounding catchment. Australia's catchments and rivers have been radically altered through human usage of water, urban and industrial development and land use practices. This has often resulted in a deterioration of water quality.

### *Urban wastes*

Domestic wastes contribute a large range of pollutants to the water supply, the most significant being sewage effluent. Although raw sewage often contains high levels of bacteria and viruses which can cause disease, other harmful pollutants contained in treated sewage are the plant nutrients phosphorus and nitrogen which can contribute to algal blooms.

About 85% of Hobart's sewage is discharged into the middle reaches of the Derwent estuary. Nutrient levels exceed the indicative values for estuaries and embayments recommended in the Australian and New Zealand Environment and Conservation Council (ANZECC) Australian Water Quality Guidelines for Marine and Freshwaters—by approximately 10 times for ammonia and two times for orthophosphate. For ammonia the recommended ANZECC level of  $<5\mu\text{g/L}$  compared with  $50\mu\text{g/L}$  recorded in the middle Derwent; for orthophosphate the recommended ANZECC level of  $5\text{--}15\mu\text{g/L}$ , compared with  $26\text{--}30\mu\text{g/L}$  recorded in the middle Derwent.

Of 14 Ministerial exemptions from compliance with emission standards under the *Environment Protection Act 1973* at 30 June 1994, five exemptions were for sewage treatment.

In addition, runoff from urban areas is often contaminated with car oil, lead from petrol, and raw sewage which has seeped from septic tanks. The clearing and construction work associated with urban expansion leads to soil erosion and high sediment levels in rivers and streams.

#### *Industrial wastes*

The main pollutants produced by industry are organic wastes, toxic chemicals and heavy metals. Heavy metals are a particular problem because they accumulate within the aquatic food chain, leading to the contamination of edible fish. The discharge of heated water, after being used for industrial cooling, can also be fatal to aquatic life.

In the 1980s and first half of the 1990s there were efforts to decrease the amount of industrial waste being discharged into the Derwent River, which has major industries on its banks. These industries include Pasmenco Metals-EZ at Risdon, Australian Newsprint Mills at Boyer and Cadbury's at Claremont. The successful commissioning of the \$17 million Effluent Treatment Plant at Pasmenco Metals-EZ has resulted in a significant decrease in heavy metal concentrations in the river. This change is expected to be reflected in a stepped decrease in the already diminishing level of metals reported in the Derwent shellfish-monitoring program. At Australian Newsprint Mills the efficient operation of the clarifiers has significantly reduced wood fibre discharges into the river.

The major activity in the King River catchment up until the end of 1994 was the Mt Lyell copper mine at Queenstown. Since the 1930s approximately 1.5 million tonnes of tailings per annum have been discharged into the river. These tailings have created prominent sediment banks and point bars in the river system, and a 250 hectare delta.

At times Haulage Creek waters had a pH of approximately three and were also very high in dissolved metal concentrations due to acid mine drainage. However, they mixed with mine tailings leaving the Mt Lyell Mill with a pH of 11, which effectively buffered the acid mine drainage. The high concentration of suspended particulates in the tailings stream also provide adsorption sites for many of the metals present in the acid mine drainage stream and they were deposited along the bank of the King River in the delta region or in the main body of Macquarie Harbour.

#### *Flood control and construction of water storages*

Tasmania's freshwater resources are unevenly distributed: much falls in inaccessible areas such as the Southwest, and less is available for industry, agriculture and human consumption in the East and Midlands. There is also a large seasonal variation in volume in many rivers. The South Esk River at Launceston, for example, carries ten times as much water in August as in January. Tasmania's rivers and water bodies are also used for

hydro-electricity generation. Thus to ensure a reliable water supply impoundments have been constructed on many rivers. These reservoirs also reduce the impact of flooding.

There are three State-owned irrigation schemes: the Cressy-Longford scheme which covers about 10,000 hectares using water from the tail-race of the Poatina Power Station; the South East Districts scheme which covers 4,222 hectares of the Coal River valley and uses water from the Craighourne Dam; and the Winnaleah scheme which uses water from the Cascade Dam on the Cascade River and serves properties with an area of 6,231 hectares.

These changes in river flow can result in significant changes to aquatic environments. Often wildlife habitat is lost or degraded, and erosion and sedimentation increased.

#### *Drainage of wetlands*

Wetlands (swamps, marshes, and other shallow water bodies) are low-lying areas and as such they hold water longer than surrounding areas and concentrate nutrients and organic matter washed down from the soils around them. Wetlands have been shown to be much more productive in terms of plant and animal life than an equivalent area of 'dry' land. They also perform important functions as water filters and naturally control flooding by absorbing large amounts of water and then slowly releasing it down the creeks and rivers or directly in to the ground water table.

In 1971 a number of countries concerned about the world-wide decline in the number of wetlands met in Ramsar, Iran, and developed and signed the *Convention on Wetlands of International Importance Especially as Waterfowl Habitat*, which has become known as the Ramsar Convention. To qualify as a site of International Importance, a wetland must be a particularly good example of a representative type, a rare type, or one that supports rare plants or animals or holds large numbers of animals at certain times of the year.

There are now over 500 wetlands on this list of which 40 are in Australia. Tasmania has 10 sites: Sea Elephant River on King Island, Logan Lagoon on Flinders Island, the east coast of Cape Barren Island, the mouth of the Ringarooma River, Little Waterhouse Lake, Jocks Lagoon near St Helens, Moulting Lagoon and the Apsley Marshes, Pittwater-Orielton Lagoon, and the north-east corner of Lake Crescent.

#### *Vegetation clearance*

Clearing native vegetation has a major impact upon water resources. Firstly, water runoff increases and flooding becomes more severe. Often the excess water seeps down to the water table, leading to a rise in ground water levels and subsequent salinity and waterlogging problems.

Increased run-off following land clearing has exacerbated erosion on the banks of most Australian rivers. This in turn increases the amount of sediment suspended in the water, or turbidity, of rivers and streams. Water that contains large amounts of suspended solids is not only unpleasant to drink, it suffocates aquatic animal life and kills aquatic plants by blocking out sunlight.

#### *Agriculture*

Many agricultural land-use practices can be detrimental to water quality. Artificial fertilisers, when washed into rivers or leached into ground water, increase the water's nutrient levels and encourage the prolific growth of algae. Pesticides and herbicides also tend to be washed into waterways. These chemicals are not only toxic to aquatic organisms, but because they do not break down readily, accumulate within the food-chain, with far-reaching consequences.

*Responses*

Although provisions exist under the *Water Act 1957*, very little integrated catchment, regional planning or extensive corrective action has been undertaken.

River management includes schemes to control riverbank erosion, sedimentation and pollution, the installation of arterial drainage schemes and some pest plant and animal control. Other strategies include the implementation of the Forest Practices Code to ensure the preservation of streamside reserves during commercial harvesting operations.

**Estuarine and marine**

A 1994 ABS Survey found that 26.3% of Tasmanians were concerned about ocean pollution. This compared with 34.7% who had this concern in 1992.

*Macquarie Harbour study*

In February 1993, a steering committee was formed to coordinate a three-year scientific investigation of pollution in Macquarie Harbour. The steering committee includes representatives from the Division of Environmental Management, the Division of Sea Fisheries, the Hydro-Electric Commission, and the Mt Lyell Mining and Railway Company Ltd.

The Macquarie Harbour Study was designed to examine sediment and metal dispersion in Macquarie Harbour, particularly in relation to the King River. It assessed the possible impacts of future changes to activities in the King River catchment, including inputs from the Mt Lyell Mine and the operation of the King River Power Station. As part of the study, there was an assessment of metal contamination of fish caught and grown in the harbour.

Stage 1 investigated into the physical and geochemical processes controlling sediment and metal dispersion in the freshwater and estuarine environments. In 1994, Stage 2 examined the broader community concerns and environmental management issues relating to the harbour.

**The North Pacific Seastar**

In recent years, the North Pacific Seastar (*asterias amurensis*) has become established in the Derwent estuary. So important was further understanding of the status of this seastar thought to be that the Feral Pests Program of the Australian Nature Conservation Agency provided the Tasmanian Museum and Art Gallery with \$60,000 for research into the seastar's distribution and ecology, as well as for research into a strategy for the recovery of seastar species that it was displacing.

The research monitored the annual spawning pattern and recorded the distribution and prey species in Tasmania. Early results indicated that the seastars were feeding on most of the invertebrate species present in the Derwent River. Museum staff

organised a diving event in July 1993 to collect and record the seastar from the Hobart wharf area.

More than 60 members from diving clubs and associations took part and more than 24,000 seastars were collected. The three tonnes of seastars collected were donated to the University of Tasmania for composting trials.

A colour pamphlet about the North Pacific Seastar was produced, funded by the National Seastar Task Force.

A display of the North Pacific Seastar by the Tasmanian Museum and Art Gallery was the backdrop for the launch of new Australian Domestic Guidelines for the transport and disposal of ballast and sea water late in 1993.

#### *Derwent Estuary Nutrient Program*

In March 1993, the Department of Environment and Land Management commenced a sampling and analysis program of the waters, sediment and biota of the Derwent estuary. The aim of this program was to obtain data on the nutrient concentrations of the upper, middle and lower reaches of the estuary and to locate major sources and inputs of nutrients to the river system. Initially, the project was carried out over a twelve-month period and involved fortnightly sampling at 37 sites along the river.

#### *Seagrass beds*

Seagrass beds in Tasmania have declined significantly in a number of areas close to large human population centres (Rees 1993). Five species of seagrass occur in Tasmanian coastal waters.

The Furneaux Group of islands has extensive areas of seagrass, while in the east and south-east of the State seagrasses are confined to sheltered bays and estuaries. In many cases these bays and estuaries have been receiving waters with urban, industrial and agricultural wastes, which have been identified as causes of seagrass decline elsewhere in Australia. Recent research has shown significant losses in the Hobart and D'Entrecasteaux region, Triabunna and St. Helens, the Tamar, Port Sorell, and Duck Bay near Smithton.

#### *Marine reserves*

Two ways in which the marine environment can be protected and enhanced are through wise and technically sound utilisation of marine resources based on sustainable principles, and by the reservation of selected marine areas for conservation and passive use.

Marine reserves serve a similar purpose in the sea to that served by national parks on the land. They have been created to protect and conserve a representation of Tasmania's marine life and ecosystems. They provide unspoilt areas for fish breeding, public enjoyment and scientific study. Some also include features of archaeological and historic importance. There are four marine reserves in Tasmania: Maria Island, Governor Island, Tinderbox and Ninepin Point.

Inside a marine reserve natural processes are protected as far as possible and current activities which have minimal impact may continue to be undertaken; fishing is generally not allowed.

Generally the following activities may be allowed: boating, swimming, sailing, diving, handlining, and angling. Each marine reserve has guidelines for specific uses, and other activities may be allowed in particular reserves.

#### *The State Coastal Policy*

Tasmania's coast is important from many points of view: history, geology, economy, science, culture and recreation. Being the centre of so much attention, Tasmania's coast has been—and continues to be—under pressure that could jeopardise its ability to sustain itself in its present form.

In response to this pressure, the State Government in June 1994 released a Draft Tasmanian State Coastal Policy. The Policy had three major principles:

- the coast is available for sustainable development;
- natural and cultural values of the coast shall be protected; and
- integrated management and protection of the coastal zone is a shared responsibility.

The economic, cultural and social values of the coast, which drew on Principles 1 and 2, covered uses and development, transport, public access, public land, recreation, natural resources and ecosystems, cultural heritage and resources, and coastal hazards.

Management of the coastal zone, which drew on Principle 3, referred to shared responsibility for management, institutional arrangements, public participation and information, and the implementation, evaluation and review of the Policy.

This Draft Policy was referred to the Sustainable Development Advisory Council (SDAC) for consideration in August 1994. SDAC also had responsibility for the consultative process, which involved relevant Government agencies, local governments, industry, individuals, and community groups. This consultative process took place during the first half of 1995.

It is planned to present a further report incorporating information from this consultative process and SDAC's own deliberations, to the Minister for the Environment by the end of 1995.

## LAND

A 1994 ABS survey showed that 8.3% of Tasmanians (and 9.6% of Australians) were concerned about land degradation. A similar survey conducted in 1992 indicated that this was a concern of 16.5% of Tasmanians.

Land degradation is the decline in quality of natural land resources, commonly caused through improper use of the land by humans. It encompasses soil degradation and the deterioration of natural landscapes and vegetation. It includes the adverse effects of overgrazing, excessive tillage, over clearing, erosion, sediment deposition, extractive industries, urbanisation, disposal of industrial wastes, road construction, decline of plant communities and the effects of noxious plants and animals.

In general, the severity and extent of land degradation in Tasmania is not as great as that in other States, but significant tracts of land have been seriously damaged, and repair can be prohibitively expensive. Although some forms of land degradation occur on several land types, a number of forms of land degradation are linked to specific land uses: those associated with farmland, forestry land and mining areas, towns and cities, and Crown and other lands.

### Decade of Landcare

LANDCARE has been accepted as the primary strategy to control and prevent degradation on all land in Australia: rural, national parks, towns and cities, and coastal areas. This is to be achieved through:

- the securing of a community commitment to Landcare by strategies such as the formation and support of Landcare groups, input into teacher training and the school curriculum, and continual upgrading of whole-farm planning and soil-management training courses.
- the implementation of policies, legislation and administrative structures. This will focus on the development of land use and management policies and strategies. These include codes of practice, the review of legislation such as the *Water Act 1957*, *Forest Practices Act 1985* and environmental and planning legislation, and by the review of administrative and organisational structures to improve the delivery of technical and other support services.
- a greater understanding of the character and condition of the State's land and water resources. This will be aided by the Department of Primary Industry and Fisheries' program to map farmland capability, survey soils, and develop databases such as computerised Geographic Information Systems.

## Landcare in Tasmania

In 1995 there were approximately 160 Landcare groups in Tasmania, 75 of which were agricultural based, and 85 were non-agricultural based.

Total funding for Landcare for Tasmania in 1994-95 was approximately \$652,000.

<i>National Landcare Program</i>	<i>Funding for 1994-95 (\$)</i>
One Billion Trees	70 000
Save the Bush	204 000
Land and Water	378 000
<b>Total</b>	<b>652 000</b>

The biggest single grant for 1994-95 was almost \$35,000 to Bridgewater High School for their City Farm Landcare Centre. Other large grants were given to the Gunns Plains Landcare Group for soil conservation and ragwort awareness (\$22,000) and to the Molesworth Environment Education Centre Landcare Program (\$21,000).

In September 1994 Hobart hosted the annual Australian Landcare Conference. Over 450 Landcarers attended and experienced four days of field trips, discussion, debate, speeches and presentations.

Keynote speakers included Penny Wensley (Australian Ambassador for the Environment), Helen Alexander (National Landcare Facilitator), Rick Farley (National Farmers Federation), Tracker Tilmouth (Central Land Council), and Senator Bob Collins (Federal Minister for Primary Industries and Energy).

One field trip looked at sustainable cropping techniques at Kindred, the Nile River Landcare Group's soil management demonstration site at 'Winburn', and potato cropping along the South Esk River. Another field trip visited three river catchments (the North Esk, the Meander, and Elizabeth rivers) and looked at work carried out to improve water quality, techniques for removal of willows, revegetation of river banks, effluent disposal, and flood plain management.

Another field trip considered sustainable resource management. The group visited forests managed by Forestry Tasmania in the south-east area to look at dry forest logging, the forest practices code in operation, wet forest ecology and fire effects. The field trip also visited a Dunalley farm which is managed according to integrated resource management techniques, and which hosts a 'Landcare in Action' educational program.

- the encouragement and support of research and development where necessary and the promotion of sustainable land management practices for all land uses.

## RECYCLING AND WASTE DISPOSAL

### The Tasmanian Solid Waste Management Policy

Like residents in other Australian States and Territories, Tasmanians produce a lot of rubbish. In response to the increasing volume of rubbish generated in Tasmania by individuals, households and industry, successive Tasmanian Governments have adopted policies to minimise the volume and environmental impact of solid waste.

An ABS survey in June 1994 showed that 12.4% of Tasmanians considered garbage disposal to be an environmental problem; some 10.2% were concerned about toxic chemical waste. This compared with 24.5% and 22.0%.

In 1994 the Department of Environment and Land Management produced the *Tasmanian Solid Waste Management Policy*. Its overall goals were to promote

**PERFORMANCE TARGETS FOR RECYCLING IN TASMANIA**

Material	Amount (tonnes)	Amount recycled 1993 (%)	Interim recycling target 1995 (%)
Aluminium	927	30	65
Glass (cullet)	148 000	38	45
PET plastic (no. 1)	700	15	30
HDPE plastic (no. 2)	2 000	1	50
PVC plastic (no. 3)	900	n.a.	45
Liquid paperboard	1 100	3	20
Newspaper	12 000	8	40
Office paper/cardboard	35 000	30	50
Lubricating oil (MI)	20	35	60
Tyres	45 000	n.a.	50
Batteries (vehicle)	50	50	80
Batteries (Hg/Cd)	n.a.	n.a.	60
Ferrous metal	14 000	70	90
Putrescibles (domestic)	35 000	n.a.	45
Building materials	n.a.	n.a.	45

Source: Department of Environment and Land Management, Tasmania, Solid Waste Management Policy 1994

**ITEMS RECYCLED, MAY 1992 (% of households)**

Item recycled	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
Paper	57.5	67.1	36.0	43.1	61.0	38.4	27.1	63.3	52.8
Glass	51.0	70.6	42.4	55.3	58.4	46.0	14.5	54.9	54.3
Cans	39.4	54.5	32.7	50.8	55.2	26.5	18.2	28.1	43.4
Plastic	33.9	48.4	34.0	33.2	35.7	30.4	14.2	32.9	36.6
Motor oil	7.9	9.2	9.3	7.9	10.0	10.7	7.9	15.8	9.0
Kitchen or food waste	30.3	39.9	33.2	39.9	37.4	48.0	32.7	41.9	36.3
Garden waste	42.3	51.8	49.1	47.6	44.7	52.8	47.7	51.8	47.4
Old clothing or rags	58.5	66.9	62.2	62.1	67.8	61.7	51.2	75.0	63.0
No recycling by the household	17.3	10.2	19.0	16.7	12.5	19.4	31.3	12.5	15.6

Source: ABS catalogue no. 4602.0

environmentally and economically feasible waste minimisation and resource recovery; and to protect the environment from effects arising from landfills receiving municipal and hazardous wastes.

Goals of the Waste Minimisation component of the policy included that:

- manufacturing and processing industries will be encouraged to adopt clean production technology;
- the State Government will implement and monitor the National Packaging Guidelines;
- Tasmania will introduce a Municipal Waste Minimisation Grants Program;
- Municipal Councils will encourage home composting, and introduce chippers/shredders at tip sites; and
- Municipal Councils will charge for waste collection by volume at the kerbside.

Goals of the Recycling and Reuse component of the policy included that:

- recycling in public places will be encouraged, and all facilities will have colour-coded bins and signs;

## Tasmanian State of Environment Report

The Sustainable Development Advisory Council (SDAC) was created under the *State Policies and Projects Act 1993*. Under the Act, SDAC became Tasmania's principal body responsible for sustainable development policies, projects of State significance, and State of Environment (SoE) reporting. It is a distinct body of the State Government, though for practical and administrative purposes SDAC shares resources from time to time with the Department of Environment and Land Management.

Preparation of the Report commenced in mid-1994. Publication is planned for the first half of 1996 and will be the first to be produced under the auspices of the Tasmanian Government. Further SoE Reports are planned at approximately five-yearly intervals.

Other Australian SoE reports have been published in the ACT (1994), NSW (1993), South Australia (1993), Western Australia (1992), and Victoria (1991).

The Tasmanian SoE Report will contain three parts. In Part 1, there will be chapters on:

- climate;
- air quality;
- inland waters (surface waters and groundwater);
- land resources;
- biological diversity and habitat;
- human settlements;
- coastal, estuarine and marine environment; and
- cultural heritage.

In Part 2, environmental impacts, pressures and management responses will be considered.

Finally, in Part 3, appropriate actions, based on sustainability criteria, will be recommended.

The following principles have been adopted for the Tasmanian SoE Report:

- rigour—the best available scientific information, methods and advice will be used;
- objectivity—information is to be presented without bias or modification;
- cooperation—partnerships will be encouraged to facilitate the sharing of information, expertise and resources;
- openness—the most relevant and up-to-date information about the environment will be used;
- sustainability—the principles of sustainable development will underpin relevant parts of the SoE Report;
- precautionary principle—that if there is insufficient information to indicate that a process or development is not harmful, then the process or development ought to not to occur;
- maintenance of biological diversity; and
- meeting client needs—identifying and responding to the information required.

Reference groups, responsible for drafting specialised information on topics in Part 1, were constituted in 1994. They have been noteworthy for the diversity of the background and experience of their members. Some are from Tasmanian Government agencies (including Environment and Land Management, and Primary Industry and Fisheries); others are from the University of Tasmania, industry, and private environmental consultancies.

SDAC hopes that the Tasmanian SoE Report will become an authoritative reference tool for students, environmental practitioners, community groups, parliaments, industry, government departments, and the general community in the years ahead.

- a voluntary manufacturing levy will be put in place by all industry groups to assist in providing funds for improving the recycling infrastructure; and
- where garbage collection services operate, kerbside collection of recyclables are recommended by 1995.

Goals of the Safe and Secure Disposal component of the policy included that:

- recognised training courses will be introduced for disposal site operators;
- a waste disposal site classification system will be implemented; and
- Municipal Waste Management Plans will be developed and implemented.

## FURTHER READING

### ABS PUBLICATIONS

*Australia's Environment: Issues and Facts*, 1992 (4140.0)

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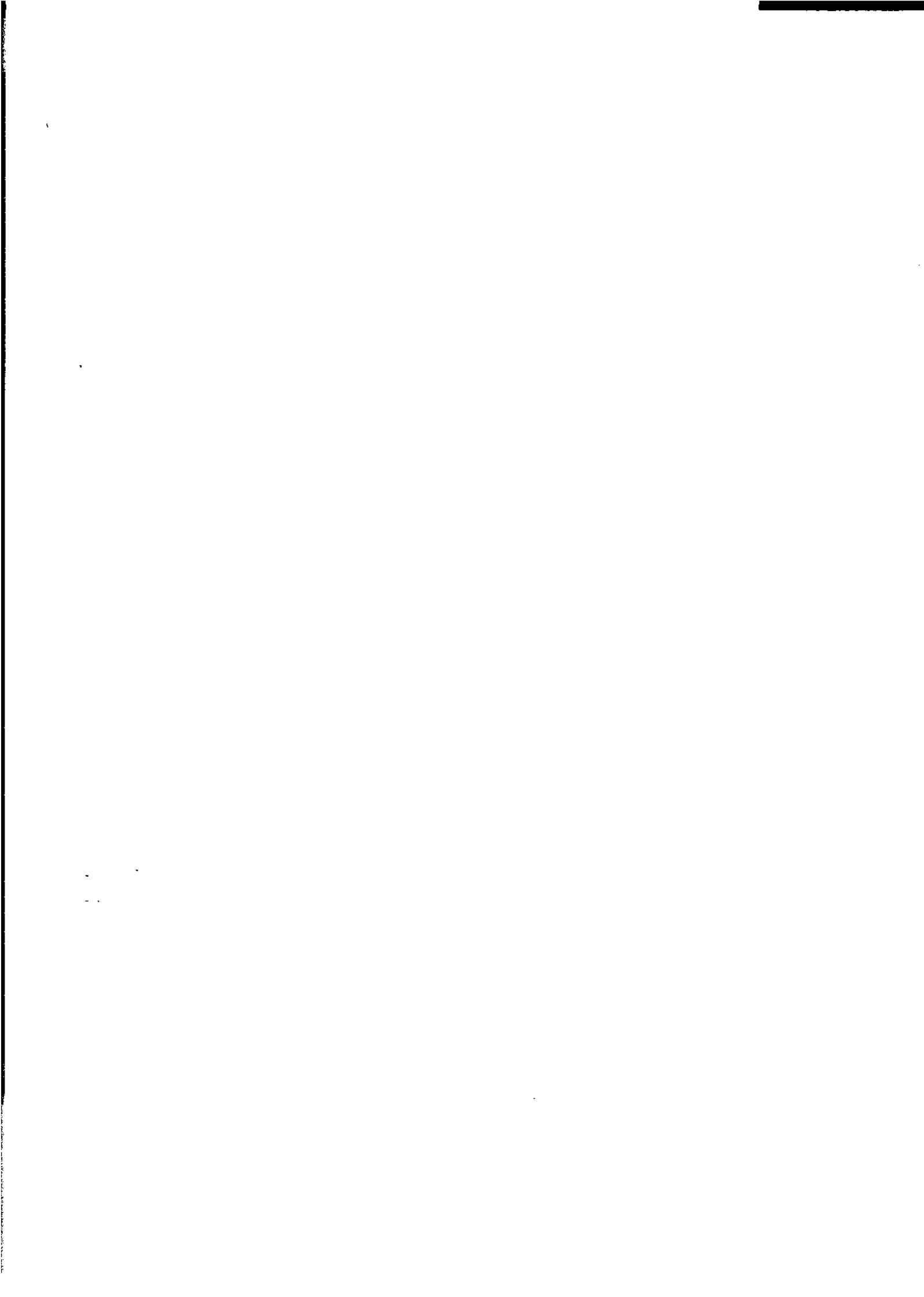
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### ACKNOWLEDGEMENTS

Steven Smith and Sally Bryant, Parks and Wildlife Service, Department of Environment and Land Management



## 3 | Geography



Many areas in Tasmania recorded below average rainfall in 1994.

*The Mercury*

THE STATE OF TASMANIA is a group of islands lying south of the south-east corner of the Australian mainland. Roughly shield-shaped with the greatest breadth in the north, the Tasmanian mainland extends from latitude 40°38' south to 43°39' south, and from longitude 144°36' east to 148°23' east.

The coastline is bounded by the Southern Ocean on the south and west and the Tasman Sea on the east, while the approximately 240 kilometres-wide Bass Strait separates the island from the Australian mainland. Macquarie Island, a part of the State, is situated at 54°38' south, 158°53' east in the Southern Ocean.

The area of the whole State, including the lesser islands, is 68,049 square kilometres or about 0.9% of the total area of Australia (7,682,300 square kilometres); it is just under one-third the size of Victoria, the smallest mainland State, and is less than half the size of England and Wales.

Apart from the Great Dividing Range in the east, continental Australia is predominantly a land of low plateaux and plains with little relief. In contrast, Tasmania could legitimately be called the island of mountains, since it has the largest proportion of high country to its total area, compared with the other States.

Mainland Australia, extending north of the Tropic of Capricorn, and with much of its area in the zone of the sub-tropical anti-cyclones, is basically a warm, dry continent. Tasmania is in the temperate zone and practically the whole island is well watered with no marked seasonal concentration; there are no deserts or drought areas as found extensively on the adjacent mainland.

Being south of latitude 40°, it is on the edge of the wind belt commonly known as the Roaring Forties and, with South America, the nearest land mass to the west, Tasmania's weather is subject at times to strong winds and heavy rain about the south and west coastal areas. Its insular position provides protection against temperature extremes—the variation between summer and winter mean temperatures in coastal towns rarely exceeds 8°C.

## PHYSIOGRAPHY

Tasmania, a mere 296 kilometres from north to south and 315 kilometres from east to west, has a wide variety of mountains, plateaux and plains, of rivers, lakes, and tarns, of forest, moorland and grassland, of towns, farms and uninhabited country. The temperate maritime climate partly explains Tasmania being called the most English of all States but other factors operate to heighten the comparison—the pattern of agricultural settlement with orchards, hedges and hopfields; the lake country; the early freestone architecture still common in the east and south-east and the roadsides and villages dotted with oaks, elms and poplars.

## PHYSICAL FEATURES

<i>Islands</i>	<i>Area (km<sup>2</sup>)</i>
Badger	12
Bruny	355
Cape Barren	462
Clarke	82
Flinders	1 341
Hunter	71
King	1 094
Macquarie	123
Maria	101
Prime Seal	12
Robbins	99
Schouten	28
Three Hummock	70
Vansittart	8
Other islands	105
Mainland Tasmania	64 086
<b>Total Tasmania</b>	<b>68 049</b>

<i>Mountains</i>	<i>Height (m)</i>
Mt Ossa	1 617
Legges Tor	1 573
Barn Bluff	1 559
Mt Pelion West	1 560
Cradle Mountain	1 545
Stacks Bluff	1 527
Mt Massif	1 514
Mt Geryon	1 510

<i>Lakes</i>	<i>Area (km<sup>2</sup>)</i>
Lake Gordon (a)	280
Lake Pedder (b)	250
Great Lake (c)	161
Arthurs Lake (c)	64
Lake Sorell (c)	53
Lake Burbury (a)	52
Lake King William (a)	43
Lake Echo (c)	40
Lake Mackintosh (a)	31
Lake St Clair (c)	29
Lake Pieman (a)	22
Lake Rowallan (a)	9
Lake Rosebery (a)	8
Lake Barrington (a)	8
Lake Cethana (a)	6
Lake Murchison (a)	5

<i>Rivers</i>	<i>Length (km)</i>
South Esk	214
Derwent	187
Gordon	181
Arthur	179
Huon	169
Mersey	160
Franklin	120
Pieman	97
North Esk	86

(a) Man-made.

(b) Man-made—inundated the smaller natural Lake Pedder.

(c) Natural lake enlarged by dam(s).

Source: 1:250,000 topographic maps, Land Information Bureau, Department of Environment and Land Management



With eight mountains exceeding 1,500 metres, 28 above 1,220 and a substantial part of the Central Plateau above 900 metres, Tasmania is truly an island of mountains. The tallest is Mt Ossa (1,617 metres) located with a group of mountains, including Cradle Mountain, to the north-east of Queenstown and west of the highland lake country on the Central Plateau containing Lake St Clair, Australia's deepest natural freshwater lake.

Although the rivers are short, Tasmania is virtually criss-crossed by a network of rivers and lake systems. In the south, the Derwent flows from the Central Highlands past Hobart, providing one of the world's best harbours, to the sea at Storm Bay. The Gordon River takes the waters of Lake Gordon and Lake Pedder and is joined by the Franklin River before flowing into Macquarie Harbour in the west. The Huon River drains eastwards from its headwaters at Scotts Peak Dam on Lake Pedder, reaching the sea in D'Entrecasteaux Channel south of Hobart. The State's longest river is the South Esk, which flows from the north-east to join the North Esk at Launceston to create the Tamar. Other rivers include the Mersey, Forth and Leven, which flow to the North Coast, and the Pieman and Arthur rivers on the West Coast.

## CLIMATE

~ *The following section was contributed by the Bureau of Meteorology* ~

Since mainland Tasmania lies between latitudes 40°38' south and 43°39' south and is an island with no point more than 115 kilometres from the sea, its climate is classified as temperate maritime. On the coast the daily temperature range is about 7°C but inland the range is almost doubled, indicating a slight continental effect.

Prevailing westerly winds produce a marked west-east variation of cloudiness and rainfall, but the variation of temperature is governed more by elevation and distance from the coast.

Summers are mild and are characterised by greatly lengthened days. The sun reaches a maximum elevation of 70°-73° in mid-summer, giving about 15 hours of daylight. In mid-winter, the sun's elevation does not exceed 20°-23° and the shortest day consists of about nine hours of daylight.

In winter and early spring, westerly winds reach their greatest strength and persistence, causing a distinct increase in rainfall in the west and north-west.

### CAPITAL CITIES CLIMATIC AVERAGES

	Hobart	Melbourne	Sydney	Brisbane	Darwin	Adelaide	Canberra	Perth
Temperature (°C)								
Mean daily maximum	16.8	19.7	21.5	25.5	31.9	22.3	19.4	23.2
Mean daily minimum	8.2	10.0	13.6	15.7	23.1	11.9	6.3	13.1
Extreme maximum	40.8	45.6	45.3	43.2	40.5	47.6	42.2	46.2
Extreme minimum	2.8	2.8	2.1	2.3	10.4	-0.4	-10.0	1.2
Mean daily hours of sunshine	5.9	5.7	6.7	7.5	8.4	6.9	7.6	7.9
Rainfall—								
Mean annual (mm)	626	655	1 214	1 151	1 661	528	626	873
Mean annual days of rain	159	143	148	123	108	119	109	119
Wind— Average (km/h)	11.3	11.7	11.6	10.5	10.1	12.5	5.4	15.6

In the east and south-east, rainfall is more evenly distributed throughout the year. In comparison with those areas of Europe and North America which are at similar latitudes, Tasmania enjoys a very temperate climate. This is due to the stabilising effect of surrounding oceans whose temperatures change by some 6°C or 7°C throughout the year. The higher proportion of ocean to land area confers a similar benefit on the Southern Hemisphere as a whole.

### Winds

The prevailing airstream over Tasmania, the Roaring Forties, is westerly with actual winds varying from north-west to south-west. The greatest strength and persistence of winds occurs during late winter and early spring, but the speed and direction vary with the eastward passage of high and low pressure systems. In the summer months, when the westerlies are weak, afternoon sea-breezes become the predominant wind in coastal areas. Periods of more humid north-easterly winds are most likely in the summer and early autumn.

Winds of gale force (34 knots) or greater are more likely to come from the western quarter as deep lows pass just to the south of Tasmania.

### Temperature

Temperature decreases with height at an average rate of about 0.7°C per 100 metres. Thus, in a mountainous island like Tasmania the isotherms (lines joining points of equal temperature on a map) will be much influenced by topography. Greater cloud cover over the western half further decreases day-time temperatures in the west, while the Föhn effect warms and dries the westerly airstream as it descends to the eastern areas.

The incidence of frost (air temperature of 0°C or less) is markedly affected by elevation and distance from the coast. Widespread severe frosts are experienced in winter on the Central Plateau and in inland valleys. Inland centres below 300 metres are frost-free only in summer although the north coast, the east and south-east have few frosts from early October until late April. Above 300 metres there is no frost-free month.

Tasmania only occasionally experiences the hot days common in the mainland Australian States. High temperatures in the east and south-east of Tasmania generally occur on the last day of a warm spell during which a dry air mass of continental origin is advected over the State from a direction between north and north-west. Some cooling in the lower air layers over the waters of Bass Strait prevents the northern coast from reaching the higher temperatures that are experienced in the south under these conditions. The highest temperature recorded in Tasmania is 40.8°C, at Bushy Park in December 1945 and at Hobart in January 1976. The lowest temperature recorded is -13.0°C at Shannon, Tarraleah and Butlers Gorge in June 1983.

**TEMPERATURES AT SELECTED STATIONS, TASMANIA, 1994 (°C)**

Station	Summer (Dec-Feb)		Autumn (Mar-May)		Winter (June-Aug)		Spring (Sep-Nov)	
	Mean max.	Mean min.	Mean max.	Mean min.	Mean max.	Mean min.	Mean max.	Mean min.
Hobart	21.1	11.9	17.9	9.3	12.5	5.4	16.7	7.6
Launceston Airport	21.5	9.4	17.8	6.6	11.6	2.4	16.5	5.0
Devonport	19.5	10.9	17.7	8.5	13.0	4.4	15.9	6.5
St Helens	21.9	11.6	19.5	7.8	14.7	2.5	18.4	5.7
Queenstown	19.9	8.5	16.4	5.8	11.9	2.8	15.0	4.5

<b>ANNUAL RAINFALL, TASMANIA (mm)</b>				
<i>Station</i>	<i>1992</i>	<i>1993</i>	<i>1994</i>	<i>Long-term average (a)</i>
Bicheno	619	891	455	688
Burnie	1 255	949	711	997
Bushy Park	529	520	570	582
Butlers Gorge	1 525	1 662	1 545	1 677
Devonport	998	744	492	901
Glenorchy	679	736	704	717
Hobart Airport	417	518	334	522
Hobart Bureau	535	648	458	626
Launceston Airport	732	599	465	695
Launceston	830	660	493	685
Oatlands	470	562	312	561
Queenstown	2 422	2 463	2 815	2 519
Scottsdale	1 341	979	678	1 077
Southport	747	1 034	891	988
Smithton	1 383	958	1 031	1 104
Strahan	1 648	n.a.	798	1 647
Strathgordon	2 342	2 485	2 917	2 489
St Helens	884	1 024	500	784
Swansea	416	651	272	611
Waddamana	816	924	888	813
Currie PO	1 298	813	711	903
Flinders Island Airport	n.a.	n.a.	527	777

(a) Number of years of records used to calculate the long-term average varies from station to station.

## Rainfall

Rainfall over Tasmania is largely governed by the interaction of airstream and topography. Since the prevailing winds are westerly the higher annual totals are recorded in western highland areas, but there are parts of the north-east which very efficiently intercept the less frequent bursts of humid north-easterly winds. In the west, annual totals vary from 1,500 to 3,500 mm, whereas in the eastern half the range is from 500 to 1,500 mm.

Extreme three to five day rainfalls occur most often on the West Coast in late June, when the westerlies are increasing in strength and persistence, and the sea temperature is higher than the land temperature. In the north, short periods of extreme precipitation occur when wind flow is sustained for up to two days from the north-east, usually in mid to late autumn. The high moisture content of such streams from over the relatively warm waters of the Tasman Sea results in heavier, if less prolonged, rainfall than is produced in the westerly streams.

Rainfall is less reliable in the east, south-east, Midlands and Derwent Valley. Highest rainfall in these areas tends to occur in autumn and spring, under the influence of small cyclonic depressions off the East Coast.

Effective rainfall is the amount necessary to compensate for evaporation, begin germination and maintain plant growth above the wilting point. Average rainfall is sufficient for this purpose from May until September.

From October to January the chance of receiving effective rainfall lessens, except in the west and north-west, where the probability remains mostly better than 50%. Over much of the eastern half, the chance of receiving at least effective rainfall during the summer months is very small.

### Snow, hail and thunderstorms

Snow can be experienced over the highlands, above approximately the 900 metre level, at any time of the year. Heaviest snowfalls tend to occur in July and August. Extensive snow below 150 metres occurs, on average, less than once every two years, and is associated with an unusually vigorous outbreak of cold air from Antarctic regions. There is no permanent snowline, but patches of snow often remain on the highest peaks until December.

Hail is most likely in spring, though it is possible in any month. Large hail is usually associated with severe thunderstorms and is more likely in the warmer months. It does particular damage to fruit crops in the Huon Valley and Tasman Peninsula if it occurs in late spring.

Thunderstorms are most common in the north and west of the State and are mostly associated with the lifting of warm moist air by a cold front. The north and west report ten to fifteen storms per year on average while the Midlands, as gauged from Oatlands, has fewer than three. Severe thunderstorms are more likely during the period November to March and may produce isolated instances of flash flooding or large hail. Tornadoes are rare, most occurring in the central north.

### Floods

In Tasmania, floods tend to be seasonal, being more frequent in winter when catchments are saturated, than in summer. The major rivers in the Tamar River basin (the South Esk, Macquarie, Meander and the North Esk rivers) converge in the north of the State near Launceston, where the combined catchment area is nearly 9,000 km<sup>2</sup>. Many rivers in this system flow through flat country and consequently floods can be widespread and disruptive. Launceston and Longford, the two major urban areas in the basin, and many small rural townships are affected by major floods such as those that occurred in 1929 and 1969.

The Derwent River, with a catchment area of 7,750 km<sup>2</sup> at New Norfolk, drains the central part of the State. Minor floods do not occur with the same regularity as in the South Esk due to the Hydro-Electric Commission's storages, but these have little effect during major floods such as the one which flooded New Norfolk in 1960.

The Huon River, which has a catchment area of 2,100 km<sup>2</sup> at Judbury, rises very quickly during floods. Major floods, the most recent of which was in 1975, affect the main township of Huonville in the catchment.

Although heavily regulated by the Hydro-Electric Commission power generation schemes, the Forth and Mersey rivers (with catchment areas of 1,100 and 1,600 km<sup>2</sup> respectively), may still have major floods. The most recent major flood in 1970 affected urban areas in the catchments.

Many of the smaller rivers in the north and north-west of the State have their headwaters in the Western Tiers and are subject to flash flooding. The short, fast-flowing rivers of the north-east and east of the State rise and fall rapidly but can be quite damaging. Flooding of rivers in the west and south of the State goes largely unnoticed because they pass through rugged, sparsely populated regions.

### Humidity and evaporation

The mean relative humidity at both 9 a.m. and 3 p.m. exceeds 50% at all stations in all months of the year. Relative humidity is generally higher in the morning than in the afternoon, and higher in coastal areas than inland. Days of high temperature combined with uncomfortably high humidity are rare. In the east, south-east and Fingal Valley, warm

dry winds from a westerly or north-westerly direction may occasionally have a relative humidity as low as 10%. These type of winds invariably result from air descending from just above mountainous terrain into lowland valleys or plains.

Evaporation depends mainly on wind strength, the moisture deficit of the airstream and on sunshine.

In the northern Midlands the annual evaporation is nearly 1,500 mm due largely to the prevalence of winds coming from the Western Tiers, which become warmer and drier in their descent, thus increasing evaporation. Monthly evaporation at Launceston Airport has ranged as high as 270 mm in summer but drops to between 25 mm and 40 mm in winter. This area of high evaporation extends southward to the lower Derwent and Huon areas. The lowest evaporation rate occurs in the Central Plateau, West Coast Ranges and Southwest area, where annual evaporation may fall to less than 750 mm. This is due to the high moisture content of the prevailing westerlies and the high average cloud cover. In these areas the monthly evaporation rate may range from about 125 mm in January to only 12 mm in June and July. Another area of low evaporation (below 1,000 mm per year) is located in the north-eastern highlands.

### **Droughts and bushfires**

Although Tasmania has the highest average annual rainfall of any State in Australia, drought conditions are not unknown. Unlike the remainder of Australia, droughts in this State tend to be localised and of relatively short duration and are related to peoples' expectations of normal rainfall. The most severe effects are usually felt over a period of only a few months, but serious rainfall deficiencies can extend over a period of two or three years. The most severe long-term droughts occurred during the periods 1888-89, 1897-98, 1918-20, 1933-34, 1945-46, 1949-52, 1967-69, 1972-73, 1979-82 and 1987-88.

Serious bushfires occurred in 1897-98, 1914, 1934, 1940, 1967 and 1981. The bushfires of 7 February 1967 were the most severe in the State's history, causing 62 deaths and damage to property estimated at the time to be in excess of \$25 million. The worst fires on the West Coast occurred during February 1981 when fuels were exceptionally dry for that district. Property damage around Zeehan was estimated to be near \$5 million.

### **Sunshine**

The average number of hours a year of sunshine ranges from about 2,500 hours in the northern Midlands to less than 1,750 hours on the West Coast and western highlands; these areas having the least amount of sunshine in Australia. Hobart averages 2,100 hours per year and Launceston around 2,400.

In January, the average daily sunshine ranges from nine hours per day between the Midlands and Launceston to six hours per day on the west and south coasts. In mid-winter, average daily sunshine is down to a maximum of four hours on the east coast and considerably less on the west coast and highlands.

### **Hobart's climate**

**RAINFALL.** Hobart is not the wettest Australian capital city; in fact it has the lowest mean annual rainfall of all capitals except Adelaide. There is a strong gradient of rainfall to the immediate west of Hobart caused by the presence of Mt Wellington. On the south-eastern slopes of the mountain the annual rainfall reaches 1,400 mm (at The Springs and The Gap) while at Fern Tree the annual average is 1,140 mm. The rainfall decreases to about 600 mm in the city area, the annual average being 626 mm at the Regional Office of the Bureau of Meteorology. Some eastern-shore suburbs receive as little as 500 mm of rain per annum.

**HOBART CLIMATIC DATA**

Month	Temperature (°C)								Sunshine (Daily hours)	Rainfall (mm)		
	Maxima				Minima				Long-term av. (a)	Mean daily 1994	Long-term av. (a)	Total 1994
	Long-term (a)	Mean daily 1994	Extreme (a)	Extreme 1994	Long-term (a)	Mean daily 1994	Extreme (a)	Extreme 1994				
January	21.5	21.2	40.8	38.8	11.7	11.2	4.5	7.1	7.9	8.6	48	33
February	21.6	22.2	40.2	30.7	11.9	13.1	3.4	8.7	7.2	7.3	40	20
March	20.1	20.2	37.3	28.0	10.7	10.8	1.8	6.5	6.3	7.8	47	13
April	17.2	18.7	30.6	27.9	8.9	10.0	0.6	4.2	5.1	5.7	52	49
May	14.3	14.7	25.5	20.8	6.9	7.2	-1.6	1.5	4.2	4.3	49	72
June	11.9	11.5	20.6	15.7	5.2	5.4	-2.8	-0.3	3.9	3.7	56	11
July	11.5	12.9	21.0	17.2	4.5	5.3	-2.8	-0.5	4.4	5.0	54	44
August	12.9	13.0	24.5	21.5	5.1	5.4	-1.8	1.1	5.0	6.0	52	77
September	15.0	14.2	31.0	22.3	6.3	5.6	-0.6	0.7	5.9	6.3	52	50
October	16.9	17.3	34.6	29.8	7.7	8.0	0.0	2.7	6.4	7.8	64	48
November	18.5	18.7	36.8	31.9	9.2	9.1	1.6	3.9	6.9	7.6	55	37
December	20.2	24.0	40.7	37.8	10.7	12.1	3.3	7.0	7.3	10.7	57	(b)0.4
<b>Annual</b>	<b>16.8</b>	<b>17.4</b>	<b>40.8</b>	<b>38.8</b>	<b>8.2</b>	<b>8.6</b>	<b>-2.8</b>	<b>-0.5</b>	<b>5.9</b>	<b>6.7</b>	<b>626</b>	<b>458</b>

(a) Figures taken over all periods of records.  
 (b) Rainfall of 0.4mm record low.

Monthly totals are fairly uniform. The wettest 12 months on record at the Bureau's Hobart Office yielded 1,104 mm (to December 1916) and the driest, 320 mm (to November 1943).

**TEMPERATURES** Mean maximum temperature exceeds 21°C in January and February. On average there are two or three days per year with maximum temperatures greater than 32°C. Minimum temperatures below -1°C are rare.

**FOG** Fogs occur in the city about six times per year in the cooler months but are more frequent over and near the Derwent River, down which they are often carried on a light north-west wind. Fog frequency is far less than that for either Launceston or Melbourne.

**WIND** The main wind direction is north-west, induced by the orientation of the Derwent Valley. Next in importance is the sea-breeze (from south or south-east) during summer months. The strongest wind gust experienced in Hobart was 150 km/h recorded during a storm in September 1965.

**SNOW AND HAIL** Snow below 300 metres occurs, on the average, less than once per year. Falls lying in the centre of the city, almost at sea level, have occasionally been recorded. Snow generally lies on Mt Wellington during winter and early spring months, but it is rare between November and March. Hail occurs about four times a year mainly between September and November.

**FROST** The average annual frequency of days of frost is 28, mostly from June to August. Cold air drainage is found in the hilly suburbs and frosts are common on the valley floors.

**SUNSHINE AND CLOUD** No marked seasonal or diurnal variation of cloud amount occurs. However, there is a clear-cut seasonal variation in monthly average hours of sunshine with variations of 235 hours in January to 112 hours in June.

## South of Tasmania

South of Tasmania lies a vast expanse of water, the Southern Ocean, with the continent of Antarctica over 2,000 kilometres away. Only Macquarie Island, nearly 1,300 kilometres to the south-east of Tasmania interrupts the waves. The advent of tourist ship visits to Macquarie Island has made the climate of these waters of interest to the traveller.

### A WORLD OF COLD WINDS

The southernmost islands of Tasmania are notoriously windy places, suggesting the power of the westerly winds that blow across the great Southern Ocean. In the zone just north of Antarctica, a belt of low pressure encircles the globe, while in the subtropics the pressure is higher. The result is a band of strong winds, sometimes called the Roaring Forties and the Furious Fifties, extending from just south of Australia to just north of Antarctica. In this band, the wind direction varies as low pressure troughs extend into it from the south or high pressure ridges extend into it from the north, but mostly the wind blows from between north-west and south-west.

The winds over the Southern Ocean are often far stronger than the trade winds of near-equatorial regions but are more variable in direction and speed. They might be called the 'trade winds' of the south, being used in the time of sailing ships to travel from South Africa to Australia. Typical wind speeds are 20 to 30 knots, with speeds of 70 knots common in the intense cyclones that form in these latitudes. Even the powerful commercial ships of today can save fuel and time by making use of these winds and the sea surface currents they generate.

Temperatures are usually low, influenced by sea surface temperatures that range from about 13°C in the north near Tasmania to about 4°C in the south near Macquarie Island. Strong southerly winds may be 5°C colder than the water, while northerlies may be warmer by a similar

amount. Further south, sea surface temperatures fall to as low as -1.8°C, cold enough to allow ice to form at the surface. During winter, ice covers the ocean as far north as about 60° south, with icebergs commonly found as far north as 58° south. Icebergs are rare in the waters off Macquarie Island and virtually unheard of as far north as Tasmania.

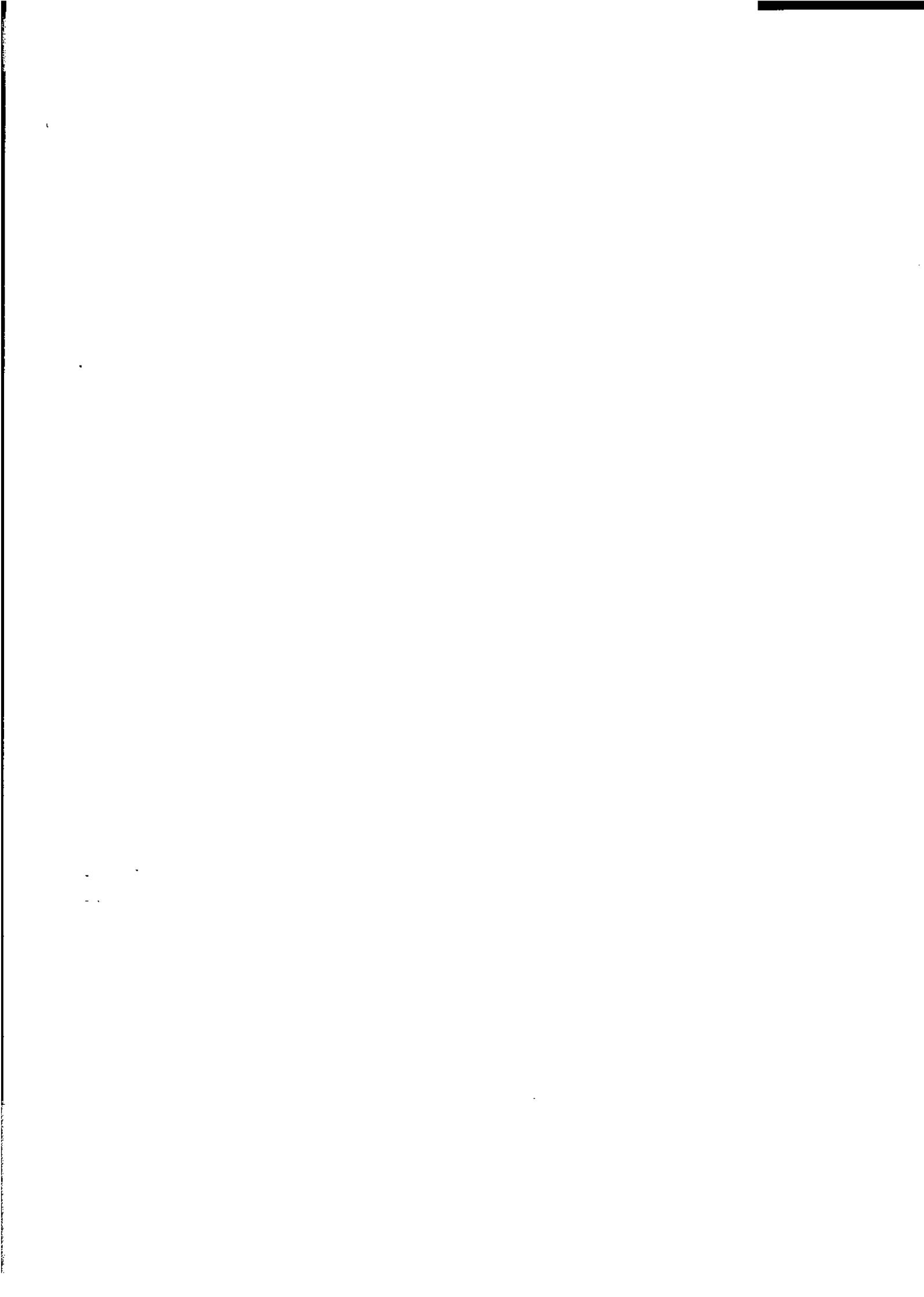
The combination of strong winds, low air temperatures and low water temperatures makes this part of the world hazardous to the unwary traveller. Even the waters surrounding Tasmania are cold enough to kill a person immersed in them for a few hours. Immersion in the sea off Antarctica can kill within minutes.

The traveller in the Southern Ocean may be able to ignore the cold winds from the comfort of a warm cabin, but the one thing that cannot be ignored in smaller ships is the swell—the longer ocean waves.

### A VAST CATCHMENT FOR WAVES

As the winds blow over the southern oceans, waves develop and move across the water. As the waves move out of the area of the strongest winds (or the winds ease), the shorter waves disappear, leaving only the longest of waves, called the 'swell'. Swell waves may travel for thousands of kilometres before dissipating or losing much of their energy when they reach land. Because there is so little land in the southern hemisphere, many swell waves never reach land but dissipate days later, at sea.

For the sea traveller, this means almost never-ending waves, even when the winds are light. For most travellers, a few days aboard allows them to become accustomed to the constant rolling or pitching movement of their ship through the waves. Near Tasmania, the waves are usually 2 to 3 metres from trough to crest, reaching 4 to 5 metres near Macquarie Island. A small boat may become invisible much of the time, and



anybody unfortunate enough to fall overboard becomes very difficult to see, even if they wear brilliantly coloured clothing. When large low pressure systems cause strong south-westerly winds to blow over extensive ocean areas, the swell can reach 8 metres or more, especially near Macquarie Island.

The sea birds, of course, are at home above the waves, taking advantage of the rising air over the crests to gain lift and reduce the energy needed to stay aloft. Above the ship, an albatross is often seen taking advantage of air rising over the ship to glide effortlessly for hours.

#### A WORLD OF CLOUD, RAIN AND SNOW

Captain Cook spent about three years sailing the Southern Ocean, searching for the great southern continent that was thought to exist. During this time, he was able to find his position with three simple tools: an accurate clock, a sextant and a set of mathematical tables. Unfortunately, the use of a sextant requires that the sun and the horizon of the sea be visible. This is not often achieved in the Southern Ocean, because of the persistent cloudiness. A traveller can spend a week at sea without seeing the sun.

Cloud amount varies, but it is rare for clear skies to be experienced. North-westerly winds often bring low cloud and drizzle, with rain at times as troughs approach. Towards Antarctica, of course, snow is more likely than rain. South-westerly winds are

usually noted for lower temperatures and showers, often falling as snow.

#### MACQUARIE, OUR SOUTHERNMOST ISLAND

Macquarie Island is unprotected from the force of the westerlies or from the westerly swells, but the height of the island and its north-south orientation allows it to form a barrier to both wind and waves. As a result, the climate of the protected eastern side is a little more favourable than the western side and the strong westerly winds are often blocked by the higher plateau that runs from the southern tip to the small spit that joins it to a small northern cape. The relative shelter of the eastern side makes it home to many thousands of subantarctic penguins, and also to the elephant seals that breed on its beaches.

Like the oceans that surround it, Macquarie Island is a cloudy, windy place. The traveller can expect only two or three days of sunshine, clear skies and light winds per year. For most of the year, skies are cloudy with rain showers (or snow showers for much of the year) and strong winds bring ocean waves crashing onto the western side of the island. Snow covers most of the island during winter and spring, while the rain and drizzle persist for the summer and autumn.

#### IN SUMMARY

The region south of Tasmania is part of the great Southern Ocean. Climate is cloudy and cold. Showers of rain or snow occur frequently.

## FURTHER READING

Bureau of Meteorology, Hobart, *Monthly Weather Review, Tasmania*.

## ACKNOWLEDGEMENTS

Bureau of Meteorology

Land Information Bureau, Department of Environment and Land Management

## 4 Government



A Clarence City Council meeting with an audience in the gallery, illustrating community interest in local government issues.

*Clarence City Council*

SINCE 1 JANUARY 1901, Australia has been a federation of six States. In 1911 two Territories, the Australian Capital Territory and the Northern Territory, were transferred to the Commonwealth from New South Wales and South Australia. This federal system of government is based on British-derived parliamentary institutions (the Westminster system) and American-derived federal arrangements. Under this system, government in Tasmania is exercised at three levels:

- Commonwealth Government, with authority based on a written constitution and centred in Canberra;
- State Government, with residual powers (powers not reserved for the Commonwealth), and centred in Hobart; and
- local government, with authority derived from State Acts, and operating in 29 subdivisions of the State.

## COMMONWEALTH GOVERNMENT

Legislative power of the Commonwealth is vested in the Commonwealth Parliament which consists of the Sovereign, Queen Elizabeth II (represented by the Governor-General), the Senate and the House of Representatives.

### The Governor-General

Under the Commonwealth Constitution, ultimate executive power is vested in the Crown and is exercised by the Governor-General as the direct representative of the Sovereign. The Queen's status is set out by the *Australia Act 1986*. The Honourable William George Hayden, AC, retires as Governor-General on 16 February 1996 and will be replaced by Sir William Deane, a High Court Judge.

### The Senate

The Senate was originally constituted with the aim of protecting the rights and interests of the States. Today, its main function has become generally that of a house of review.

Since 1984 each State has been represented by 12 senators and, in addition, the Australian Capital Territory and the Northern Territory have been represented by two senators each since the election of 13 December 1975. Each senator's term is normally six years, as half the Senate seats come up for election every three years. However, in the case of a double dissolution of both Houses, half the senators are elected for a six-year term (the first six elected in each State) and half for a three-year term.

In Senate elections each State is an electorate. Electors are required to cast a vote for every candidate standing within the State in order of their preference or for a party or group. Election of members is carried out in accordance with the principles of proportional representation by the single transferable vote.

If a vacancy occurs in the Senate, the appropriate State Government, usually by a joint sitting of Parliament, nominates a replacement, of the same political affiliation, who sits for the remainder of the term.

### The House of Representatives

The founders of the parliamentary system, when designing the House of Representatives, envisaged a legislative body representing the national interest. The party holding a majority of seats in the House of Representatives, therefore controlling the House, provides the Government. Australia is divided into 147 single-member electorates of which five must be Tasmanian.

Election of members is carried out in accordance with the principles of the absolute majority through use of preference voting. If a vacancy occurs, it is filled by holding a by-election. Elections must be held at least every three years.

Representation in the House of Representatives is based upon the general principle of having, as near as practicable, electorates with equal numbers of electors. This is provided by regular electoral redistributions undertaken by an independent Electoral Commission.

#### HOUSE OF REPRESENTATIVES MEMBERSHIP BY STATE, 1995

New South Wales	50
Victoria	37
Queensland	26
South Australia	12
Western Australia	14
Tasmania	5
Northern Territory	1
Australian Capital Territory	2
<b>Total</b>	<b>147</b>

*Source: Australian Electoral Commission*

*House of Representatives and Senate elections, 1993*

The federal election of March 1993 returned the Labor Government under the leadership of Prime Minister, Paul Keating.

In Tasmania, the election resulted in the Labor Party retaining Denison and gaining the seats of Franklin, Bass and Lyons, and the Liberal Party retaining Braddon. In the Senate the Liberal Party won two seats, the Labor Party won three seats and the other seat went to Brian Harradine, an Independent.

### TASMANIAN GOVERNMENT

The Tasmanian Constitution was limited by the establishment of the Commonwealth Constitution. In effect, the Parliament of Tasmania may make laws operative within the State upon all matters not within the exclusive power of the Australian Parliament but, on those matters for which the Australian Government may also legislate, the Tasmanian law may be superseded by the passing of an Act by the Commonwealth Parliament.

Tasmania's legislature consists of the Queen, represented by the Governor, and two Houses of Parliament: the Legislative Council and the House of Assembly.

#### The Governor

The Governor of Tasmania is the representative of the Sovereign in the State and exercises the powers of the Crown in State matters. The Queen appoints the Governor on the advice of the Premier, generally for a five-year term. Powers and duties of the Governor are similar to those of the Governor-General and were gazetted/issued in March 1986.

On all official State occasions, the Governor performs the ceremonial functions as the representative of the Queen. The Governor summons and terminates Parliament; in special circumstances dissolving it after considering the advice of the Premier. Bills which have passed all stages in Parliament are submitted to the Governor for assent. The Governor opens each session of Parliament by outlining the legislative program of the Government, but takes no other part in the sittings of either House.

The Governor's executive powers include the appointment of ministers of the Crown, judges and other important State officers but not those whose appointments may be made by certain statutory corporations. By appointing ministers of the Crown, the Governor creates the Executive Council of the day and is required by instructions to be guided by the advice of this body. The Governor may act against the advice of the Executive Council, but the reasons for such action must be immediately reported to the Queen.

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### HOUSE OF REPRESENTATIVES, TASMANIAN MEMBERS, JUNE 1995

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<i>Member</i>	<i>Party affiliation</i>	<i>Electorate</i>
Adams, D.	ALP	Lyons
Kerr, D.J.C.	ALP	Denison
Miles, C.G.	Liberal	Braddon
Quick, H.	ALP	Franklin
Smith, S.	ALP	Bass

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### TASMANIAN SENATORS, JUNE 1995

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<i>Senator</i>	<i>Party affiliation</i>	<i>Term expires</i>
Abetz, E.	Liberal	1999
Bell, R.	Aust. Democrats	1996
Calvert, P.H.	Liberal	1996
Coates, J.	ALP	1999
Denman, K.	ALP	1999
Devereux, J.R.	Independent	1996
Gibson, B.	Liberal	1999
Harradine, R.W.B.	Independent	1999
Murphy, S.	ALP	1999
Newman, J.N.	Liberal	1996
Sherry, N.J.	ALP	1996
Watson, J.O.W.	Liberal	1996

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## Governor of Tasmania

On 2 July 1995 the Premier confirmed that Sir Guy Stephen Montague Green, AC, KBE, the Chief Justice of Tasmania, would replace the retiring Governor Sir Phillip Bennett in October 1995.

Sir Guy will be Tasmania's first Tasmanian-born Governor. He was born in Launceston in 1937 and graduated in law from the University of Tasmania. He was appointed a magistrate in 1971 before becoming one of the youngest chief justices in Australian legal history in 1973. Since 1981 he has been the longest-serving chief justice in Australia and one of the longest-serving judges. He has been the Lieutenant-Governor since 1982. He was knighted in 1982 and received the Companion of the Order of Australia in 1994.

Sir Guy has served the community in a wide range of roles and public offices, including as Chancellor of the University of Tasmania, Director of the Winston Churchill Memorial Trust, Chairmanship of the Tasmanian Committee of the Duke of Edinburgh Award and Chancellorship of St John Ambulance Australia.



His involvement in judicial administration was through the Australian Institute of Judicial Administration. He was a Council Member (1984-88) and Deputy Chairman (1986-88).

### SUCCESSION OF GOVERNORS, ACTING GOVERNORS, ADMINISTRATORS, FROM 1924

Name	Designation	Term of office	
		From	To
Sir James O'Grady, KCMG	Governor	23.12.24	23.12.30
Hon. Sir Herbert Nicholls, KCMG	Lieutenant-Governor	23.12.30	04.08.33
Sir Ernest Clark, KCB, KCMG, CBE	Governor	04.08.33	04.08.45
Hon. Sir John Morris	Administrator	04.08.45	24.12.45
Admiral Sir Hugh Binney, KCB, KCMG, DSO	Governor	24.12.45	08.05.51
Hon. Sir John Morris, KCMG	Administrator	08.05.51	22.08.51
Rt Hon. Sir Ronald Cross, Bt, KCMG, KCVO	Governor	22.08.51	04.06.58
Hon. Sir Stanley Burbury, KBE	Administrator	04.06.58	21.10.59
Rt Hon. Lord Rowallan, KT, KBE, MC, TD	Governor	21.10.59	25.03.63
Hon. Sir Stanley Burbury, KBE	Administrator	25.03.63	24.09.63
Lt-General Sir Charles Gairdner, GBE, KCMG, KCVO, CB	Governor	24.09.63	11.07.68
Hon. Sir Stanley Burbury, KBE	Administrator	11.07.68	02.12.68
Lt-General Sir Edric Bastyan, KCMG, KCVO, KBE, CB	Governor	02.12.68	30.11.73
Hon. Mr Justice Green	Administrator	30.11.73	05.12.73
Hon. Sir Stanley Burbury, KCMG, KCVO, KBE	Governor	05.12.73	01.04.82
Hon. Sir Guy Green, KBE	Lieutenant-Governor	01.04.82	30.09.82
Sir James Plimsoil, AC, CBE	Governor	01.10.82	08.05.87
Hon. Sir Guy Green, KBE	Lieutenant-Governor	09.05.87	18.10.87
General Sir Phillip Bennett, AC, KBE, DSO	Governor	19.10.87	30.06.95
Hon. Mr Justice William Cox	Administrator	30.06.95	02.10.95
Hon. Sir Guy Green, AC, KBE	Governor	02.10.95	

## The Cabinet and executive government

In Tasmania, as in the other States and the Commonwealth, executive government is based on the system which evolved in Britain in the 18th century, and which is generally known as 'Cabinet', or 'responsible' government. Its essence is that heads of the State (in Tasmania, the Governor) should perform governmental acts on the advice of ministers; that they should choose ministers of State from members of Parliament belonging to the party, or coalition of parties, commanding a majority in the popular House; that the ministry, the Cabinet, so chosen should be collectively responsible to that House for the government of the country and that the ministry should resign or advise an election if it ceases to command a majority there.

The Cabinet system operates chiefly by means of constitutional conventions, customs or understandings, and through institutions that do not form part of the legal structure of government.

In law, the executive power of the State is exercised by the Governor who is advised by, and appoints the Executive Council.

### *The Premier*

The Honourable Ray Groom became Premier in February 1992 after his party won the State election called by the previous minority Labor Premier, The Honourable Michael Field.

A lawyer who practised in Tasmania and interstate, including appearances in the Supreme Court and the High Court, Mr Groom also had a successful career as an Australian Rules footballer with the VFL Club Melbourne.

He was first elected to Federal Parliament in 1975 as the member for Braddon, the seat he held until he resigned from national politics in 1984.

In the Fraser government he had several junior portfolios, serving as Minister for the Environment, Minister for Housing and Community Development and as Minister for Employment and Industrial Relations.

After resigning from Federal Parliament Mr Groom moved to Hobart with his family and became a senior adviser to the then Premier, Mr Robin Gray. In 1986 he was elected as one of the Members for Denison in the State Parliament, and was given responsibility for the portfolios of Forests, Mines and Sea Fisheries. He was elected Deputy Premier in 1988, and successfully unseated the leader of the opposition Robin Gray at his second attempt in December 1991.

## The House of Assembly

The Tasmanian Lower House comprises 35 members elected for a term of four years from five seven-member electorates.

### PREMIERS FROM 1923

Name of Premier	Term of office	
	From	To
J.A. Lyons	25.10.23	15.06.28
J.C. McPhee	15.06.28	15.03.34
Sir Walter Lee	15.03.34	22.06.34
A.G. Ogilvie (a)	22.06.34	10.06.39
E. Dwyer-Gray	11.06.39	18.12.39
R. Cosgrove	18.12.39	18.12.47
E. Brooker	18.12.47	25.02.48
R. Cosgrove	25.02.48	26.08.58
E.E. Reece	26.08.58	26.05.69
W.A. Bethune	26.05.69	03.05.72
E.E. Reece	03.05.72	31.03.75
W.A. Neilson	31.03.75	01.12.77
D.A. Lowe	01.12.77	11.11.81
H.N. Holgate	11.11.81	26.5.82
R.T. Gray	26.05.82	29.06.89
M.W. Field	29.06.89	17.02.92
R.J. Groom	17.02.92	

(a) Tasmania had an unbroken succession of Labor premiers, starting with the Ogilvie ministry (1934) until the electoral defeat of the Reece government on 26 May 1969.

*Electoral system*

Tasmania uses proportional representation known as the Hare–Clark system in elections for the Assembly. The essential features of the system are:

- Party groups, if officially registered, are identified on ballot papers.
- Candidates' positions within groups are rotated so that in 'preferred' positions all candidates appear on the same number of ballot papers.
- A valid vote must show at least seven preferences.
- To secure election, candidates must gain a quota—the total first preference votes divided by eight, plus one vote.
- On polling day, no media advertising and no soliciting of votes near the polling booth is permitted.
- The constituencies are the same five divisions as used for House of Representatives elections.
- There are no by-elections; a vacant seat is filled by a count-back of the vote at the last election.

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**MINISTERS AND THEIR PORTFOLIOS AS AT JUNE 1995**


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The Hon. R.J. Groom	Premier, Minister for State Development and Resources, Minister for Mines, Minister for Forests, Minister for Aboriginal Affairs
The Hon. R.J. Beswick	Deputy Premier, Minister for Education and the Arts, Minister for Industrial Relations and Training, Minister for Public Sector Management
The Hon. I.M. Braid	Minister for Transport, Minister for Works
The Hon. T.J. Cleary	Minister for Environment and Land Management, Minister for National Parks and Wildlife, Minister for Inland Fisheries, Minister for Local Government
The Hon. R. Cornish	Attorney-General, Minister for Justice, Minister assisting the Treasurer, Leader for the Government in the House
The Hon. R.T. Gray	Minister for Primary Industry and Fisheries, Minister for Energy, Minister for TT-Line
The Hon. F.R. Groom	Minister for Community and Health Services
The Hon. P.C. Hodgman	Minister for Tourism, Sport and Recreation, Minister for the Status of Women, Minister for Antarctic Affairs, Minister for Licensing
The Hon. F.L. Madill	Minister for Police and Emergency Services, Minister for Multicultural and Ethnic Affairs, Minister for Consumer Affairs, Minister assisting the Premier
The Hon. A.M. Rundle	Treasurer, Minister for Finance, Minister for Employment, Minister for Racing and Gaming, Minister assisting the Minister for State Development and Resources

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**HOUSE OF ASSEMBLY, MEMBERS, JUNE 1995**


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<i>Electoral division</i>	<i>Member</i>	<i>Party affiliation</i>
Bass	Armstrong, L.J.E.	Tas. Greens
	Benneworth, A.J.	Liberal
	Beswick, The Hon. R.J.	Liberal
	James, G.H.	ALP
	Madill, The Hon. F.L.	Liberal
	Napier, S.D.	Liberal
Braddon	Patmore, The Hon. P.J.	ALP
	Bonde, W.B.	Liberal
	Cains, C.S.	Liberal
	Cornish, The Hon. R.	Liberal
	Field, The Hon. M.W.	ALP
	Groom, The Hon. F.R.	Liberal
Denison	Hollister, D.L.	Tas. Greens
	Rundle, The Hon. A.M.	Liberal
	Amos, J.J.	ALP
	Barker, J.S.	Liberal
	Putt, P.	Tas. Greens.
	Groom, The Hon. R.J.	Liberal
Franklin	Hodgman, The Hon. W.M.	Liberal
	Jackson, The Hon. J.L.	ALP
	White, The Hon. J.C.	ALP
	Bladef, The Hon. F.M.	ALP
	Cleary, The Hon. T.J.	Liberal
	Davison, B.F.	Liberal
Lyons	Foley, M.B.	Tas. Greens
	Hodgman, The Hon. P.C.L.	Liberal
	Lennon, P.A.	ALP
	Sheppard, J.C.	ALP
	Braid, The Hon. I.M.	Liberal
	Gray, The Hon. R.T.	Liberal
Lyons	Llewellyn, The Hon. D.E.	ALP
	Mainwaring, R.G.	Liberal
	Milne, C.A.	Tas. Greens
	Page, The Hon. G.R.	Liberal
	Polley, The Hon. M.R.	ALP

Speaker—The Hon. G.R. Page  
 Chairman of Committees—Mr J.S. Barker  
 Leader of the Opposition—The Hon. M.W. Field  
 Source: *The House of Assembly*

### *State election, 1992*

The May 1989 poll resulted in the Green Independents holding the balance of power in the Parliament, with no party able to govern in its own right. The five Green Independents and the parliamentary Labor Party signed an 'Accord' which ensured the Labor Party majority support in the Parliament. The Accord ended in October 1990 after Cabinet endorsed the Forests and Forest Industry Strategy.

The Green Independents continued to fight the progress of the legislation, but the Labor and Liberal parties combined their numbers to ensure its success in November 1991. An election was called by Michael Field for February 1992, which resulted in the election of 19 Liberal Party members, 11 Labor Party members and 5 Green Independents.

## The Legislative Council

The Legislative Council has the tradition of being a non-party House; in June 1995 the composition of the Council was 15 Independents, 3 Labour Party members and one Liberal Party member. The Leader for the Government in the Legislative Council therefore cannot rely upon a vote taken on party lines to ensure the passage of any Government bill. Contrary to the House of Assembly where parties usually dominate to ensure the passage of Government legislation, no such certainty exists with legislation through the Council. As a result it is not unusual for legislation to be amended or even rejected. Where conflict occurs between the two Houses, 'managers' are appointed from each House to meet and attempt to resolve the dispute. Occasionally, even such 'Managers Conferences' fail to resolve the differences.

Following conflict between the two Houses of Parliament over a money bill during 1924 and 1925, the *Constitutional Amendment Act 1926* was passed. This Act defined the relations between the two Houses especially with regard to the passing of money bills.

- The Legislative Council retains the right to reject any bill, including a money bill.
- The Council is specifically prevented from amending bills to raise revenue for the ordinary annual services of the Government and bills imposing land and income tax.
- It can suggest to the House of Assembly that amendments be made but the adoption or rejection of such amendments is at the discretion of the Assembly.

Apart from the above specific exception, the Council retains the right to amend money bills, such as those dealing with loan funds. The House of Assembly is given the sole right to initiate bills for the raising of revenue and the imposition of taxes. Finally, the powers of the two Houses are declared equal in all matters except for these specific exceptions.

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### LEGISLATIVE COUNCIL MEMBERS, JUNE 1995

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<i>Electoral division</i>	<i>Member</i>	<i>Party</i>	<i>Term expires</i>
Buckingham	Crean, The Hon. D.M.	ALP	1998
Cornwall	Bailey, The Hon. R.F.	Independent	1996
Derwent	Aird, The Hon. M.A.	ALP	1997
Gordon	Schulze, The Hon. P.R.	Independent	2000
Hobart	Parkinson, The Hon. D.J.	ALP	2000
Huon	Meyer, The Hon. A.Y.	Independent	1996
Launceston	Wing, The Hon. D.G.	Independent	2000
Macquarie	Shaw, The Hon. G.A.	Independent	1998
Meander	Hope, The Hon. R.T.	Independent	1997
Mersey	Squibb, The Hon. G.B.	Independent	1996
Monmouth	Wilson, The Hon. S.J.	Independent	1999
Newdegate	Ginn, The Hon. R.W.	Independent	1999
Pembroke	McKay, The Hon. P.C.	Liberal	2001
Queenborough	Wilkinson, The Hon. J.S.	Independent	2001
Russell	Fletcher, The Hon. A.W.	Independent	1999
South Esk	Ratray, The Hon. C.L.	Independent	1998
Tamar	Loone, The Hon. J.A.	Independent	2001
West Devon	Hiscutt, The Hon. D.M.	Independent	2001
Westmorland	Brookes, The Hon. H.G.	Independent	1997

President—The Hon. R.T. Hope

Deputy President and Chairman of Committees—The Hon. A.Y. Meyer

Leader for the Government—The Hon. P.C. McKay

Deputy Leader for the Government—The Hon. A.W. Fletcher

*Legislative Council elections*

Members of the Legislative Council are elected by 19 single-member electorates for six-year terms by preferential voting. Elections are held every year to elect three members except for every sixth year when four members are elected.

As for the Assembly, candidates' names are rotated on the ballot papers. To be elected a candidate must obtain 50% of the valid votes plus one, including preferences. A valid vote must show at least three preferences.

Rotational elections were held for the electorates of Gordon, Launceston and Hobart in 1994 and Pembroke, Queenborough, Tamar and West Devon in 1995. In 1994 the Hon. Peter Schulze was returned to the seat of Gordon, the Hon. Donald Wing was returned to the seat of Launceston, and the Hon. Douglas Parkinson was elected to the seat of Hobart.

In 1995, two of the Sitting Members were returned: the Hon. Peter McKay in Pembroke, and the Hon. John Loone in Tamar. The Hon. Desmond Hiscutt was elected to the seat of West Devon on the retirement of his brother Hugh Hiscutt and the Hon. Jim Wilkinson was elected to the seat of Queenborough upon the retirement of the Hon. Eric John Stopp. The Hon. Michael Aird was elected to the seat of Derwent on the retirement of the Hon. Charles Batt.

**LOCAL GOVERNMENT**

Local government in Tasmania is administered by 29 councils including the cities of Hobart, Launceston, Glenorchy, Devonport, Burnie and Clarence. They provide services such as garbage and waste disposal facilities, roads and footpaths, drainage, health inspection, parks, recreation facilities, gardens, cemeteries and community centres as well as water supply and sewerage.

~ *The following text was contributed by Dr Colin Balmer, ~*  
*Deputy Director, Municipal Association of Tasmania*

During the 1990s Tasmanian local government has undergone more change than at any time since its establishment, and this trend appears set to continue until the turn of the century.

Over the past fifty years since World War II there have been several attempts at reforming the system, but these came to little except for the merger of Queenstown and Gormanston to create the Municipality of Lyell, and the absorption of St Leonards and Lilydale into the City of Launceston during the 1980s. The recent reforms have been focused on structural change, legislative change affecting the powers local government councils may exercise, and procedural changes to the manner in which they operate.

**Structural change**

In November 1989 the Minister for Local Government announced that he would initiate a reference to the Local Government Advisory Board aimed at reducing the number of councils. Instead of opposing this move, Local Government responded by suggesting that the local government system be 'modernised', with a rationalisation of State-local functions and finances, legislative reform, and structural change all considered as an integrated package. This reform package is now partly in place, while reviews to finalise it are underway.

Structural change was completed first, with the Local Government Advisory Board reporting to the Minister for Local Government in September 1992, and the reduction in

the number of councils from 46 to 29, that it had recommended, coming into effect in April 1993. These territorial changes affected mainly the smaller councils as most were abolished through mergers with neighbours. Most of the larger cities were left largely unchanged.

An important part of the structural changes has been the decision by most councils to abandon the ward, or electoral district, base for council elections. Only three councils now retain this base, with all others having their councillors elected by the whole municipality.

### **Legislative changes**

As part of the modernisation program, a new Local Government Act came into effect from the beginning of 1994. A package of several other Acts, dealing with the land use planning system and environment protection, has been enacted. A new Building Act is expected to be considered by Parliament late in 1995.

The *Local Government Act 1993* provides the constitution under which councils operate. It removed the distinctions between Hobart and Launceston (which formerly operated under their own legislation) and all other councils by making all councils subject to the same Act. The Act also provides councils with a 'general competence power', enabling them to take whatever measures are needed to give effect to their decisions, rather than being restricted to exercising only those few powers which are actually listed, as was the case with the former Local Government Act.

The Local Government Act, while generally continuing the rating powers of the previous Act, also provides a power to set differential rates. This will increase flexibility and enable councils to apply their revenue raising powers in more sensitive and effective ways than was previously the case. Differential rating has been available in the other States for some time.

Councils are also able to delegate matters to local committees if they wish. This is particularly relevant for councils which are large in area (such as Northern Midlands) or otherwise have distinct local areas (as in the case of Kingborough which now incorporates Bruny Island). Councils may also join with other councils to create joint authorities, when they decide, for example, that they will be able to undertake a particular function more efficiently by operating over a wider area than a single municipal area. The first joint authority has been established by four councils in the north of the State to provide waste disposal services.

The planning and environment legislation consists of several separate Acts. A similar philosophy underlies all these Acts: the desired outcomes are to be achieved by following the procedures which are most appropriate, rather than ones prescribed in legislation.

The *State Policies and Projects Act 1993*, among other things, provides for the development of State Sustainable Development Policies, which will ultimately provide a set of guidelines for actions by all agencies (public and private) to ensure that developments will be ecologically sustainable in the long term. It also provides for the preparation of a regular environment audit report.

The *Land Use Planning and Approvals Act 1993* provides a framework within which councils and marine boards may undertake their planning responsibilities for all municipal areas and coastal waters. It also establishes a Land Use Planning Review Panel to approve planning and development applications.

The *Environmental Management and Pollution Control Act 1994* provides for the control of activities that could lead to environmental harm. It classifies functional activities into three categories, with local government being responsible for assessing those falling into Level 1. To assist in this, an assessment manual has been prepared to provide

guidelines. Codes of practice have also been developed to provide additional guidance.

The *Resource Management and Planning Appeal Tribunal Act 1994* establishes a tribunal to resolve conflicts, preferably by mediation, between parties in relation to planning and environment management matters.

These planning and environmental management Acts are of central importance to local government, which regards control over the development and management of the local area as the core of its functional responsibilities.

### Procedural changes

One of the more far reaching changes accompanying the establishment of the new local government arrangements was the decision to conduct elections by post. All residents who are listed on the House of Assembly electoral role automatically receive ballot papers (and a reply paid envelope) for the municipal area in which they live. Thus they are enabled to vote in the council elections without going to a polling booth, if they wish.

This system is expected to be extended to include property owners who are resident in another municipal area elsewhere in Tasmania.

All elected members of local government are now elected for four-year terms, with half the members of each council retiring each two years. With one exception (Launceston), the mayors and deputy mayors of the cities are elected at large by the community. Along with Launceston, the principal member of all other units, now termed 'councils', rather than 'municipalities', is chosen from among councillors at a council meeting.

The principal member is now termed 'mayor' for all units except the capital city of Hobart, replacing the term 'warden' which had been used for municipality leaders. Hobart's chief elected member continues to be termed lord mayor.

The Local Government Act allocates to elected councillors the roles of setting policy and determining the directions of the council, and requires the council to appoint a general manager who is charged with providing professional advice on all matters considered by the councillors and with implementing their decisions.

The council is required to develop a strategic plan covering the forthcoming five years, and to consult with the local community both in determining the contents of the plan, and in relation to the annual report outlining the year's events. Through this means, and others of a similar nature, the Act effectively makes councils responsible to the communities they serve, rather than to the Minister for Local Government and the State Government.

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## MAYORS, JUNE 1995

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<i>Council</i>	<i>Mayor</i>
Break O'Day	Cr Robert Legge
Brighton	Cr Tony Foster
Burnie City	Ald. Sandra French
Central Coast	Cr Sue Smith
Central Highlands	Cr Geoff Ashton-Jones
Circular Head	Cr James Smith
Clarence City	Ald. Cathy Edwards
Devonport City	Ald. Geoff Squibb, MLC
Dorset	Cr Peter Partridge
Flinders	Cr Shirley Holloway
George Town	Cr Heather Barwick
Glamorgan/Spring Bay	Cr Elwyn Bailey
Glenorchy City	Ald. Terry Martin
Hobart City	Ald. Doone Kennedy
Huon Valley	Cr Greg Norris
Kentish	Cr Lawrence Connors
Kingborough	Cr Reg S. Gee
King Island	Cr Vernon Philbey
Latrobe	Cr Miles Ford
Launceston City	Ald. Tony Peck
Meander Valley	Cr Denise Swan
New Norfolk	Cr Ken Britton
Northern Midlands	Cr Kenneth von Bibra
Sorell	Cr Carmel Torenus
Southern Midlands	Cr Colin Howlett
Tasman	Cr Neil Noye
Waratah/Wynyard	Cr Cyril Dixon
West Coast	Cr Murray Waller
West Tamar	Cr Eldon Griffiths

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### Local government today

As a consequence of the reforms that have been and are occurring, local government now employs approximately 4,300 people, or 2.2% of the public sector workforce in Tasmania. Its activities contribute 2.7% of the State Gross Product.

Collectively, councils raise a total of \$172 million annually from all revenue sources. Of these, the property rate is the most important, with the average revenue raised by councils from this source being approximately \$5 million in 1994–95. This amount is a significant increase on the average amount raised prior to the amalgamations that occurred in 1993. This increased financial capacity, coupled as it has been with an equally significant increase in the numbers of professionally qualified personnel, either employed as staff or retained as regular consultants, has been accompanied by a marked increase in the effectiveness and efficiency of service provision.

Of the reforms foreshadowed when the modernisation program commenced in 1990, those that remain incomplete are the rationalisation of the roles, functions and inter-governmental financial relationships of the State and local spheres of government. A review with this rationalisation as its goal is underway, under the chairmanship of Mr Robert Hand. The review committee is expected to complete the first phase of its program early in 1996 with a report containing recommendations relating to a number of infrastructure services and their financial implications.

### Conclusion

Tasmanian local government enjoys a positive working partnership with the State Government. This is evidenced by the State's willingness to enter into three formal protocols with local government, signed in 1992 and 1993, guaranteeing the completion of the modernisation program and the allocation of resources for this purpose.

For its part, local government has welcomed the increased responsibility passed to it by the Local Government Act, and has modified its processes to now operate in a more transparent manner in close consultation with the communities that each council serves. It recognises the developments occurring in the wider society—both within Tasmania and the Commonwealth as a whole—in relation both to effective sustainable environmental management and increased operational efficiency. To these ends it is playing a more positive role in environmental management than formerly and is readying itself for the changes that will accompany the much discussed competition policy agreed to by the Council of Australian Governments.

### FURTHER READING

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Solomon, D., *Australia's Government and Parliament* (6th edition), Nelson, Melbourne, 1984.  
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### ACKNOWLEDGEMENT

Dr Colin Balmer, Deputy Director, Municipal Association of Tasmania

## 5 Law and order



Lawyers were among the many Tasmanians who stepped out in denim for Jeans for Genes Day, in support of medical research into genetic diseases.

*The Mercury*

TASMANIA'S LAWS, LEGAL SYSTEM AND INSTITUTIONS are derived from those of Britain. For a time English law applied directly to the colony and by Federation in 1901, all Australian States had a legal system firmly based on the Common Law of England. With Federation, Tasmanians also became subject to Commonwealth laws enforced by administratively separate institutions.

The legal system is based on the political and philosophical ideal called *the rule of law*. This means that a person's relations with other people and the State are governed by law, not by force or arbitrary power. The Parliament enacts the law and officers who administer the law are responsible, through Parliament, to the people.

Another principle of *the rule of law* is that no person should be deprived of his life, liberty or property, except by fair trial in an open court presided over by impartial judges. In law, all people are equal.

Australia has two sources of law: case law and legislation or statute law. Case law, also called common law, consists of rules resulting from the decisions of the courts. When a case comes before the courts, the judges generally apply the law as laid down or interpreted by earlier courts that decided similar cases.

The Commonwealth and State Parliaments make Australia's laws within powers set out in the Constitution. Often legislation gives power to the Governor-General, Governor or a minister to make rules of law. These laws, called subordinate or delegated legislation, are an important part of the law. State and Commonwealth police are charged with enforcing the law. The police have broad powers to investigate breaches of the law and to arrest people suspected of crimes. It is usually the police who institute criminal proceedings. Each State as well as the Commonwealth has its own police force.

After formal charges are laid, guilt or innocence is determined through trial in a court. In Tasmania this is either in the Supreme Court or, for less serious matters, in a lower court. Each court has jurisdiction in civil and criminal matters. For civil trials and criminal matters in the lower courts, the issue is generally determined by a magistrate. In the Supreme Court, questions of guilt in criminal matters are decided by a jury.

Although the Tasmanian jury system is based on the English system, since 1934 it has embodied the principle of allowing majority decisions in certain circumstances, instead of requiring the unanimous decisions once characteristic of juries in England. In criminal cases, a 10-2 decision is accepted instead of 12-0 after defined periods of deliberation. In the case of murder, 12-0 is necessary to convict. A 10-2 decision can bring in a verdict of not guilty, or not guilty of murder but guilty of a lesser crime.

Civil litigants may elect to have a seven-member jury. If after three hours deliberation the jury cannot reach a 7-0 decision, a 5-2 decision is accepted. If the minimum 5-2 decision cannot be reached after four hours, the jury may be discharged.

At present, all people listed on the electoral roll below the age of 65, can be called for service as jurors. Persons are disqualified from jury service if they have been convicted of an offence; are bound by a recognisance, for example a good behaviour bond; are subject to a community service order; or are on probation. Within limits prescribed in legislation, the presiding officer of the court imposes a sentence of imprisonment, a fine, probation, or a community service order. A term of imprisonment may be suspended on condition of good behaviour.

## POLICE

Tasmania Police is directed by a Police Commissioner, who is answerable to the Minister for Police and Emergency Services. At 30 June 1994 Tasmania's police force consisted of 1,065 officers (one per 443 people), plus support personnel. The aim of Tasmania Police is to maintain law and order, protect life and property, enhance community safety and reduce the incidence and fear of crime.

Tasmania Police is currently undergoing a number of reforms as part of a significant program of modernisation which focuses on providing a more effective and efficient service in line with the outcomes demanded by Government and corporate objectives.

### OFFENCES RECORDED BY TASMANIA POLICE

	1992-93	1993-94
Offences against the person	1 878	2 307
Offences against property	39 600	48 198
Fraud and similar offences	1 397	1 584
Other offences	28	78

Source: Department of Police, Annual Report

## Crime

Over the past five years there has been an upward trend in both offences against property and offences against the person. Burglary and stealing offences account for the majority of property crimes whereas assault accounts for a large proportion of offences against the person. Crime frequency for 1993-94 was:

Offences against property	One offence every 11 minutes
Burglary: buildings	One offence every 39 minutes
Burglary: motor vehicles	One offence every 131 minutes
Stealing: motor vehicles	One offence every 328 minutes

Source: Tasmania Police

## Road traffic control

The role of police involved in traffic duties is to ensure the free flow of traffic, improve and promote safety for road users, reduce the number and severity of vehicle accidents, and enforce compliance with the traffic laws.

### *The road toll*

The decrease in road fatalities in recent years may be attributed to public education, the economic recession and improved policing and engineering methods.

Alcohol, as a contributing factor in these crashes has been decreasing since the introduction (in December 1991) of greater financial penalties. Speed, however, is still a major contributing factor in accidents.

Research has shown that excessive speed (for particular conditions) is a major factor in serious traffic crashes. Approximately 40% of road fatalities occur in accidents where excessive speed was judged to be a causal factor. Motorists who are detected to be exceeding the prescribed speed limit face the following penalties:

Speed	Demerits	Fine
1-14 km/h	1 point	\$50
15-29 km/h	3 points	\$110
30-44 km/h	4 points	\$140
45 km/h or more	6 points	\$170

Speed cameras were introduced in Tasmania on 18 March 1993 as a road safety measure. Four speed cameras operate throughout the State (one each in the Southern, Eastern, Northern and Western Police Districts).

## Community policing

Tasmania Police is gradually moving towards greater community involvement; with the police and the community working together to prevent and solve crime.

### *Neighbourhood Watch*

A good example of Tasmania Police and the community working together is through the Neighbourhood Watch scheme. The scheme is a community-based, crime-prevention program which aims to minimise the incidence of preventable crime, particularly burglary, within a defined area. Tasmania's involvement in the Neighbourhood Watch scheme began in 1986, with Watch areas initially being established in Lindisfarne, Geilston Bay and Flagstaff Gully. At 30 June 1994 there were 116 Neighbourhood Watch areas State-wide, growing to 138 by mid-1995, with each area covering around 600 homes.

Neighbourhood Watch objectives are to minimise preventable crime; maximise the reporting of crime and suspicious behaviour; increase personal and property security through education and the marking of valuables for easy identification; reduce the fear of criminal activity; highlight the scheme through erecting signs; and improve community awareness and interaction.

Other initiatives which are being pursued by Tasmania Police include Rural Watch; Fisherman's Watch; Taxi Watch; Safety House (which gives children a safe refuge in the event of stress); the Adopt-a-Cop program (a program designed to bridge the gap between police and the community by encouraging children to regard police as their friends); mobile police offices (introduced in various parts of the State to give police a greater presence in the community); bicycle patrols; the Drug Education Program (established to develop strategies to deliver effective drug education programs to schools, the community and industry, addressing both legal and illegal drugs); Police and Citizen Youth Clubs; Citizen and Police Liaison Groups; Bush Watch; and Business Watch.

#### *Tasmania Police Community Drug Education Program*

The Tasmania Police Community Drug Education Program is a nationally funded initiative which has enabled a team of police officers to be trained to deliver a program of drug education sessions to community groups and grades 9–12 students. The goals of the program are to:

- minimise the damage and adverse effects associated with the use of drugs to individuals and the community;
- minimise the level and impact of drug related offences within the community; and
- increase positive police participation in the community.

The program is based on aspects of the law with a focus on harm minimisation and it can focus on any drugs that are appropriate to the group. They can include alcohol, tobacco, pharmaceuticals and illicit drugs.

#### *Domestic violence*

Domestic violence covers a wide range of criminal offences such as physical assault, sexual assault and murder. These offences are usually accompanied by psychological, emotional, social, financial and other forms of abuse.

Since the 1980s, several acts of legislation have been amended and introduced to strengthen police powers and provide for the protection of victims of domestic violence. In 1992 the *Criminal Code Act 1924*, *Police Offences Act 1935* and the *Justices Act 1959* were amended and updated. The main effects of these legislative changes are to:

- provide the police with power to arrest where they had reasonable grounds for believing an offence had been committed;
- enable police to place conditions on the bail of offenders, prior to release from police custody;
- provide police with a greater power to search premises and seize objects used to threaten or intimidate victims; and
- enable the police to arrest an offender for the purpose of applying for a restraint order, where the police believe that the offender has intimidated a person and the intimidation is likely to continue and lead to an assault.

Tasmania Police works closely with the Crisis Intervention Unit within the Department of Community and Health Services to help families involved in family violence.

## Crime Stoppers

While programs such as Neighbourhood Watch and Business Watch are effective preventive measures, Crime Stoppers has become an extremely successful community-based crime solving initiative in States of Australia and countries around the world since it was introduced in New Mexico in 1976.

It is based on the premise that for the majority of crime committed, some person other than the offender has the ability to provide information that will solve that crime, or assist to solve it.

Crime Stoppers was introduced to Tasmania in February 1994. The program relies on the cooperation between police, the general community and the media to provide a flow of information about crime and criminals as a result of publicity and information.

The program operates through a weekly crime segment shown on the Southern Cross television station. Weekly target crimes are featured, complemented by daily newspaper and radio station coverage. The crime is shown at the scene, and police request information on a crime that has proven to be difficult to solve through traditional methods.

These weekly target crimes also act as a promotional avenue for the program in that

it encourages members of the public to provide information about other crimes.

Personnel receiving the information evaluate it, make initial enquiries and then pass it on to the relevant investigating agencies.

The Crime Stoppers telephone line guarantees the anonymity of the caller: informants are identified by the use of an alphanumeric code given at the time of calling.

Informants may be entitled to a reward of up to \$1,000 for information that results in an arrest or charges. There is no specified minimum reward and in special circumstances the maximum reward may be increased on specific recommendations of the police executive officer.

Crime Stoppers in Tasmania has achieved the following to 22 June 1995:

Property recovered	\$38 840
Drugs seized	\$206 025
Arrests	38
Charges	186

Crime Stoppers aims to make Tasmania a safer and more secure place by actively involving the community in the fight against crime.

## Police staffing

The basic requirements for entry to Tasmania Police are that a person is an Australian citizen or permanent resident of Australia; is a minimum age of 18 years; is medically and physically fit; holds a current motor vehicle licence; holds a current senior first aid certificate and a Bronze Medallion life saving award. Tertiary qualifications are preferred although applicants who have not reached this standard will be considered.

During 1993-94, 80 recruits were inducted to Tasmania Police. New recruits undertake a 30-week residential course at the Police Academy at Rokeby, near Hobart. Training involves a range of studies including law enforcement, public service and the social implications of policing in society. A greater emphasis is now placed on community policing with a partnership approach and the provision of quality service. Recruits participate in classroom instruction, practical exercises and field experience at police stations; they also undertake driver training, firearm training and learn self defence.

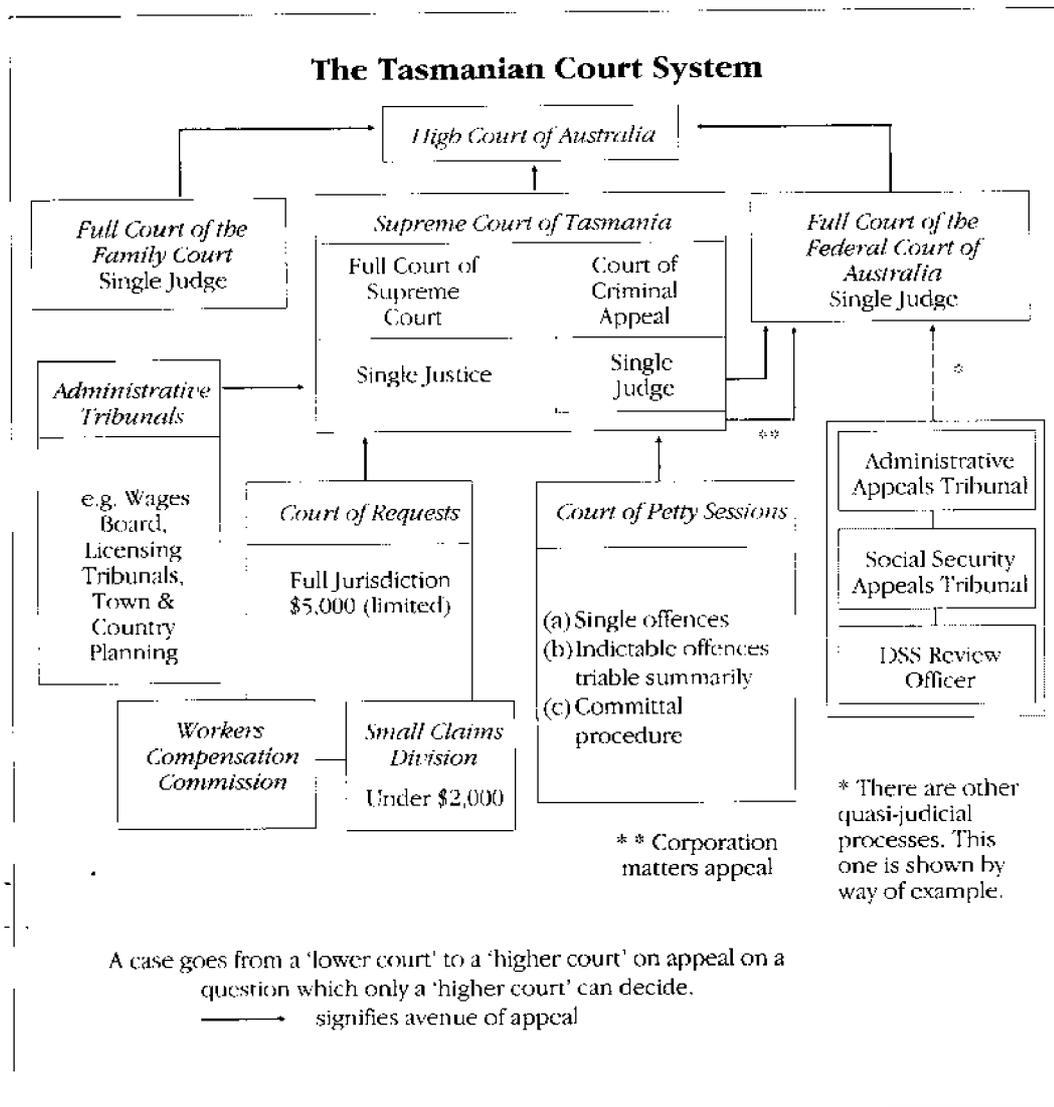
## COURTS

Just as all Australians live with two sets of laws, Federal and State, these laws are enforced by two sets of courts, Tasmanian State Courts and Federal Courts.

Tasmania has a two-tiered system of courts which consists of the Magistrate's Court (lower courts) and the Supreme Court of Tasmania. States such as Victoria have a three-tier system with 'County Courts' between the Magistrate's Courts and the Supreme Court.

Although not strictly courts, there are also a number of tribunals, boards and commissions set up under particular statutes to act as specialised courts. An example of this is the Wardens' Court, constituted under the *Mining Act 1929* to hear matters involving mining licences.

The courts and tribunals are usually open to the public, although some may restrict access, such as children's courts where the child, the child's parents and any legal representatives may be the only people allowed into the court.



*Offenders and offences proven*

During 1993, there were 11,984 people convicted of offences (excluding minor traffic offences) in Tasmanian courts, a decrease of 8.5% compared with the 13,100 offenders convicted in 1992. In the higher courts, 216 people were convicted. In the lower courts, 10,565 were convicted, and in the Children's Courts, 1,203 people were convicted.

Compared with the figures of five years ago, the number of people convicted in 1993 in all courts fell by 15.4%. For higher courts, however, there was an increase of 7.5%, while in the lower courts, there was a decrease of 14.5%. In the Children's Courts the number of people convicted fell by 24.7%.

In 1993, of the 31,843 offences finalised in Tasmanian courts, 87.1% were proven. In the higher courts, 80.4% of offences finalised were proven. Comparable figures for lower and Children's Courts were 87.0% and 90.7% respectively.

In the higher courts there was an average of 4.2 offences proven for every person convicted. This was much higher than the 2.3 offences proven per person convicted in the lower courts, and the 2.4 offences in the Children's Courts.

*Characteristics of offenders*

In 1993, of all people convicted in Tasmanian courts, 85.1% were males. Male offenders were particularly predominant in cases heard in the higher court, where 92.1% of offenders were males.

In the lower courts, approximately half of all offenders were aged less than 25 years.

*Most serious offences proven*

In 1993 in the lower courts, 32.7% of people appearing were convicted of motor vehicle, traffic and related offences, and 29.6% were convicted of offences against good order. In the Children's Courts, offences against good order contributed 33.2% of all most serious offences proven, and breaking and entering offences, 47.0%. The higher courts had a high proportion of breaking and entering offences, 36.6%, and offences against the person, 33.8%.

**Tasmanian Supreme Court**

This is the highest State court and it comprises one Chief Justice and six other judges all of whom are formally appointed by the Governor acting on the advice of the State Government. The Supreme Court has jurisdiction for any civil action with no upper money limit as well as criminal jurisdiction for all offences to be heard by a jury. It also has some jurisdiction which is not given to the Magistrate's Court in equity, probate, and admiralty. The Supreme Court hears appeals from civil and criminal decisions of the Magistrate's Court. The Full Court of the Supreme Court (which consists of three Supreme Court judges) hears appeals from decisions of a single judge in the ordinary Supreme Court. Similarly, the Court of Criminal Appeal (also with three judges) hears appeals from decisions of a single trial judge in criminal cases.

**The Supreme Court of Tasmania***Chief Justice*

The Hon. Mr Justice William Cox,  
appointed 1995.

*Puisne Judges*

The Hon. Mr Justice Peter Underwood,  
appointed 1984.  
The Hon. Mr Justice Christopher Wright,  
appointed 1986.  
The Hon. Mr Justice Ewan Crawford,  
appointed 1988.  
The Hon. Mr Justice William Zeeman,  
appointed 1990.  
The Hon. Mr Justice Pierre Slicer,  
appointed 1991.

(The number of judges is being reviewed at  
September 1995.)

<b>TASMANIAN SUPREME COURT, OFFENCES, 1993</b>		
<i>Offence</i>	<i>Finalised</i>	<i>Proven</i>
Offences against the person	194	127
Robbery and extortion	35	33
Breaking and entering, fraud and other offences involving theft	649	530
Property damage and environmental offences	44	32
Offences against good order	14	13
Drug offences	71	56
Motor vehicle, traffic and related offences	10	3
Other	121	121
<b>Total</b>	<b>1 138</b>	<b>915</b>

*Source: ABS catalogue no. 4508.6, final issue*

The judges hear appeals in rotation. If a party wishes to appeal from a decision of the appellate jurisdictions of the Supreme Court, they can only go the High Court of Australia.

In 1993, 279 defendants appeared in the Supreme Court. Of these 77.4% were convicted. Males accounted for 92.1% of those convicted, while 39.4% of all offenders were aged less than 25 years. Persons under 25 years of age accounted for 49% of breaking and entering, fraud etc. offences proven and 57.1% of robbery and extortion offences.

In the higher courts for 1993, there were 216 defendants convicted and 915 offences proven. Some 80.4% of all offences finalised were proven. This proportion varied by type of offence. Of the 194 offences against the person finalised, 65.5% were proven. For breaking and entering, fraud, etc. the proportion proven was 81.7%, while for property damage and drug offences the proportions were 72.7% and 78.9%, respectively.

#### **Magistrate's Court (Tasmanian lower courts)**

The Magistrate's Court is quite a recent innovation in Tasmania. Until 1989 Tasmania had two courts of summary jurisdiction. Summary cases are minor ones tried without a jury. These were the Court of Petty Sessions (which had criminal jurisdiction) and the Court of Requests (which had civil—that is, non-criminal—jurisdiction over money claims which did not exceed \$5,000). In 1989, these two courts were effectively incorporated into a new lower court to be known as the Magistrate's Court, though it is still widely known by its previous names.

This court consists of a Chief Magistrate, a Deputy Chief Magistrate and various other magistrates who are appointed by the Governor (though by constitutional convention he or she will act on the advice of the government of the day). By virtue of their office, the magistrates are also Justices of the Peace, Commissioners of the Court of Requests, Workers' Compensation Commissioners and Coroners. As a result of this diversity of offices, the Magistrate's Court handles a wide variety of legal actions.

In its criminal jurisdiction, the court hears most criminal offences such as drink driving. In addition, the court can hear some less serious instances of more serious crimes. For example, stealing is a serious crime, but where the amount is only small, the Magistrate's Court will hear the matter. Finally, the court will also hear committal proceedings in more serious criminal cases.

The Children's Court is also part of the Magistrate's Court with jurisdiction to hear criminal charges against children and young people to the age of 17 years.

In 1993, in Tasmanian lower courts, of the 11,687 appearances by defendants, 10,567, 90.4%, were convicted of offences. Males accounted for 85.8% of convicted persons. Persons under 25 years of age accounted for almost half of the persons convicted, 48.5%. For the 10,567 offenders convicted in lower courts in 1993, 23,894 offences were proven at an average of 2.3 offences per person.

#### *Courts of Petty Sessions*

There are Courts of Petty Sessions sitting in Hobart, Launceston, Devonport and Burnie, as well as temporary courts in other country centres. The court is constituted by a magistrate or two or more lay justices. In major population centres, a court sits regularly. In smaller centres a court sits less frequently or is convened as needed.

A Court of Petty Sessions deals with the most common offences such as drink driving and less serious instances of stealing, assault and drug offences. In more serious criminal cases like murder, manslaughter or conspiracy to pervert the course of justice, the magistrate may hold a preliminary (committal) hearing. This hearing is held to decide whether there is enough evidence to send the accused person to a higher court for trial.

#### *Courts of Requests*

These are constituted as courts with civil jurisdiction for particular municipalities, in accordance with the authority given by the *Local Courts Act 1896*. Courts are held before a commissioner who is usually a magistrate. Every court has jurisdiction throughout the State but a plaintiff may have their action struck out if they bring it in a court other than the court nearest to which the cause of action arose.

The current jurisdiction of a Court of Requests covers all personal actions where the debt or damage claimed does not exceed \$5,000.

The Small Claims Division of the Magistrate's Court was established in 1985 to deal with claims of up to \$2,000. The primary function of the magistrate hearing the claim is to attempt to bring the parties in a dispute to an acceptable settlement. If the magistrate cannot do so, they may determine the matter in dispute. Proceedings in this jurisdiction are private, straightforward and informal. Legal practitioners are excluded as a general rule, and the magistrate may proceed as they see fit.

New legislation to replace the *Local Courts Act* has been passed but is yet to be proclaimed. This legislation establishes the Civil Division of the Magistrate's Court and is designed to streamline proceedings in the civil jurisdiction. It will be able to deal with claims up to \$20,000.

### **TASMANIAN LOWER COURTS, OFFENCES, 1993**

<i>Offence</i>	<i>Finalised</i>	<i>Proven</i>
Offences against the person	1 081	799
Robbery and extortion	24	2
Breaking and entering, fraud and other offences involving theft	8 916	7 950
Property damage and environmental offences	645	562
Offences against good order	6 795	5 977
Drug offences	3 763	3 468
Motor vehicle, traffic and related offences	4 904	3 885
Other	1 340	1 251
<b>Total</b>	<b>27 468</b>	<b>23 894</b>

Source: ABS catalogue no. 4508.6, final issue.

*Children's Courts*

A 'child' in this jurisdiction is one under the age of 17 years. Before finally disposing of the case the court must receive a report from a child welfare officer (the representative of the Secretary of the Department of Community and Health Services), unless the court considers the offence trivial or the Director decides not to provide one. A child's parent has the right to be heard and to examine and cross-examine witnesses, or to be represented by counsel. A parent can be forced to attend the hearing if it does not cause an unreasonable inconvenience. In summary proceedings, the court does not enter a conviction against a child. However, a conviction will be recorded if the court imposes a sentence of imprisonment, or there are special circumstances that warrant a conviction being recorded.

Children under 16 years cannot be sentenced to imprisonment and children aged 16 years cannot be sentenced for more than two years in total. Minimum penalties imposed by legislation do not apply to children. For children under 14 years, the maximum fine is \$20, and for those over 14 years, \$100. The court may also impose a supervision order which brings a child under the guidance of a child welfare officer. If a child is older than 15 years, they come under the supervision of a probation officer. Alternatively, the court may declare the child a Ward of the State, placing them under the control of the Minister for Community and Health Services.

A child remains a ward until their eighteenth birthday, unless they have been released earlier. In cases where further investigation appears necessary, the court may issue a remand for an observation order before it makes a final decision. Remands for observation orders are for short periods and usually provide for intensive supervision. Neglected or uncontrolled children are also in the court's jurisdiction.

In 1993, in the Children's Courts, 1,355 defendants appeared; of these 1,203 were found guilty, 88.8%. Males accounted for 77.3% of convictions. Some 1,203 people were convicted of 2,937 offences, an average of 2.4 offences per person.

**TASMANIAN CHILDREN'S COURTS, OFFENCES, 1993**

<i>Offence</i>	<i>Finalised</i>	<i>Proven</i>
Offences against the person	175	158
Breaking and entering, fraud and other offences involving theft	1 871	1 761
Property damage and environmental offences	118	110
Offences against good order	856	727
Drug offences	149	135
Motor vehicle, traffic and related offences	58	37
Other	10	9
<b>Total</b>	<b>3 237</b>	<b>2 937</b>

*Source: ABS catalogue no. 4508.6, final issue*

*Coroner's Courts*

Coroners are appointed by the Governor and they have jurisdiction throughout the State. Under the *Coroners Act 1957*, a Coroner may hold an inquest concerning the manner of death of any person who has died:

- a violent or unnatural death;
- suddenly without the cause being known;
- from sudden infant death syndrome;
- in a prison; or
- in a mental institution.

At the direction of the Attorney-General, the Coroner may also be required to hold an inquest concerning any death. In addition, the Coroner may have to determine the cause of a fire if:

- directed by the Attorney-General;
- the Attorney-General has approved a request by the property owner or insurer; or
- the State Fire Authority or the Rural Fires Board require an investigation.

The duty of the court is to determine who the deceased was, and the circumstances by which death occurred. Medical practitioners and other people may be summoned to give evidence. In the case of the death of an infant in a nursing home, the Coroner may also inquire generally into the conditions and running of the institution. On the evidence submitted at the inquest, the Coroner can order a person to be committed to the Supreme Court and can grant bail. In the case of murder, a Coroner can issue a warrant for apprehension.

The Coroner in holding an inquest usually acts alone. However, the Attorney-General or the relatives of the deceased may request that a four or six-person jury be empanelled. After considering a post-mortem report, the Coroner may dispense with an inquest unless the circumstances of death make an inquest mandatory under the Act.

The *Coroners Amendment Act 1985* introduced two significant changes: the tape recording of depositions to speed up the hearing of inquests; and new provisions dealing with the care, custody and control of exhibits.

## Commonwealth courts

### *The High Court of Australia*

The most prestigious of the Commonwealth Courts is the High Court of Australia, constituted by the Chief Justice and six other Justices. The High Court has original jurisdiction under the *Commonwealth of Australia Constitution Act 1901* in cases concerning treaties, consuls, the Commonwealth of Australia as a party, residents in different States and matters arising under the Constitution.

It is the final court of appeal for Commonwealth and State courts. The High Court hears appeals from State Supreme Courts and the Federal Court of Australia, and in some circumstances from the Family Court of Australia. If there is sufficient business, the High Court may sit in Hobart.

### *The Federal Court of Australia*

The Court was created by the *Federal Court of Australia Act 1976*. It was established to reduce the work of the High Court, so that the High Court could give greater attention to its primary function as interpreter of the Constitution. It also replaces the former Australian Industrial Court and the Federal Court of Bankruptcy and sits in two divisions: Industrial and General.

### *The Family Court*

The Family Court of Australia was set up by the *Family Law Act 1975*. It hears petitions for divorce and has jurisdiction in the welfare and custody of children and in disputes as to any property of marriage and maintenance payments.

The sole ground for divorce became the irretrievable breakdown of marriage. In 1993 there were 1,465 divorces granted, an increase of 100 on the number granted in the previous year. About 56% of the petitioners were females and 10% were joint applicants.

**DIVORCES GRANTED BY SEX OF PETITIONER, TASMANIA**

Year	Males	Females	Joint	Total
1988	455	688	77	1 220
1989	471	728	70	1 269
1990	448	654	68	1 170
1991	493	810	80	1 383
1992	528	740	97	1 365
1993	501	819	145	1 465

Source: ABS catalogue no. 3307.0

**SENTENCES**

The level of punishment for particular criminal offences is laid out in criminal law. The penalties prescribed are the maximum possible. The magistrate or judge may exercise discretion in deciding what is appropriate, taking into consideration the particular offender, and the circumstances of the offence.

In December 1968 the death sentence was abolished in Tasmania, having last been imposed in 1946. Punishment aims to be preventive and is applied to avoid further trouble from the offender. By imposing a severe sentence on the offender, it serves as an example to the community, with the aim to deter other potential offenders.

The most frequently imposed penalties are fines and periods of imprisonment. More recently there has been a move away from using imprisonment if possible. Through this change in attitude, sentences such as community service orders and probation orders are being used more widely.

**Fines**

In 1993-94, Courts of Petty Sessions imposed fines totalling \$5.6 million in Tasmania. Of this, \$3.7 million was actually collected (41,613 cases).

**Imprisonment**

Tasmania's main prison is at Risdon, near Hobart. There is also an outstation prison farm at Hayes in the Derwent Valley. In Launceston a prison at the Police Headquarters building is a temporary holding centre where prisoners are held before being transferred to Risdon.

In 1993-94, 1,203 prisoners were received: 1,148 males (95.4%) and 55 females (4.6%). Some 64% of the people sentenced to gaol in 1993-94 had been imprisoned previously. Of these, 36% had been to prison at least three times before.

The largest proportion of imprisonments was for offences against property (41%) and offences against good order (41%). Offences relating to motor vehicle and traffic infringements accounted for 10% of imprisonments. Less than 5% of prison sentences were for periods of one year or more. Most prison sentences (over 81%) were for a period under three months.

A large proportion of prisoners are young offenders: over 41% of people sentenced to imprisonment during 1993-94 were under 25 years of age. The proportion of prisoners aged less than 25 has been declining over the past 20 years. In 1971-72 the proportion was 62.1% and in 1981-82 it was 54.3%.

The declining proportion of young offenders being imprisoned can be attributed to the greater use of non-custodial sentencing options (such as community service orders); and a decline in the proportion of young people in the population. In 1971 the estimated resident male population aged less than 25 years was 97,983 (24.6% of the total estimated

population). In 1991 there were an estimated 91,388 males in this age group, which was 19.6% of the estimated population.

The cost of imprisonment in Tasmania for 1993-94 was \$117.28 per inmate per day or \$42,807 per annum. This is an increase of 2.8% on the previous year's cost of \$114.09 per inmate per day.

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#### INSTITUTIONS FOR ADULTS, TASMANIA, 30 JUNE 1994

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<i>Institution</i>	<i>Capacity</i>	<i>Occupancy</i>
Risdon prison (male) (a)	259	160
Risdon prison (female)	23	8
Medium security unit	36	28
Hayes prison farm	70	48
Launceston prison	33	7
<b>Total</b>	<b>421</b>	<b>251</b>

(a) Includes prison hospital.

Source: Department of Justice Annual Report 1993-94

### Community corrections

It is being increasingly recognised that harsh punishments are not necessarily effective in reducing offences. With this change in attitude, there has been a move towards imposing custodial sentences as opposed to imprisonment.

The overall aim of this change is to reform the offenders. In Tasmania, Community Corrections (in the Department of Justice) is responsible for custodial sentences and community service orders.

The major activities of Community Corrections are the provision of pre-sentence and pre-release reports; operations of the Community Service Order Scheme; supervision of people on parole; and supervision of people on probation.

Community Corrections has 53 permanent officers, 36 of whom are field officers. It works closely with officers of the Department of Community and Health Services, the Prison Service and the Police. It is essentially a community-based operation involving close liaison with families, private relief agencies and public departments concerned with human problems and law enforcement.

While there is a significant component of welfare work involved, Community Corrections conducts over 200 prosecutions annually against people failing to satisfactorily fulfil the conditions and obligations set down in their supervision or community service orders.

During 1993-94, there were 1,172 community service orders made in Tasmania. A total of 1,724 community service order employees completed 80,493 hours of unpaid community work.

During 1994-95 Community Corrections commenced a pilot Victim Offender Mediation Program in the Hobart area. This program provides an opportunity for the victim of a crime to meet with the offender, in a controlled circumstance, and subject to the agreement of both parties. A report of their meeting and of any discussions or agreements which result may be forwarded to the magistrate who may take this into account in passing sentence.

The purposes of the program are to assist victims to overcome some of the fears which may result from some crimes, and to help offenders to understand the personal impact of their crime. This program is being evaluated with a view to development State-wide if it proves effective.

### LEGAL AID SERVICES

Legal aid services provide legal assistance to help people who are unable to pay for a lawyer. In Tasmania, legal aid is offered through the Legal Aid Commission of Tasmania, with offices in Hobart, Launceston and Burnie; Community Legal Services which are

located in Hobart, Bridgewater, Launceston and Devonport; Tasmania Police; and Anglicare. Other agencies which provide more specialised assistance include the Aboriginal Legal Service, the Human Rights and Equal Opportunity Commission and the Child Support Agency.

The Legal Aid Commission of Tasmania offers services which range from giving basic legal advice, to providing a lawyer in court. Free advice is given on any legal problem but if it is necessary to provide assistance beyond simple advice or referring a person to another service, a client must apply for legal aid.

Community Legal Services provide an alternative to mainstream legal aid provided through the Commission. Voluntary lawyers and community workers offer advice to clients, primarily during evening sessions. The primary form of assistance is referral to other services and the aim is to facilitate people to help themselves. In addition, Community Legal Services are involved in community legal education and advocating for specific law reform issues.

## FURTHER READING

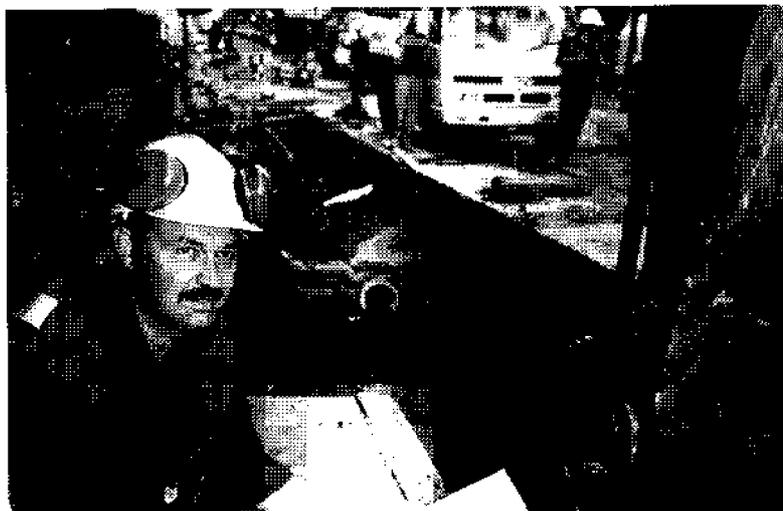
### ABS PUBLICATIONS

- Court Statistics, Tasmania 1993* (4508.6) final issue
- Crime and Safety Australia, April 1993* (4509.0)
- Divorces, Australia* (3307.0)
- Information Paper, National Crime Statistics, May 1994* (4511.0)
- National Crime Statistics* (4510.0)

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- Chalmers, D.R.C., *Textbook for Legal Studies, Tasmania*, Butterworths, Sydney, 1992.
- Department of Police, *Annual Report*, Government Printer, Hobart.
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- Mukherjee, S.K., Scandia, A., Dagger, D., and Mathews, W., *Source Book of Australian Criminal and Social Statistics: 1804-1988*, Australian Institute of Criminology, Canberra, 1989.
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## 6 | Public finance



The Hobart City Council construction manager supervises roadworks in Murray Street, Hobart. Such expenditure by local governments on gross fixed capital totalled \$77 million in 1993–94.

*The Mercury*

THE ABS CATEGORISES the Australian economy into institutional sectors for the purposes of compiling statistics, particularly the Australian National Accounts. The Standard Institutional Sector Classification of Australia (SISCA) recognises three subsectors applicable to the public sector. The subsectors are:

- general government enterprises;
- public trading enterprises; and
- government financial enterprises.

The scope of Government Finance Statistics (GFS) includes only general government and public trading enterprises, collectively referred to as the *non-financial* public sector. All enterprise units owned and/or controlled by Commonwealth, State/Territory and local governments and classified as either general government or public trading are included.

**GENERAL GOVERNMENT TRANSACTIONS, TASMANIA (\$ million)**

<i>Transactions</i>	1991-92	1992-93	1993-94
Current outlays—			
Final consumption expenditure	1 199	1 263	1 330
Interest payments	307	328	394
Other	200	221	226
<b>Total current outlays</b>	<b>1 706</b>	<b>1 812</b>	<b>1 950</b>
Capital outlays—			
Expenditure on new fixed assets	131	167	147
Expenditure on second-hand fixed assets (net)	-29	-9	-36
Capital grants	70	52	77
Advances paid to public trading enterprises (net)	-21	-13	-13
Other	5	-16	172
<b>Total capital outlays</b>	<b>156</b>	<b>181</b>	<b>4</b>
Revenue and grants received—			
Taxes, fees and fines	540	558	592
Interest received	159	181	242
Grants received	1 077	1 164	1 127
Other	72	81	84
<b>Total revenue and grants received</b>	<b>1 847</b>	<b>1 985</b>	<b>2 044</b>
Financing transactions			
Advances received	-185	-149	-120
Borrowing (net)	301	43	955
Other	-100	115	-925
<b>Total financing transactions (a)</b>	<b>16</b>	<b>8</b>	<b>-91</b>
Deficit (b)	16	8	-91

(a) Current plus capital outlays minus revenue and grants.

(b) Financing transactions minus increase in provisions.

Source: ABS catalogue nos. 5501.0, 5512.0

Since an important focus of GFS is to establish the source and structure of governments' financing and since governments have ready access to their financial institutions (Reserve Bank, State-owned banks, etc.), the combination or consolidation of financial transactions of the non-financial public sector with transactions of public financial enterprises would result in a less meaningful statistical account of public sector activity.

General government enterprises are mainly engaged in the production of goods and services outside the normal market mechanism. The costs of production are mainly financed from public revenues. These goods and services are often free of charge, or provided at a nominal price well below their cost of production. Examples of general government enterprises are the departments of Education and the Arts, Community and Health Services, and Police.

Public trading enterprises are mainly engaged in the production of goods and services for sale in the market place. The intention is to maximise returns to their owners, to recover, as a minimum, a substantial part of costs. Public trading enterprises include the Hydro-Electric Commission, TT-Line, port authorities and water boards.

The classification system used in GFS is based on standards promulgated by the International Monetary Fund (IMF), and aims to organise the individual financial transactions of the non-financial public sector into meaningful categories appropriate for analysis, planning and policy determination.

<b>STATE GENERAL GOVERNMENT FINAL CONSUMPTION EXPENDITURE, TASMANIA (\$ million)</b>			
<i>Expenditure item</i>	1991-92	1992-93	1993-94
General public services	127	110	126
Public order and safety	110	109	115
Education—			
Primary and secondary	236	258	264
Tertiary	107	114	133
Other	42	49	56
Health	307	341	302
Social security and welfare	26	22	58
Housing and community amenities	10	13	15
Recreation and culture	30	34	33
Agriculture, forestry, fishing and hunting	62	61	62
Mining, manufacturing and construction	5	6	5
Transport and communications	59	49	55
Other	78	98	106
<b>Total</b>	<b>1 199</b>	<b>1 263</b>	<b>1 330</b>

Source: ABS catalogue no. 5512.0

Government transactions are classified according to the Economic Transactions Framework (ETF) which deals with the nature of the financial transactions. The ETF is made up of four major groups: current outlays, capital outlays, revenue and grants received, and financing transactions.

Taxes, fees and fines revenue is further detailed by a separate classification. Current and capital outlays are also classified according to the purpose of the transactions using the Government Purpose Classification.

Stocks of financial assets and liabilities are also organised to show the net debt situation of sectors within the non-financial public sector.

Statistics are presented on a consolidated basis, which means that certain transactions flowing within a defined sector are eliminated. This is done to show the impact of a defined sector on the rest of the economy.

## STATE GOVERNMENT FINANCE

### State general government sector

General government current outlays for 1993-94 totalled \$1,950 million, of which \$1,330 million was final consumption expenditure. The major areas of final consumption expenditure were education (34%) and health (23%).

Capital outlays were only \$4 million, (compared to \$181 million in 1992-93). Capital grants and expenditure on new fixed assets were offset by the sale of the Tasmanian Development Authority housing loans portfolio to Advance Bank for \$98.1 million and the sale of the Tasmanian Government Insurance Office for \$40 million to TGIO Ltd, a wholly owned subsidiary of Fortis Australia Ltd. These sales resulted in the general government sector recording a surplus for the year, and the proceeds were used to retire debt.

### Public trading enterprise sector

While current outlays in 1993-94 declined, capital outlays increased significantly. The expenditure on new fixed assets of \$297 million in 1993-94 included \$155 million for the purchase of the ferry *Spirit of Tasmania* which was offset by sales of assets, including the *Abel Tasman*. The Government's contribution of \$53 million towards the purchase of the

<b>STATE PUBLIC TRADING ENTERPRISES TRANSACTIONS, TASMANIA (\$ million)</b>			
<i>Item</i>	1991-92	1992-93	1993-94
Current outlays—			
Interest payments	248	234	202
Income transferred to general government	17	18	23
<b>Total current outlays</b>	<b>265</b>	<b>252</b>	<b>225</b>
Capital outlays			
Expenditure on new fixed assets	156	145	297
Expenditure on second-hand fixed assets	2	1	24
Other	6	-11	-2
<b>Total capital outlays</b>	<b>152</b>	<b>136</b>	<b>271</b>
Revenue and grants received—			
Net operating surpluses	233	223	222
Interest received	22	15	11
Grants received	69	53	77
Other property income & other revenue	4	4	5
<b>Total revenue and grants received</b>	<b>328</b>	<b>295</b>	<b>314</b>
Financing transactions —			
Net advances received	-22	-13	13
Net borrowing	15	16	56
Increase in provisions	101	131	99
Other financing transactions	6	-42	40
<b>Total financing transactions</b>	<b>89</b>	<b>93</b>	<b>182</b>
Deficit (a)	-12	-38	83

(a) Financing transactions: loss increase in provisions.  
Source: ABS catalogue no. 5512.0

new ferry is reflected in the capital grants received. Together these transactions contributed to the public trading enterprise sector deficit in 1993-94 following two years of surplus.

#### **State Government public trading enterprises, Tasmania**

Printing Authority of Tasmania  
Hobart Regional Water Board  
Housing Services  
Hydro-Electric Commission  
Marine boards and port authorities  
Metropolitan Transport Trust  
North West Regional Water Authority  
Port Arthur Historic Site Management Authority  
Public Trust Office  
Rivers and water supply schemes  
Southern Regional Cemetery Trust  
Stanley Cool Stores Board  
Tasmanian Dairy Industry Authority  
Tasmanian Grain Elevators Board  
Tasmanian Totalizator Agency Board  
TT-Line  
Derwent Entertainment Centre Management Authority  
Tasmanian International Velodrome Management Authority

**TOTAL STATE GOVERNMENT TRANSACTIONS, TASMANIA (\$ million)**

Transactions	1991-92	1992-93	1993-94
Current outlays—			
Final consumption expenditure	1 199	1 263	1 330
Interest payments	479	488	524
Other	200	221	226
<b>Total current outlays</b>	<b>1 878</b>	<b>1 973</b>	<b>2 079</b>
Capital outlays—			
Expenditure on new fixed assets	287	312	445
Expenditure on second-hand fixed assets (net)	27	-7	-61
Other	6	4	2
<b>Total capital outlays</b>	<b>266</b>	<b>279</b>	<b>211</b>
Revenue and grants received—			
Taxes, fees and fines	540	558	592
Net operating surplus of public trading enterprises	233	223	222
Interest received	104	122	179
Grants received	1 080	1 167	1 128
Other	57	65	63
<b>Total revenue and grants received</b>	<b>2 013</b>	<b>2 135</b>	<b>2 184</b>
Financing transactions			
Increases in provisions	101	131	99
Advances received (net)	-185	-149	-120
Borrowing (net)	317	60	1 011
Other	-102	75	-882
<b>Total financing transactions (a)</b>	<b>131</b>	<b>116</b>	<b>107</b>
Deficit (b)	30	15	8

(a) Current plus capital outlays minus revenue and grants.

(b) Financing transactions minus increase in provisions.

Source: ABS catalogue nos. 5501.0, 5512.0

**TOTAL STATE GOVERNMENT, NEW FIXED ASSETS EXPENDITURE, TASMANIA (\$ million)**

	1991-92	1992-93	1993-94
General public services	6	3	2
Public order and safety	8	15	15
Education—			
Primary and secondary	16	14	16
Tertiary	8	12	6
Other	1	3	1
Health	15	34	16
Social security and welfare	1	1	—
Housing and community amenities	38	27	42
Recreation and culture	9	12	11
Fuel and energy	108	96	71
Agriculture, forestry, fishing and hunting	2	3	5
Mining, manufacturing and construction	—	1	—
Transport and communications	45	84	204
Other	2	1	—
<b>Total</b>	<b>260</b>	<b>305</b>	<b>384</b>

Source: ABS catalogue no. 5512.0

## LOCAL GOVERNMENT FINANCE

On 2 April 1993 legislation came into effect which reduced the number of local government authorities in Tasmania from 46 to 29. In order to produce statistics for the financial year 1992-93, the accounts had to be combined in such a way that all data for the entire 1992-93 financial year was consistent with the new boundary structure. In other words the figures should, as closely as practicable, appear as they would have done if the new boundaries had existed from 1 July 1992.

For instance, where the boundary restructure involved two or more councils simply amalgamating, the accounts of the amalgamating councils for the period before 2 April 1993 were combined and added to the accounts of the amalgamated council.

The accounts of eleven councils required more detailed analysis. These were councils which had gained and/or lost areas of land or population in addition to simple amalgamation. In these cases it was necessary to apportion individual transactions among two or more councils. This was done using other appropriate data such as the population of the transferred districts, length of roads, and location of water and sewerage schemes.

In 1993-94 there was an additional change as all councils were required to use accrual accounting procedures in accordance with the Australian accounting standard AAS 27. Up till then, only Hobart, Glenorchy, Clarence, Kingborough and Launceston councils had used accrual accounting while the remainder used modified cash accounting.

<b>LOCAL GOVERNMENT AUTHORITIES TRANSACTIONS, TASMANIA (\$ million)</b>			
<i>Item</i>	1991-92	1992-93	1993-94
Current outlays—			
General government final consumption expenditure	106	112	119
Interest payments	27	25	19
Other	7	8	10
<b>Total</b>	<b>140</b>	<b>145</b>	<b>149</b>
Capital outlays—			
Gross fixed capital expenditure	63	79	77
Other	2	.	1
<b>Total</b>	<b>65</b>	<b>80</b>	<b>79</b>
Revenue and grants received—			
Taxes, fees and fines	117	122	125
Net operating surpluses of public trading enterprises	31	29	24
Interest received	12	9	9
Grants received	50	62	60
Other	3	5	5
<b>Total</b>	<b>214</b>	<b>228</b>	<b>222</b>
Financing transactions—			
Increase in provisions	8	10	15
Net borrowings	-6	1	-2
Other	-10	13	-8
<b>Total</b>	<b>-9</b>	<b>-2</b>	<b>5</b>
<b>Deficit (a)</b>	<b>-16</b>	<b>-12</b>	<b>-10</b>

(a) Financing transactions less increase in provisions.  
Source: ABS catalogue no. 5501.6

The change to accrual accounting for 24 councils will not impact significantly on government finance statistics except for the increase in provisions for depreciation on water and sewerage assets in 1993-94. The increase in depreciation charges will reduce the *operating surplus* item and increase the *increase in provisions* item. Provisions for depreciation for ordinary services (including significant assets such as roads) will continue not to appear in government finance statistics (being netted off as internal transfers). This is in keeping with the rationale of compiling cash-based figures for the general government sector as required by the International Monetary Fund (IMF). The water and sewerage operations of the councils are regarded as trading activities and as such are part of the public trading enterprise sector which is presented on an accruals basis.

## PUBLIC SECTOR DEBT

The net debt of the State Government at 30 June 1994 was \$3,326 million. The public trading enterprise sector accounted for 59% of the debt.

Public trading enterprise debt has a different impact on public finances from general government debt, as public trading enterprises tend to borrow to attain assets which are used to generate revenue to service the debt. General government borrowing usually relates to assets used in the provision of services which do not generate revenue.

Since 1990 Tasmania has been given a credit rating along with the other States. The ratings of the major agencies such as Moody's Investors Service, and Standard and Poor's Ratings Group are extremely important in that they affect the interest rates which the State must pay, and thus impact on the budget.

## STATE AND LOCAL GOVERNMENT DEBT, TASMANIA (\$ million) (a)

	As at 30 June		
	1992	1993	1994
State general government—			
Gross indebtedness	2 862	3 007	3 817
Financial assets	1 627	1 721	2 465
Net debt (b)	1 235	1 287	1 353
State public trading enterprise			
Gross indebtedness	2 217	2 207	2 234
Financial assets	292	331	260
Net debt (b)	1 925	1 877	1 974
Total State Government—			
Gross indebtedness	4 129	4 256	5 111
Financial assets	969	1 093	1 784
Net debt (b)	3 160	3 163	3 326
Local government—			
Gross indebtedness	211	200	197
Financial assets	138	136	140
Net debt (b)	73	64	57
State and local government—			
Gross indebtedness	4 266	4 411	5 279
Financial assets	1 034	1 182	1 895
Net debt (b)	3 232	3 229	3 384

(a) Totals between sectors may not add because of consolidation.

(b) Gross indebtedness less financial assets.

Source: ABS catalogue no. 5513.0

## NET STATE AND TERRITORY GOVERNMENT DEBT, (\$ million)

State/ Territory	As at 30 June		
	1992	1993	1994
NSW	21 814	20 964	21 862
Vic.	31 020	31 849	31 910
Qld	3 681	2 648	-242
SA	7 653	8 480	8 677
WA	8 025	8 308	8 172
Tas.	3 221	3 163	3 326
NT	1 442	1 370	1 396
ACT	248	269	256

Source: ABS catalogue no. 5513.0

## STATE AND LOCAL GOVERNMENT TAXATION

State Government revenue from taxes, fees and fines rose 6%, from \$558 million in 1992-93 to \$592 million in 1993-94. The most significant impact on this increase was an increase in the *ad valorem* component of the tobacco franchise fees rate, from 50% to 100% of the value of tobacco sold by wholesalers or purchased by retailers from unlicensed sources. This resulted in a collection of \$63 million in 1993-94, compared with \$41 million in 1992-93.

Local government revenue from taxes, fees and fines in 1993-94 totalled \$125 million, a 2% increase over 1992-93. Of this total \$119 million was collected as municipal rates.

STATE AND LOCAL GOVERNMENT TAXES,  
FEES AND FINES PER HEAD OF MEAN  
POPULATION (\$)

State/Territory	1991-92	1992-93	1993-94
NSW	1 792	1 833	1 973
Vic.	1 666	1 790	2 006
Qld	1 264	1 373	1 469
SA	1 367	1 481	1 587
WA	1 426	1 471	1 692
Tas.	1 412	1 445	1 537
NT	1 167	1 245	1 402
ACT	1 477	1 636	1 738
All States	1 577	1 660	1 813

Source: ABS catalogue no. 5506.0

## STATE AND LOCAL GOVERNMENT TAXES, FEES AND FINES, TASMANIA (\$ million)

	1991-92	1992-93	1993-94
Employers' payroll taxes	135	132	131
Taxes on property—			
Municipal rates	111	117	119
Other	130	139	143
<b>Total</b>	<b>242</b>	<b>256</b>	<b>262</b>
Taxes on provision of goods and services—			
Excises	13	13	13
Taxes on gambling	42	43	45
Taxes on insurance	21	24	25
<b>Total</b>	<b>76</b>	<b>80</b>	<b>83</b>
Taxes on use of goods and performance of activities—			
Motor vehicle taxes	64	66	69
Franchise taxes—			
Petroleum products	46	45	47
Tobacco franchise taxes	34	41	63
Liquor franchise taxes	17	17	17
Other	14	14	10
<b>Total</b>	<b>176</b>	<b>183</b>	<b>205</b>
<b>Total taxes</b>	<b>629</b>	<b>651</b>	<b>681</b>
Fees and fines	28	30	36
<b>Total taxes, fees and fines—</b>			
<b>State Government</b>	<b>545</b>	<b>558</b>	<b>592</b>
<b>Local government</b>	<b>117</b>	<b>122</b>	<b>125</b>

Source: ABS catalogue no. 5506.0

## Glossary

**ECONOMIC TRANSACTIONS FRAMEWORK (ETF):** This framework is used to classify economic transactions of government agencies. It applies to transactions between agencies, and between an agency and the rest of the economy.

Transactions have four main groups: current outlays; capital outlays; revenue and grants received; and financing transactions.

**CURRENT OUTLAYS:** Current outlays are both expenditure on goods and services not resulting in acquisition of assets, and transfer payments. There are three sub-groups of transactions in this group:

- *general government final consumption expenditure* relates to the net result to the government for the provision of goods and services. As governments usually charge less than the cost of these services, a net payment results.
- *requited current transfer payments* are those where something is received in return (such as rent in return for the use of land).
- *unrequited current transfer payments* are those where no direct benefit is received in return (such as payment of personal benefits).

**CAPITAL OUTLAYS:** Capital outlays are capital expenditure on fixed assets, land and intangible assets and changes in stock, plus net advances. Net advances are the only repayable transactions which are included in outlays and not in financing items. This is because advances are used as a means of carrying out government policy in particular purposes.

**REVENUE AND GRANTS RECEIVED:** Revenue and grants are those receipts available to finance outlays of public authorities and consist mainly of non-repayable receipts (such as taxes, grants and interest) and operating surpluses of public trading enterprises.

**FINANCING TRANSACTIONS:** Financing transactions are the means by which governments finance their deficits or invest their surpluses. Financing transactions include *net borrowings (domestic and overseas)*, *advances from other government agencies*, *changes in private trust funds*, *changes in cash and bank balances*, *net investments*, and *changes in provisions*.

**FINAL CONSUMPTION EXPENDITURE:** General government expenditure on the provision of goods and services is known as final consumption expenditure. It comprises *current expenditure on wages, salaries and supplements*, *superannuation payments* and *goods and services other than fixed assets and stocks, less sales of goods and services and superannuation receipts*.

**NEW FIXED ASSETS EXPENDITURE:** These are transactions which relate to payments for new fixed assets, such as buildings and capital equipment. These transactions are found in both general government and public trading enterprises.

**GOVERNMENT PURPOSE CLASSIFICATION:** This classification categorises transactions in terms of the area of the economy for which the benefit is intended. Because of the nature of the federal system in Australia, State governments have large expenditures on education, health, and police.

**CENTRAL BORROWING AUTHORITY (CBA):** Tasmania has a central borrowing authority, as do most of the Australian States and Territories.

In Tasmania the CBA is called the Tasmanian Public Finance Corporation, or Tascorp. Tascorp is the financing arm of the Tasmanian State Treasury. It is the agency through which most of the lending and borrowing for other Government agencies is conducted.

## FURTHER READING

### ABS PUBLICATIONS

- Classifications Manual for Government Finance Statistics, Australia* (1217.0)  
*Government Financial Estimates, Australia* (5501.0)  
*Government Finance Statistics, Australia* (5512.0)  
*Government Finance Statistics, Australia, Concepts, Sources and Methods* (5514.0)  
*Government Finance Statistics, Tasmania* (5501.6)  
*Public Sector Financial Assets and Liabilities, Australia* (5513.0)  
*Taxation Revenue, Australia* (5506.0)

### OTHER PUBLICATIONS

- The Budget 1994-95 and Supporting Information*, Government Printer, Hobart.

# 7 | Population



Of the 6,773 Tasmanian confinements in 1993, 61 were multiple births.

*The Mercury*

THE FIRST HUMAN inhabitants of what is now Tasmania arrived more than 35,000 years ago, crossing the land bridge that then connected Tasmania to the mainland. The total population, before white settlement, has been estimated at between 5,000 and 10,000.

White settlement began in 1803 to secure British strategic interests against the French. In keeping with the penal nature of the early settlement, most of the population were convicts or government officials. At the Census of 1847, just over 50% of the total population of 70,000 were, or had been, convicts. Less than 20% were free immigrants.

Until the mid-nineteenth century, Tasmania experienced a fairly rapid build-up of population. However, in the early 1850s this rapid rate of population increase slumped. This decline was due to two major factors: the discovery of gold in Victoria in 1851, which led to a large-scale emigration of Tasmanians, and the ending of transportation in 1853. This decline was reversed in the early 1870s, partly due to a growth in mainland markets

for Tasmanian primary products, and also important tin and gold discoveries in Tasmania. Between 1861 and 1876, the population increased from 90,000 to 105,000. The next 15 years to 1891 saw the population reach 147,000—an annual rate of increase more than double that of the previous period.

The effects of economic depression in Australia in the 1890s, while severe, were eased somewhat in Tasmania by the silver and copper mining boom on the West Coast. Tasmania's relative prosperity was reflected in a net migration in excess of 4,000 per year from 1896 to 1899. While federation in 1901 meant free access to mainland markets for primary producers, many small manufacturers faced strong competition from mainland firms.

Economic stagnation, exacerbated by the decline of the West Coast mining boom, was reflected in a drift of people to the mainland. Attracting manufacturing industries through the provision of cheap hydro-electric power came to be seen as a way out of the economic gloom. While this was partly successful, it was not wholly sufficient, especially during the economic depression of the late 1920s and 1930s. Rural industries, always important to Tasmania's economic well-being, were particularly affected by the depression. In the 35 years between 1900 and 1935, Tasmania's population grew at less than 0.7% per year.

After World War II, Tasmania shared in the prosperity of the Australian economy. The post-war baby boom and gains from overseas immigration resulted in an annual population increase of 1.5% in the 35 years from 1945 to 1980—more than double the pre-war rate.

Despite this growth, Tasmania still lagged behind the mainland States. In the same period, the Australian rate of growth was 2% and, as a result, the proportion of the total Australian population living in Tasmania decreased from 3.4% in 1945 to 2.7% in 1992.

#### RATES OF CHANGE OF MAJOR COMPONENTS OF POPULATION GROWTH, AUSTRALIA, (%) (a)

States and Territories	Natural increase	Net migration	Total growth
NSW	0.74	0.16	0.90
Vic.	0.73	-0.46	0.27
Qld	0.84	1.76	2.60
SA	0.56	0.09	0.47
WA	0.88	0.64	1.52
Tas.	0.62	0.41	0.21
NT	1.72	-0.64	1.08
ACT	1.09	-0.17	0.67
Australia	0.77	0.28	1.06

(a) Year ended 30 June 1994 (p).  
Source: ABS catalogue no. 3101.0

#### POPULATION GROWTH, TASMANIA (year ended 30 June)

	Growth	Rate (%)	Australian rate (%)
1989	4 110	0.91	1.71
1990	6 930	1.52	1.49
1991	4 614	1.00	1.28
1992 r	2 883	0.62	1.19
1993	1 665	0.35	0.96
1994 p	1 007	0.21	1.06

Source: ABS catalogue no. 3204.6

#### POPULATION CHANGE, 1972 TO 1994 (year ended 30 June)

States and Territories	Estimated resident population		
	1972 ('000)	1994 p ('000)	Growth (%)
NSW	4 795.1	6 051.4	26.2
Vic.	3 661.3	4 476.1	22.3
Qld	1 898.5	3 196.9	68.4
SA	1 214.6	1 469.8	21.0
WA	1 082.0	1 701.9	57.3
Tas.	400.3	472.4	18.0
NT	92.1	171.1	85.8
ACT	159.8	300.9	88.3
Australia	13 303.7	17 843.3	34.1

Source: ABS catalogue no. 3101.0

**NATURAL INCREASE, TASMANIA**

Year ended 30 June	Births	Deaths	Natural increase	Rate (%)	Australian rate (%)
1989	6 840	3 649	3 191	0.71	0.79
1990	6 942	3 590	3 352	0.74	0.79
1991	6 972	3 712	3 260	0.71	0.83
1992 r	6 878	3 688	3 190	0.68	0.79
1993	6 790	3 675	3 115	0.66	0.78
1994 p	6 728	3 784	2 944	0.62	0.77

Source: ABS catalogue no. 3204.6

**POPULATION GROWTH**

In the period from 1971-72 to 1993-94, Tasmania's resident population growth was the lowest of all the States, followed by South Australia, Victoria and New South Wales. In 1991-92, the rate of population growth fell below 1%, falling each subsequent year to less than a quarter of 1% in 1993-94. The 1993-94 rate for Australia was over five times the growth rate for Tasmania.

**Natural increase**

Until the year ended 30 June 1987, Tasmania's rate of natural increase closely mirrored Australia's, which, in line with most of the developed world has been gradually falling. However, the years 1987-88 and 1988-89 saw the Tasmanian rate fall below that for Australia. This trend continued through to 1993-94, when Tasmania's rate of natural increase was 0.62%, compared with the Australian rate of 0.77%.

**Migration***Interstate migration*

Tasmania experienced net gains in interstate migration in the years 1988-89 to 1990-91. Since then, however, increasingly greater net losses have been recorded. In 1993-94 there was an estimated net loss of 2,162 people, or 0.46%.

*Overseas migration*

In Tasmania, the rate of population increase due to overseas migration has always been low, and since 1987-88 the rate has been diminishing. In the year ended 30 June 1994, the rate of increase due to overseas migration was estimated to be 0.05%. This was less than one-fifth of the Australian rate of population increase, 0.28%.

**ESTIMATED INTERSTATE MIGRATION, TASMANIA**

Year ended 30 June	Arrivals	Departures	Net	Rate (%)
1989	11 846	11 643	203	0.04
1990	13 259	10 469	2 790	0.61
1991	11 696	10 880	816	0.18
1992 r	10 590	10 933	-343	-0.07
1993	11 089	12 642	1 553	-0.33
1994 p	9 490	11 652	-2 162	0.46

Source: ABS catalogue no. 3204.6

**ESTIMATED OVERSEAS MIGRATION, TASMANIA**

Year ended 30 June	Arrivals	Departures	Net (a)	Rate (%)	Aust. rate (%)
1989	1 998	1 406	756	0.17	0.95
1990	2 055	1 483	760	0.17	0.74
1991	2 028	1 559	408	0.09	0.51
1992	1 851	1 649	r 36	r 0.01	r 0.40
1993	1 979	1 582	103	0.02	0.17
1994 p	1 943	1 553	225	0.05	0.28

(a) Estimates of net overseas migration include an adjustment for 'category jumping'.

Source: ABS catalogue no. 3204.6

**ESTIMATED RESIDENT POPULATION IN LOCAL GOVERNMENT AREAS, TASMANIA  
(at 30 June)**

Local government area	1991	1994 p	Annual average rate of change 1991 to 1994 (%)	Proportion of State (%)
Brighton	12 066	12 425	0.98	2.6
Central Highlands	2 969	2 894	-0.85	0.6
Clarence	49 447	49 840	0.26	10.6
Glamorgan/Spring Bay	3 962	4 006	0.37	0.8
Glenorchy	43 611	43 986	0.29	9.3
Hobart	47 681	47 629	-0.04	10.1
Huon Valley	12 634	12 961	0.86	2.7
Kingborough	25 441	26 994	1.99	5.7
New Norfolk	10 313	10 310	-0.01	2.2
Sorell	8 518	9 219	2.67	2.0
Southern Midlands	5 157	5 236	0.51	1.1
Tasman	1 956	2 004	0.81	0.4
<b>Greater Hobart-Southern Region</b>	<b>223 755</b>	<b>227 504</b>	<b>0.56</b>	<b>48.2</b>
Break O'Day	5 764	5 824	0.35	1.2
Dorset	7 637	7 698	0.27	1.6
Flinders	965	912	1.87	0.2
George Town	7 165	7 111	-0.25	1.5
Launceston	65 637	65 832	0.10	13.9
Meander Valley	14 651	15 316	1.49	3.2
Northern Midlands	11 007	11 117	0.33	2.4
West Tamar	18 254	19 317	1.90	4.1
<b>Northern Region</b>	<b>131 080</b>	<b>133 127</b>	<b>0.52</b>	<b>28.2</b>
Burnie	21 071	20 970	-0.16	4.4
Central Coast	21 006	21 105	0.16	4.5
Circular Head	8 530	8 594	0.25	1.8
Devonport	25 337	25 465	0.17	5.4
Kentish	5 176	5 295	0.76	1.1
King Island	1 917	1 894	-0.40	0.4
Latrobe	6 927	7 135	0.99	1.5
Waratah/Wynyard	14 339	14 286	-0.12	3.0
West Coast	7 664	6 982	-3.06	1.5
<b>Mersey-Lyell Region</b>	<b>111 967</b>	<b>111 726</b>	<b>-0.07</b>	<b>23.7</b>
<b>Tasmania</b>	<b>466 802</b>	<b>472 357</b>	<b>0.40</b>	<b>100.0</b>

Source: ABS catalogue no. 3204.6

**SEX BY AGE DISTRIBUTION, TASMANIA, 30 JUNE 1994 p**

Age group	Males (number)	Females (number)	Sex ratio (males per 100 females)
0-4	17 537	16 812	104.31
5-14	36 849	35 402	104.09
15-24	35 682	33 846	105.42
25-34	34 809	35 593	97.80
35-44	35 398	35 527	99.64
45-64	48 474	47 764	101.49
65 and over	25 479	33 185	75.35
<b>All ages (a)</b>	<b>234 228</b>	<b>238 129</b>	<b>98.32</b>

(a) There may be discrepancies between totals due to rounding.  
Source: ABS catalogue no. 3204.6

**POPULATION DISTRIBUTION**

At 30 June 1994 the resident population of Tasmania was estimated at 472,357. On a regional basis, the Greater Hobart-Southern Region accounted for 48.2% of the population, the Northern Region 28.2% and the Mersey-Lyell Region 23.7%.

The local government area which had the largest percentage increase in estimated population since 1991 was Sorell, followed by Kingborough and West Tamar. Kingborough recorded the largest actual increase of 1,553 people. The largest percentage loss was recorded by West Coast.

In terms of population distribution, Tasmania is the most decentralised State with nearly 60% of the population living outside the capital city statistical division.

**Mobility**

At the 1991 Census, 57% of Tasmanian residents were living in the same dwelling as they had in 1986, compared with 55% for the whole of Australia. Of those Tasmanians whose address differed between 1986 and 1991, 78.5% (123,500) reported that their address was still in Tasmania.

Between 1986 and 1991, most people moving to Tasmania came from New South Wales and Victoria. New South Wales provided the largest net gain of 3,011 people during the period. Victoria and Queensland were the two main destinations of Tasmanians leaving the State.

Census data are useful to gain a measure of relative mobility, but as the reference dates are merely two points in time, no information can be obtained for any movements in the intervening period.

A measure of *total* interstate movements can be obtained from the estimates of internal migration, used to produce intercensal population estimates.

For the year ended 30 June 1991 these estimates confirm the position of Victoria as the main source *and* destination of permanent and long-term Tasmanian interstate movements.

The relatively large number of departures to Victoria resulted in the largest *net* loss to Tasmania, of all the States and Territories, followed by Queensland and New South Wales respectively.

## CHARACTERISTICS OF TASMANIANS

### Age

Tasmania's population, like Australia's, continues to age. In 1994 the median age (the age where one half of the population is younger and the other half older) of Tasmania's population was 33.7 years. This is 3.2 years older than in 1986 and 4.9 years older than in 1981. By comparison, the median age of all Australians in 1994 was 33.4 years.

The age distribution of Tasmania's population has also changed markedly over time. In 1901, 48% of the population were aged under 20 years. This compares with 33% who were aged under 20 years in 1986, and 29.8% in 1994.

### Sex

In 1994 the Tasmanian population contained an estimated 3,901 more females than males. This excess of females is concentrated in the 65 and over age group.

## BIRTHS AND DEATHS

### Births

The late 1950s and early 1960s was a period of peak fertility in the post-war era, before a decline in the mid 1960s which continued through the 1970s. The trend since 1980 indicates that a period of stability may have been reached, but at a level only slightly over 50% of the 1961 rate.

Prior to 1977 the most fertile age group was 20–24 years; however it is now the 25–29 age group. The fertility rates of the under 20 and 20–24 age groups have been declining steadily during the 1970s and 1980s, while those of the 25–29, 30–34 and 35–39 age groups have shown steady increases.

Several factors have contributed to these trends, including later marriage and an increasing period between marriage and the birth of the first child. Since the early 1960s the median age for spinster brides has increased, from about 21 years to 24.3 years in 1993. In the mid 1960s the median duration between marriage and the birth of the first child was about 12 months. This increased until in 1988 it was approaching three years. Recently the median duration between marriage and the birth of the first child has fallen to levels experienced in the early to mid 1980s.

The fertility rate, as measured by the net reproduction rate, is falling and since the early 1970s has been below replacement level. The Tasmanian fertility rate has generally been higher than the national rate.

### NET REPRODUCTION RATES, TASMANIA AND AUSTRALIA (a)

Year	Tasmania	Australia
1988 r	0.919	0.880
1989 r	0.906	0.884
1990 r	0.928	0.911
1991 r	0.935	0.890
1992	0.933	0.909
1993	0.923	0.896

(a) The extent to which the population can reproduce itself over time.

Source: ABS catalogue no. 3311.6

### LIFE EXPECTANCY, AUSTRALIA (years)

Age (years)	1901–1910		1993	
	Males	Females	Males	Females
0	55.2	58.8	75.0	80.9
5	57.9	58.6	70.6	76.4
10	53.5	56.0	65.7	71.4
20	44.7	47.5	56.0	61.6
40	28.6	31.5	37.2	42.1
60	14.3	16.2	19.5	23.7
70	8.7	10.0	12.4	15.6

Source: ABS catalogue no. 3311.6

**AGE-SPECIFIC DEATH RATES, TASMANIA**

Age group (years)	Males		Females	
	1970-72	1993	1970-72	1993
Under 1	17.8	7.0	11.5	4.5
1-4	1.0	0.4	0.7	0.1
5-9	0.5	0.3	0.4	0.2
10-14	0.6	0.3	0.3	0.1
15-19	2.4	1.0	0.6	0.5
20-24	2.0	1.2	0.5	0.5
25-29	1.8	1.4	0.8	0.4
30-34	1.8	1.9	0.8	0.8
35-39	2.1	2.0	1.3	0.9
40-44	3.4	2.1	1.9	1.5
45-49	5.3	3.0	3.0	2.2
50-54	9.5	4.9	5.6	3.2
55-59	15.5	9.8	8.0	5.3
60-64	25.2	15.2	12.4	8.3
65-69	39.5	27.4	21.3	13.2
70-74	62.2	39.7	36.5	24.5
75-79	91.9	62.8	60.9	35.8
80-84	164.0	112.0	135.5	63.4
85 and over	n.a.	191.1	n.a.	159.9

Source: unpublished ABS data

## Deaths

### *Life expectancy*

Life expectancy is a measure often used to indicate changes in the health status of a community. It is the number of years that a person can, on average, expect to live past their present age; it is based on death rates of the population. In the early twentieth century, life expectancy at age 0 years was less than life expectancy at age 5: this was a reflection of the high infant mortality rates.

More recently with improvements in hygiene and health care, infant and early age death rates have decreased significantly. Since the start of the century, life expectancy at age 0 has increased by 19.8 years for males and 22.1 years for females.

Changes to life expectancy rates for older age groups were only minor until the 1970s. In 1970-72, life expectancy for males aged 60 was 15.4 years, compared with 14.3 years in the first decade of this century. For females the difference was 19.7 compared with 16.2 years. Since 1970-72 there has been a significant increase in life expectancy of 60-year-olds. In 1993, life expectancy for males aged 60 was 19.5 years—an increase of 4.1 years from 1970-72. Much of this improvement can be related to advances in the prevention and treatment of diseases associated with the circulatory system, for example heart attacks and strokes.

### *Mortality*

The 1970s, 80s and 90s have been years of considerable improvement in life expectancy. Improvements in age-specific death rates have been most marked among the age groups over 60 years with decreases of between 31% and 40% for males and 33% and 53% for females. The infant mortality rate has also fallen quite dramatically, from 20.3 per thousand live male births in 1960-62 to 7.1 in 1993, and from 17.3 to 4.5 among females. Nevertheless, the infant mortality rate is higher for Tasmania than for Australia.

## MARRIAGES AND DIVORCES

### Marriages

Marriage is a legal contract but in religious terms it is also a sacred rite. Although the marriage rate has generally declined, and the incidence of divorce and de facto relationships (especially among younger people) have increased over the past 20 years, 93% of Tasmanian couples counted in the 1991 Census said that they were married. Associated with changes in living arrangements has been an increase in the age at first marriage. There has also been a trend towards civil rather than religious marriage ceremonies.

There were 3,055 marriages registered in Tasmania during 1993. Tasmania's crude marriage rate for 1993 was 6.5 per 1,000 of mean population, less than the rates recorded for 1990, 1991 and 1992 of 6.6.

### *Age at marriage*

Since the mid-1970s there has been a trend towards later marriage for both men and women. The median age (the age where there are as many people marrying above the age as there are people marrying below it) at first marriage in Tasmania in 1993 was 26.5 years for men and 24.3 years for women (compared with 22.8 years for men and 20.5 years for women in 1972). The difference between men and women in median age at first marriage has consistently been over two years. The median age at marriage varies according to previous marital status. For divorcees remarrying in 1993, the median age at remarriage was 40.6 years for men and 37.0 years for women.

The trend towards later marriage is clear when the ages at marriage are compared between 1973 and 1993. Some 38% of all brides were less than 19-years old in 1973, whereas only 4% of all brides were in this age group in 1993. Conversely, 8% of all brides were aged between 25 and 29 years in 1973, whereas 25% of all brides were in this age group in 1993.

A similar pattern emerges for bridegrooms. Some 66% of all bridegrooms were less than 25-years old in 1973, whereas only 26% of all bridegrooms were in this age group in 1993. Conversely, 24% of all bridegrooms were aged between 25 and 34 years in 1973, whereas 47% of all bridegrooms were in this age group in 1993.

### *Marriage ceremonies*

There has been a shift from religious towards civil marriage ceremonies. Most of this shift occurred in the 1970s and can be attributed to the Commonwealth Government's introduction, in 1973, of authorised private civil celebrants to provide an alternative to religious ceremonies (conducted by a minister of religion registered as an authorised celebrant), and State Registry weddings. Although over half of the 3,055 Tasmanian weddings in 1993 were performed by ministers of religion, the proportion has steadily declined, from 85% in 1973 to 53% in 1993.

In January 1993, there were 21 official registrars and 27 other civil celebrants registered to conduct marriages in Tasmania. Of those authorised to conduct religious marriage rites,

### MEDIAN AGE OF BRIDES AND BRIDE-GROOMS, TASMANIA (years)

	1988	1993
Brides—		
Never married	23.5	24.3
All brides	24.9	26.0
Bridegrooms—		
Never married	25.5	26.5
All bridegrooms	27.7	28.6

Source: ABS catalogue no. 3311.6

**MARRIAGE, CATEGORY OF CELEBRANT (%)**

Celebrant	Tasmania		Australia
	1973	1993	1993
Ministers of religion (a)			
Anglican	37.3	20.2	13.4
Baptist	2.6	3.0	1.9
Catholic	20.5	12.7	20.0
Churches of Christ	0.6	1.1	1.1
Lutheran	n.a.	0.2	1.1
Orthodox	n.a.	0.5	2.6
Presbyterian	4.4	1.0	1.5
Uniting Church	n.a.	7.9	9.3
Other	19.8	6.2	6.9
<b>Total</b>	<b>85.1</b>	<b>52.9</b>	<b>57.9</b>
Civil celebrants			
Official registrars	14.9	5.2	8.4
Other civil celebrants	..	42.0	33.7
<b>Total</b>	<b>14.9</b>	<b>47.1</b>	<b>42.1</b>
All celebrants	100.0	100.0	100.0

(a) Under authority of the *Australian Marriages Act 1961*.  
Source: ABS catalogue nos. 3306.0, 3311.6

128 were Anglican, 77 Catholic, 48 Uniting Church, 45 Baptist and 214 were registered to conduct other religious marriage rites.

Some 77% of all Tasmanian religious weddings in 1993 were performed by ministers of the Anglican, Catholic or Uniting churches. This is broadly consistent with the incidence of these denominations in the population. Of the 1,615 marriages performed by ministers of religion in 1993, 618 (38%) were in the Anglican Church, 389 (24%) were in the Catholic Church and 242 (15%) were in the Uniting Church.

Some 36% of the 3,055 weddings in 1993 involved remarriage for one or both partners (94% of these involved at least one divorced person). Where both parties were marrying for the first time, 67% of the ceremonies were performed by ministers of religion, compared with 27% where at least one partner had been previously married.

### Divorces

Under the *Family Law Act 1975*, the only ground on which a divorce may be granted is that of irretrievable breakdown of the marriage. This ground is established by the husband and wife having lived apart for 12 months or more, and there being no reasonable likelihood of reconciliation.

There were 1,465 divorces registered in Tasmania in 1993, compared with 1,365 registered in 1992. The crude divorce rate of 3.1 divorces registered for every 1,000 of population is the highest for the past ten years.

### Age distribution

Over the past six years the highest divorce rate for males has most frequently been in the 30-34 year age group, but in 1991 and 1993 the 35-39 group has had the highest rate, being 16.4 per 1,000 in 1993. The 25-29 year age group had the highest divorce rate for females from 1988 to 1991. In 1992 the 30-34 year age group had the highest rate and in 1993 the 35-39 group had the highest rate of 16.8 per 1,000.

**DIVORCES REGISTERED IN TASMANIA**

	1988	1992	1993
Divorces granted	1 220	1 365	1 465
Crude divorce rate (per 1,000 population) (c)	2.7	2.9	3.1
Median duration of marriage (years)	10.3	10.7	11.0
Median interval between marriage and final separation (years)	7.8	7.9	8.2
Divorces involving children—			
Number	761	827	909
Percentage of total divorces	62.4	60.6	62.0
Average issue	2.0	2.0	2.0
Applicant—			
Husband	455	528	501
Wife	688	740	819
Joint	77	97	145

Source: ABS catalogue no. 3311.6

*Divorces involving children*

The proportion of divorces involving children has fluctuated in recent years rising to 62% of all divorces registered in 1993 after having fallen to 56.5% of all divorces in 1991, this being the lowest proportion of divorces involving children since the introduction of the *Family Law Act* in 1976.

*Previous marital status*

The proportion of previously divorced husbands among divorcees was 18.2% in 1993, compared to the 17.7% recorded in 1992. Previously divorced women made up 17.8% of divorcees in 1993, an increase on the 1992 figure of 17.5%.

In 1993, 80.7% of husbands and 80.6% of wives were divorcing from their first marriage. In 1992 these figures were 81.4% and 81.0% respectively.

**RELIGION**

Religious affiliation by Tasmanians appears to have decreased in recent years. The 1991 Census shows that almost 86% of the population were adherents of religious groups compared with almost 92% in 1976. This trend is also evident in Australia as a whole. In 1976, 90% of the Australian population were affiliated with various religions while in 1991 this had fallen to 85%.

The Anglican Church remains the largest of the Christian denominations in Tasmania, accounting for 41% of the population. The other three significant denominations, the Catholic Church (22%), the Uniting Church (10%) and the Presbyterian Church (4%) account for a further 35% of the population.

The proportion of Christians has fallen. However, the number of Uniting Church affiliations doubled from 1981 (4.8%) to 1991 (9.5%).

Buddhists make up the largest group of non-Christian believers. There has been a marginal increase in the overall proportion of non-Christian believers between 1981 (0.3%) and 1991 (0.7%). This increase is partly due to the increase in Asian immigrants.

RELIGIOUS AFFILIATION, TASMANIA						
	1981	%	1986	%	1991	%
Anglican	151 207	41.3	154 748	41.0	166 492	41.0
Baptist	7 965	2.2	8 092	2.1	9 924	2.4
Brethren	3 947	1.1	3 856	1.0	3 354	0.8
Catholic	78 143	21.3	80 479	21.3	89 496	22.1
Congregational	1 790	0.5	1 241	0.3	189	0.0
Churches of Christ	2 110	0.6	2 046	0.5	1 621	0.4
Jehovah's Witness	1 510	0.4	2 062	0.5	2 250	0.6
Latter-day Saints	1 281	0.3	1 414	0.4	1 479	0.4
Lutheran	1 631	0.4	1 753	0.5	2 324	0.6
Methodist	19 906	5.4	0	0.0	0	0.0
Orthodox	1 855	0.5	1 960	0.5	2 145	0.5
Pentecostal	1 357	0.4	1 953	0.5	3 471	0.9
Presbyterian	11 575	3.2	12 084	3.2	13 300	3.6
Salvation Army	3 202	0.9	3 437	0.9	3 096	0.8
Seventh Day Adventist	1 464	0.4	1 413	0.4	1 215	0.3
Uniting Church (a)	17 668	4.8	36 724	9.7	38 612	9.5
Other Protestant	5 217	1.4	3 034	0.8	346	0.1
Other Christian	5 586	1.5	8 496	2.3	6 402	1.3
<b>Total Christian</b>	<b>317 414</b>	<b>86.7</b>	<b>324 792</b>	<b>86.2</b>	<b>345 716</b>	<b>85.2</b>
Non-Christian—						
Buddhist	236	0.1	438	0.1	713	0.2
Muslim	369	0.1	569	0.2	620	0.2
Hindu	n.a.	0.0	305	0.1	442	0.1
Jewish	145	0.0	160	0.0	194	0.0
Other non-Christian	513	0.1	495	0.1	703	0.2
<b>Total non-Christian</b>	<b>1 263</b>	<b>0.3</b>	<b>1 967</b>	<b>0.5</b>	<b>2 672</b>	<b>0.7</b>
Other groups—						
Non-theistic	0	0.0	87	0.0	46	0.0
Inadequately described	11 162	3.0	2 292	0.6	1 845	0.5
No affiliation	36 222	9.9	47 852	12.7	55 326	13.6
<b>Total other groups</b>	<b>47 384</b>	<b>12.9</b>	<b>50 231</b>	<b>13.8</b>	<b>57 217</b>	<b>14.1</b>
<b>Total</b>	<b>366 061</b>	<b>100.0</b>	<b>376 990</b>	<b>100.0</b>	<b>405 605</b>	<b>100.0</b>
Not stated (b)	52 896		59 363		47 232	
<b>Total persons</b>	<b>418 957</b>		<b>436 353</b>		<b>452 837</b>	

(a) The Uniting Church was formed in 1978 from members of the Congregational, Methodist and Presbyterian churches.

(b) 'Not Stated' is excluded from calculations of percentages.

Source: 1986 and 1991 Population Censuses

There has been a large increase in the number of Tasmanians who are not affiliated with any religion. In 1976, 7.8% of the population professed no religious affiliation compared with 13.6% by 1991. This pattern follows Australia as a whole, but Tasmania remains lower than the Australian average (14.4%).

## FURTHER READING

Other statistical tables relating to this chapter are located in the Historical Series at the back of this book.

### ABS PUBLICATIONS

*Australian Demographic Statistics* (3101.0)

*Births, Australia* (3301.0)

*Causes of Death, Australia* (3303.0)

*Deaths, Australia* (3302.0)

*Deaths, Tasmania, 1993* (3312.6) final issue

*Demography, Tasmania* (3311.6)

*Divorces, Australia, 1993* (3307.0) final issue  
*Estimated Resident Population by Age and Sex: States and Territories of Australia* (3201.0)  
*Hobart A Social Atlas* (2840.6)  
*Marriages, Australia, 1993* (3306.0) final issue  
*Perinatal Deaths, 1993* (3304.0) final issue  
*Population Statistics, Tasmania* (3204.6)  
*Projections of the Populations of Australia, States and Territories* (3222.0)  
*Social Indicators, Australia* (4101.0)  
*Tasmania's Young People, 1991* (4123.6)  
*1991 Census First Counts for Statistical Local Areas, Tasmania* (2701.6)  
*1991 Census Hobart Suburbs* (2791.6)  
*1991 Census Launceston Suburbs* (2792.6)  
*1991 Census Burnie and Devonport Suburbs* (2793.6)  
*1991 Census Restructured Local Government Areas* (2795.6)  
*1991 Census Urban Centres and Localities, Tasmania* (2794.6)

## 8 Labour



Pastry cooking instruction at the Drysdale Institute of TAFE.

*DIRVEI*

DURING THE 1990s TASMANIA has had the highest unemployment level of any of the Australian States. Throughout most of 1990, 1991, and 1992 the unemployment level rose. It peaked in August 1993 at a level of 12.9%. For the next 12 months unemployment fell. However, for the last part of 1994 unemployment started to increase again so that the unemployment rate peaked at 11.2% in December 1994 and January 1995, after which it fell for the first half of 1995.

This period of high unemployment has been unique in Tasmania's history, except for the Great Depression of the 1930s. Since World War II until the 1980s, Tasmania had low levels of unemployment. At times, Tasmania had a labour shortage and encouraged European migrants to work on such things as Hydro-Electric Commission schemes.

Prior to 1990 in Tasmania unemployment exceeded 10% only around 1983-84, and again briefly at the end of 1988 and the beginning of 1989.

## Labour Force Definitions

**TREND SERIES:** Figures given in this chapter are generally trend series estimates, unless otherwise indicated.

Trend series estimates are used in labour force statistics, and other statistics, to 'smooth' or take out irregular movements in the underlying data. In labour force statistics, the underlying series that are 'smoothed' are usually seasonally adjusted labour force statistics.

Seasonally adjusted series are useful because they remove known seasonal factors in original data, and thus give a better idea of the extent to which data is moving in an unexpected or unaccounted for way.

The usefulness of trend series is that they 'smooth' the data, and allow for more meaningful analysis or commentary over a reasonable time interval, say 6 or 12 months or more.

**UNEMPLOYMENT:** Sometimes, informed discussion of unemployment is difficult because of different definitions or understandings that are being used. In 1978 the Federal Government decided to recognise the Labour Force Survey of the ABS as having the official definition of unemployment.

The formal definition of unemployment is as follows. Unemployed persons are persons aged 15 and over who were not employed during the week of the Labour Force Survey, and:

- (a) had actively looked for full-time or part-time work at any time in the four weeks up to the end of the reference week and were:
  - (i) available for work in the reference week, or would have been available except for temporary illness (i.e. lasting for less than four weeks to the end of the reference week);
  - (ii) waiting to start a new job within four weeks from the end of the reference week and would have started in the reference week if the job had been available then;
- (b) were 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.

**LABOUR FORCE:** The labour force is defined as the total number of employed plus unemployed. Part of the definition of unemployment is that those who are classified as unemployed are actively seeking work. In other words, the labour force is the total number of people who at any one time are economically active.

**PARTICIPATION RATE:** The participation rate is calculated by comparing the number in the labour force with the particular population. For example, there is the teenage participation rate, the female participation rate, and so on. In the case of the female participation rate this is calculated in two steps. First, the number of females employed (typically in the age range of 15 to 65) and the number of females unemployed (i.e. in part those females who are actively seeking work) are added together. Second, this number is then divided by the total number of females in the population (in the age range 15 to 65) and expressed as a percentage.

**PERSONS NOT IN THE LABOUR FORCE:** Many people are neither employed nor unemployed, according to ABS categories. Examples of people in this category are retirees, the permanently incapacitated, those who are available for work but who are not actively seeking work, and those who, for whatever reason, choose not to work.

These groups form an important part of the labour force framework and contain people who are known collectively as 'persons not in the labour force'. There are two main categories within this division.

First, there are those who are 'not marginally attached to the labour force', for example, pensioners. Second, there are those who are 'marginally attached to the labour force', for example, those who want to work but who are not actively seeking work but who are available to start work within four weeks.

Since 1990 there have been major changes in the Tasmanian economy and the workforce, which have largely paralleled changes in the Australian economy. One important change has been the emergence of enterprise and workplace bargaining and the move away from centralised determination of wages and conditions. While this has sometimes led to increased productivity, it can also lead to the shedding of jobs.

Women now play a larger part in the workforce than previously. In the late 1970s the female participation rate was approximately 41%. In 1994 the female participation rate was approximately 49%.

Because much of Tasmania's economy—and hence labour force—is vulnerable to trade, such things as the value of the Australian dollar, the US dollar and the Japanese yen can influence Tasmania's employment and unemployment.

Other factors also have an influence. Tasmania has few head offices for national or multi-national companies. One of the possible reasons for Tasmania's declining employment was that parts of the economy such as banking and insurance reduced their Tasmanian staff in the years up to and including 1994. Sometimes this was because of the national economic downturn, while sometimes it was because businesses have transferred administrative or backup operations to the mainland. Both men and women have been the victims of these head-office relocations and rationalisations.

Added to this was the view of successive State Governments up to and including 1994 that the role of State Governments is to concentrate on 'core' service provision. This means that some activities previously undertaken, such as road and bridge construction, are not viewed as integral to State Government functions. Accordingly, the State Government's workforce was reduced. Private enterprise, with its different cost structures and performance measures, often employs fewer employees when undertaking comparable tasks.

## THE LABOUR FORCE

In December 1994 there were 220,300 Tasmanians, or 60% of the State's working age civilian population, in the labour force (either working or looking for work).

### **Participation in the labour force**

Historically, the Tasmanian labour force participation rate has been lower than the national average. Throughout the 1990s there has been about a 3% difference between the Tasmanian and the Australian participation rates. In December 1994 the Australian participation rate was 63%.

There is a psychological element to the participation rate; often people will only actively seek work if they believe it is worthwhile to do so. Thus, an increase in the participation rate is sometimes a leading indicator of employment growth. It is difficult to determine the extent of any psychological component of the participation rate, but it might influence the behaviour of a significant number of those who are unemployed.

In the late 1970s, males had a participation rate of nearly 79%. In the middle 1980s, the male participation rate was around 75%. However, by 1992 the participation rate had decreased to approximately 72%. In June 1994 it had dipped as low as 70.1%.

There were a number of reasons for this decline in the male participation rate. Principally there were job shedding, relocation to mainland States, and different skills needs which often disadvantaged older workers. Also significant was a State Government policy of leaving the provision of 'non-core' services to private enterprise and offering incentives for early retirement to many of its employees. For females, there has generally

been an increase in the participation rate since the late 1970s. Then, the female participation rate averaged about 41%. In the mid-1980s the participation rate was approximately 43%. From the beginning of 1990 to the end of 1994, it averaged about 49%. The maximum female participation rate up until December 1994 was 51.4% in December 1993.

During the 1980s male employment was at a minimum of 105,500 in early 1983 and a maximum of 118,800 in December 1989. In the 1990s, the number of employed males peaked at 121,900 in April 1990. There was a minimum of 107,900 in August 1993. In December 1994 the number of employed males was 116,200. For females in the 1980s there was an overall increase in employment from around 60,000 in 1980 to a peak of 79,700 in December 1989, a rise of 33.7%. From the beginning of 1990 through to the end of 1994, female employment stayed at about 80,000. There was a maximum female employment of 83,100 in early 1994.

There has been a rise in the number of part-time workers in Tasmania in the 1990s—from about 46,000 in 1990 to about 52,000 in 1994. For males, there has been an increase in the number of part-time workers from just under 10,000 in 1990 to just under 13,000 in 1994. For females, there has also been an increase in the number of part-time workers from approximately 35,500 in 1990 to approximately 40,000 in 1994.

### **Public sector employment**

Tasmania has among the highest proportion of any State of its employees in the public sector, 33.7% in June 1994. Of the 45,000 public sector employees in Tasmania in June 1994, 16.9% (7,600) were employed by the Commonwealth Government, 74.4% (33,500) were employed by the State Government, and 8.7% (3,900) were employed by local government.

### **Industry distribution**

The largest industry sector in the Tasmanian economy in the period 1990–94 was the community services sector. This sector employed just over 30% of the Tasmanian work force in May 1994, up from slightly more than 26% in May 1992. The next largest industry, wholesale and retail trade which excludes agriculture, employed just over 19% of the Tasmanian work force.

Male employment was concentrated in the wholesale and retail industries, community services, and manufacturing. Female employment was concentrated in community services, and wholesale and retail trade.

Males were far more likely to be employed as tradespersons; labourers and related workers; or plant and machine operators and drivers. The dominant occupational groups for females were clerks; and sales and personal service workers.

There were about 11,200 multiple jobholders in Tasmania in August 1994, with almost equal numbers of males (5,500) and females (5,600) comprising 5.2% of the labour force in Tasmania.

### **Hours worked**

The average number of hours worked in Tasmania in November 1994 for males was 39.8, while for females the figure was 27.2 hours.

Throughout the 1990s, Tasmanian workers have averaged about 1 hour of overtime per employee per week. On average the amount of overtime worked per employee working overtime has been just under 7 hours per week.

In November 1994, the percentage of employees working overtime was 16.7%, compared with 14.2% in November 1993.

**INDUSTRY EMPLOYMENT DISTRIBUTION, TASMANIA (%)**

Industry	Percentage of employees	
	May 1992	May 1994
Mining	1.0	1.2
Manufacturing	15.0	13.3
Electricity, gas and water, construction	7.3	7.3
Wholesale and retail trade	19.7	19.1
Transport and storage	4.4	3.4
Communication	1.7	1.5
Finance, property and business services	8.9	7.9
Public administration and defence	7.1	6.8
Community services	26.3	30.8
Recreation, personal and other services	8.0	8.2
<b>Total all industries</b>	<b>100.0</b>	<b>100.0</b>

Source: ABS catalogue no. 6248.0

**WORKING ARRANGEMENTS, TASMANIA, AUGUST 1993**

	Percentage of employees	
	Tasmania	Australia
Employees who—		
work part-time (a)	26.4	24.3
are entitled to a rostered day off (a)	28.7	27.5
usually work overtime (a)	27.8	32.1
worked shiftwork in the last four weeks	14.2	13.9
have children aged under twelve years	27.6	26.7
had an absence of at least three hours in the previous two weeks (a)	15.9	17.3

(a) Applies to employee's main job.

Source: ABS catalogue no. 6342.0

**Labour mobility**

Of the 23,300 Tasmanians who in February 1994 had been in their current job less than one year, 24.9% were in wholesale or retail trade, and 13.8% were in the community services industry. In relation to occupation, 18.6% were tradespersons, 16.4% were labourers and related workers, and 16.0% were clerks.

**Labour force experience**

In Tasmania, there were approximately 81,700 persons aged 15 to 69 years old who had not been in the labour force at any stage in the year prior to March 1994. This was 25.3% of this age group population. Approximately 241,400 had been in the labour force for at least part of the year.

Approximately 220,300 Tasmanians worked at some stage during the year to March 1994. Of these 63.9% (140,700) worked entirely full time (of which 29.0% were women), and 26.4% (58,200) worked entirely part time (of which 76.4% were women).

Many Tasmanian employees changed employers or businesses during the year to March 1994. Approximately 17,100 had two employers or businesses, and approximately 5,000 had three or more employers or businesses during the year to March 1994.

## Unemployment

In August 1993 Tasmania's unemployment rate of 12.9% was a record maximum since the years of the Great Depression in the 1930s.

There were many reasons for this high unemployment rate. In part it was due to structural changes in the Australian economy, and to changes in the international economy which resulted in less of Tasmania's traditional exports being sold overseas, for example aluminium, woodchips and wool.

Also important were changes in the Tasmanian economy. In the private sector many firms restructured by shedding labour or moving head office operations to the mainland. At the same time the State Government pursued a vigorous policy of rationalising its services.

The number of unemployed Tasmanians steadily increased in the 1990s from approximately 19,000 in January 1990 to a peak of slightly more than 28,000 in August 1993. It reached a relative minimum of 23,000 a year later in August 1994. By December 1994 the number of unemployed was slightly less than 25,000.

The unemployment rate started to increase after March 1990 when it was 8.5%. After the peak of 12.9% in August 1993 it steadily decreased for 12 months until August 1994 to 10.6%. Subsequently it increased to 11.2% at the end of 1994.

Broadly speaking, the Tasmanian unemployment rate was between 1 and 1.5 percentage points higher than the Australian unemployment rate for much of the 1990s until mid-1994. At that point the gap widened: the Australian unemployment rate continued to fall, while the Tasmanian unemployment rate started to increase.

Male unemployment in Tasmania was around 17,500 for much of 1993 and reached a peak of 17,800 in August 1993. Thereafter, male unemployment fell to 14,500 in August 1994. By December 1994 it had risen to 15,200.

Female unemployment peaked at 10,500 in September 1993 and then fell for 9 months to June 1994 to 8,400. By December 1994 female unemployment had risen to 9,600.

## Teenage unemployment

In December 1994, the Tasmanian teenage unemployment rate was approximately 40%, while the Australian rate was approximately 30%.

During much of the 1990s, Tasmanian teenagers experienced a higher unemployment rate in Tasmania than in other Australian States for a number of reasons: the overall high unemployment rate, a reduced number of apprenticeships and openings in larger firms which had traditionally been employers of teenagers, and changes in the Tasmanian economy which meant that experience, training and skill became more important.

## Persons not in the labour force

In September 1994 in Tasmania there were 105,700 persons not in the labour force out of a civilian population of 366,200 aged 15 or more. The main reasons for males not being in the labour force were because they were retired or voluntarily inactive (13,000), or because they were attending an educational institution (10,700). The main reasons for females not being in the labour force were because of home duties or child care (48,900), or because they were attending an educational institution (8,100).

### PERSON NOT IN THE LABOUR FORCE, TASMANIA, SEPTEMBER 1994

Type	Males	Females	Total
With (a)	9 100	20 100	29 200
Without (a)	26 100	50 400	76 500
<b>Total</b>	<b>35 200</b>	<b>70 500</b>	<b>105 700</b>

(a) See definitions given earlier in this chapter for 'with marginal attachment to the labour force'.  
Source: ABS catalogue no. 6220.0

## Underemployment

There are two main types of underemployment:

- visible underemployment, involving an insufficient volume of work; and
- invisible underemployment characterised by low income, under-utilisation of skill, low productivity and other factors.

In Tasmania in September 1994 a study of visible underemployment showed:

- there were 180,200 fully employed workers of whom 140,400 were full-time workers and 39,900 were part-time workers;
- there were 15,800 part-time workers who would prefer extra hours; and
- there were 7,000 part-time workers who had been looking for extra work and who had been available to start work in the week before the study was undertaken.

## EMPLOYMENT, EDUCATION AND TRAINING

The quality of Australia's future workforce skills will depend on the basic education provided to young people, and on the development and upgrading of skills in the adult workforce. Traditional skill requirements have already undergone significant change as a result of the rapid spread of the application of computers in the manufacturing and service industries. Further changes will inevitably occur because of technological change.

Consequently, governments are adjusting education and training systems to meet the new requirements for skills demanded by our changed economic circumstances.

In a survey undertaken in April and May 1993, it was found that 56,300 Tasmanians had attended some type of in-house training during the previous 12 months. This was 23.8% of all those who were either in the labour force or marginally attached to the labour force (236,700). The comparable Australian figure was 24.4%.

The same survey showed that 11.7% (27,700 out of 236,700) had attended an external training course during the previous 12 months. The comparable Australian figure was 11.5%.

Furthermore, some 2.2% (5,200 out of 236,700) had attended an external training course in the previous 12 months while they were not working. This compared to the Australian figure of 1.9%.

The survey also found that during 1993, 13.9% (32,800 out of 236,700) were studying for an educational qualification (a course of study for which there was an award upon successful completion). The Australian figure was 14.9%.

### The Commonwealth Employment Service (CES)

The Federal Government's white paper on employment, *WORKING NATION*, was handed down on 4 May 1994. The strategy provided a comprehensive package of assistance to jobseekers and to employers.

#### *Assistance to employers*

A major thrust of Working Nation policy involved consultation and cooperation between government, employer groups and the wider community. In 1994, the Department of Employment, Education and Training (DEET) in Tasmania set up an Area Consultative Committee to provide a forum for business and union leaders to advise on employment issues, and to develop practical ways of stimulating employment growth. A Migrant Advisory Committee was also established.

The National Training Wage was introduced as part of the Working Nation package of assistance to employers. This permitted an employer to pay approximately 80% of the

award rate, provided approved training is given. The National Training Wage has coverage in federal and some State awards.

The National Employment and Training Taskforce (NETTFORCE) was established to develop training packages and obtain business commitment to increasing the number of jobs and entry level training places.

DEET's Office of Labour Market Adjustment (OLMA) funded a managerial training program for small business. It also funded an initiative by the Derby Community Development Association to convert industrial waste to fuel. It made \$360,000 available to retrain the Mt Lyell workforce, and funded the Burnie Business Enterprise Centre Ltd to employ a facilitator to work with major companies, in an attempt to attract new industries to the north-west coast. In addition, OLMA has provided funding to the West Coast Development Board and the Northern Tasmanian Regional Development Board to promote regional economic development and employment programs.

Working Nation's National Employer Servicing Strategy has been implemented, with the appointment of key account executives in CES offices to provide a single point of contact for CES programs to major employers.

#### *Assistance to jobseekers*

The main focus of CES activity under Working Nation has been the development of individual case management for people who are long-term unemployed or at risk of becoming long-term unemployed. The Job Compact provides a job placement for at least six months to all persons who have been on unemployment benefit continuously for 18 months or more.

YOUTH TRAINING INITIATIVE (YTI) gives case management to under 18-year olds within three months of leaving school, and a guaranteed place in an employment or training program such as the Landcare and Environment Program (LEAP), or a placement in an Accredited Training for Youth (ATY) or Jobtrain course.

JOBSTART is a wage subsidy program available to eligible employers who take on people who are case managed. Payments are geared to the duration of employment, level of disadvantage and age of jobseekers. Employers can receive subsidy payments for up to 39 weeks, ranging from \$70 to \$230 per week.

NEW WORK OPPORTUNITIES is a flexible new program which was introduced under Working Nation to help communities and jobseekers. It is designed to encourage local proposals for employing long-term unemployed people, especially where other employment opportunities are limited.

JOBSKILLS also provides long-term unemployed people (aged over 21 and on Department of Social Security benefits) with a combination of work experience and training to improve their employment prospects. Placements are for six months with the community sector or with federal, State or local government agencies. Jobskills training is accredited wherever possible, and combines formal with on-the-job training. DEET contracts brokers to identify placement opportunities and arrange formal training.

Other programs on offer were:

- TRAINING FOR ABORIGINALS AND TORRES STRAIT ISLANDERS PROGRAM (TAP) This is a program which aimed to increase the skills and employment level of Aboriginals and Torres Strait Islanders.
- JOB CLUB This provides a supportive environment where groups of 12 jobseekers work on improving their job search techniques.

## Training expenditure

During the period July to September 1993, Tasmanian employers spent \$25.6 million on approved training. This was equivalent to 2.7% of gross wages and salaries over the same period. The figure for Australia was 2.9%. In 1990, the equivalent Tasmanian figure was 2.3% (Australia, 2.6%).

The average training expenditure per employee was \$162, compared with the Australian average of \$192. In 1990, the equivalent figures were \$134 for Tasmania, and \$163 for Australia.

### TRAINING EXPENDITURE, JULY TO SEPTEMBER 1993

	Total expenditure (% gross wages)	Expenditure per employee (\$)	Training hours per employee (hours)	Total training expenditure (\$ million)
New South Wales	2.9	199	5.86	381.5
Victoria	3.0	210	5.76	318.6
Queensland	2.4	150	4.62	146.5
South Australia	2.7	174	5.29	84.1
Western Australia	2.9	201	5.87	106.0
Tasmania	2.7	162	5.72	25.6
Northern Territory	2.9	185	4.25	7.8
ACT	4.2	274	5.55	(a) 38.8
Australia	2.9	192	5.55	1 108.9

(a) Subject to sampling variability too high for most practical purposes.  
Source: ABS catalogue no. 6353.0

- **SPECIAL INTERVENTION PROGRAM (SIP)** This provides assistance to people with outdated work skills, or literacy or numeracy difficulties, or personal development needs.
- **MOBILITY ASSISTANCE** This offers fares assistance for travel on public transport to attend interviews, relocation assistance where jobseekers have an offer of employment in a new location and it is determined that no local jobseekers will be disadvantaged, and post-placement support to disadvantaged clients placed in employment.

### State Government employment and training schemes

The four objectives of the Tasmanian Government's Employment Opportunities Program were to:

- develop and implement State Government labour market programs designed to expand employment;
- encourage and assist the creation of employment opportunities at local and regional levels through the development of an enterprising culture;
- assist in the coordination and development of employment opportunities through the programs and services of other agencies; and
- provide policy advice to government on employment programs, matters and services.

Programs operated by the Employment Opportunities Branch of Tasmania Development and Resources during 1994 were Tas Jobs for Youth, Local Employment Initiatives, Business Advice for Rural Areas, and Tasmanian Apprentice Incentive Scheme.

TAS JOBS FOR YOUTH was introduced on 1 July 1992 to provide a wage subsidy to employers who created new and additional positions in their businesses and who employed young people aged 16–25 who had been unemployed for at least three months, and who completed appropriate training. A subsidy of \$8,000 for a full-time position and \$3,000 for a part-time position was payable over two years for positions maintained by the employer. The program was discontinued in July 1994, but commitments to existing grant holders continued to be met until the two-year period expired. As at 30 April 1995, 812 new positions had been approved under the program.

LOCAL EMPLOYMENT INITIATIVES (LEI) is a job-creation initiative of the State Government, in partnership with local communities for the creation of long-term employment. Support is provided under the program to local organisations as well as other innovative job creation proposals that link with the Commonwealth Government's WORKING NATION initiatives. During 1994, a review of the pilot stage of the program was completed, resulting in an increase in funding available from \$300,000 a year to \$400,000 a year. Since commencement in 1990–91, the program has assisted in the creation of more than 680 new jobs in local areas.

BUSINESS ADVISERS IN RURAL AREAS (BARA) is funded by the Commonwealth Department of Primary Industries and Energy with administrative support from the Employment Opportunities Branch of TDR. Two projects were initially approved under the program with one ceasing to operate during 1994. Funding of up to \$50,000 a year was provided to incorporated community organisations that operated in a similar manner to those supported under the State's Local Employment Initiatives Program.

TASMANIAN APPRENTICE INCENTIVE SCHEME was introduced from 1 July 1994 and provided assistance to employers of apprentices in the private sector. The scheme showed a recognition of the need for an appropriately trained workforce and the costs involved in such training, especially in the less productive early years. Assistance under the scheme was made available in one of two ways: for employers not subject to State payroll tax, a payment of \$500 was made for each new position filled by a new apprentice; and for those employers that paid payroll tax, a rebate of payroll tax was paid on all apprentice wages. This scheme was jointly administered by TDR and the State Revenue Office of the Department of Treasury and Finance.

### Apprenticeships

There was an increase in the number of apprenticeships commenced in 1993–94 compared with 1992–93, 1,065 compared with 1,006. There was also an increase in the number of traineeships over the same period, 717 compared with 645.

The accrediting mechanism for apprenticeship underwent significant changes during 1993–94 as more apprentices were awarded Certificates of Competency under the Australian Traineeship System. The number of certificates in-

#### APPRENTICESHIP CERTIFICATES OF COMPETENCY, TASMANIA (Industrial and Commercial Training Act 1985)

	1992 93	1993 94
Primary	45	46
Manufacturing and engineering	697	617
Building and architecture	303	209
Business services	0	0
Personal and community services	123	83
Hospitality and tourism	147	126
Access and equity	0	0
<b>Total</b>	<b>1 315</b>	<b>1 081</b>

Source: DIRVET, Annual Report 1993 94

creased from 334 to 463. The number of Certificates of Competency issued under the *Industrial and Commercial Training Act 1985* declined from 1,315 to 1,081.

In 1993-94, almost \$1,250,000 was paid in subsidies and allowances for apprentices, and almost \$500,000 for trainees.

## THE WORKING ENVIRONMENT

### Earnings

In Tasmania during the 1990s annual percentages changes in average weekly earnings were mostly greater than annual percentages changes in prices, as measured by the Hobart Consumer Price Index. In other words, there was an improvement in real wages in the period 1990 to 1994.

In November 1994, the average weekly earnings for full-time Tasmanian males (including overtime) was \$677.90 (Australian males, \$725.90). For females, the corresponding figure was \$557.60 (Australian females, \$574.60).

### Employment benefits

Tasmanian workers have similar benefits to the rest of the Australian workforce. According to a survey in August 1994, the principal differences were that Tasmanians were less likely to be provided with paid sick leave (73.7% compared with 76.6% for Australia), and Tasmanians were more likely to receive a superannuation benefit (89.1% compared with 87.1% for Australia). Where the main job was full time, Tasmanian females enjoyed a slightly higher standard of benefit than Tasmanian males. The main exception was in relation to superannuation benefits where a slightly higher proportion of males received a benefit, 95.1% compared with 94.0%.

Females also enjoyed a higher level of benefit when the main job was part time. This may have been because a large number of females did not wish to work more hours when working part time: thus there may have been consensus between employers, unions and female employees that they were a reasonably permanent and stable feature of the labour market and therefore were entitled to many of the benefits of the full-time workforce.

### Wages movement

In Australia two sets of authorities regulate wages and salaries: the Australian Industrial Relations Commission (AIRC) with federal jurisdiction; and the various State tribunals. In Tasmania, the Tasmanian Industrial Commission has statutory responsibility.

### APPRENTICESHIP CERTIFICATES OF COMPETENCY, TASMANIA (Australian Traineeship System)

	1992 93	1993-94
Primary	34	77
Manufacturing and engineering	16	2
Building and architecture	13	16
Business services	248	310
Personal and community services	0	0
Hospitality and tourism	23	58
Access and equity	0	0
<b>Total</b>	<b>334</b>	<b>463</b>

Source: DIRVET, Annual Report 1993-94

### APPRENTICESHIPS, TASMANIA

	Commenced	Total in training
Apprentices		
1992 93	1 006	3 295
1993-94	1 065	3 073
Trainees		
1992 93	645	569
1993-94	717	651

Source: DIRVET, Annual Report 1993 94

**EMPLOYEE BENEFITS, AUGUST 1994 (a)**

Benefit	Percentage	
	Tasmania	Australia
Employees who received one or more benefits	93.3	93.2
Employees who were provided with paid sick leave by their employer	73.7	76.6
Employees who were provided with paid holiday leave by their employer	73.8	76.6
Employees who were provided with long-service leave	65.1	65.8
Employees who received a superannuation benefit	89.1	87.1

(a) Proportion of employees in their main job receiving benefits.  
Source: ABS catalogue no. 6334.0

**EMPLOYEE BENEFITS, TASMANIA, AUGUST 1994 (a)**

Benefit	Percentage	
	Males	Females
Employees who received one or more benefits		
Where main job was full time	98.1	98.3
Where main job was part time	70.6	83.6
Employees who were provided with paid sick leave by their employer—		
Where main job was full time	89.0	93.3
Where main job was part time	25.1	32.4
Employees who were provided with paid holiday leave by their employer		
Where main job was full time	89.3	93.0
Where main job was part time	23.7	32.6
Employees who were provided with long-service leave—		
Where main job was full time	78.1	82.3
Where main job was part time	20.1	30.0
Employees who received a superannuation benefit—		
Where main job was full time	95.1	94.0
Where main job was part time	64.3	77.2

(a) Proportion of Tasmanian employees in their main job receiving benefits.  
Source: unpublished ABS data

Over the twelve months to December 1994, the weekly award rates of pay indexes rose by 0.7% for Tasmanian adult males and by 1.0% for Tasmanian adult females. For Australia, the figures were 0.8% and 1.0%, respectively.

During the twelve months to December 1994, for full-time adult male employees in Tasmania the largest annual increase occurred in the recreation, personnel and other services industry (2.1%), and the wholesale and retail trade industry (1.8%). No pay rises were received in the mining industry, and the communication industry. For females the largest increase was recorded in the wholesale and retail trade industry (2.3%). There were no increases recorded in the communication industry.

**Industrial disputes**

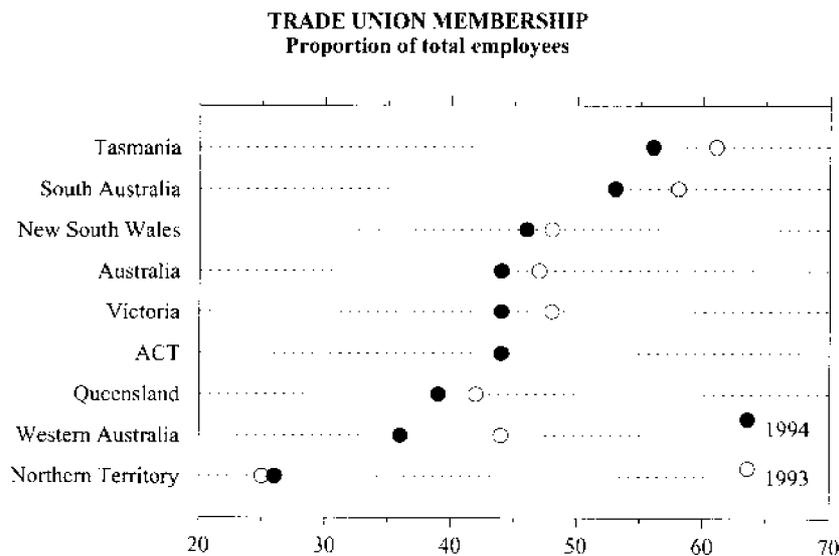
The level of industrial disputation in Tasmania was relatively low compared with other States. For the twelve months to December 1994, 4,600 working days were lost due to industrial disputes in Tasmania. This was well below the 43,000 days lost during the year ending December 1992. In addition, there were 32 working days lost per thousand employees, compared to the national average of 86 days.

### Trade unions

The proportion of total employees in trade unions in Australia decreased from 47% in 1993 to 44% in 1994. All States showed a decrease.

Tasmania had the highest rate of trade union membership of any Australian State. At the end of June 1994, there were 54 separate unions in Tasmania, accounting for a total membership of 87,000 (51,200 males and 35,800 females). Tasmania's union membership decreased by 14.6% in the 2 years from June 1992 to June 1994.

Tasmania maintained the highest proportion of trade union members to total employees for both males and females: 58% of male employees and 53% of females were trade union members. Nationally, 48% of male employees and 39% of females were trade union members.



### FURTHER READING

Other statistical tables relating to this chapter are located in the Historical Series at the back of this book.

#### ABS PUBLICATIONS

- Average Weekly Earnings, Australia* (6302.0)
- Award Rates of Pay Indexes, Australia* (6312.0)
- Employed Wage and Salary Earners, Australia* (6248.0)
- Employer Training Expenditure* (6353.0)
- Employment Benefits, Australia* (6334.0)
- Industrial Disputes, Australia* (6321.0)
- Information Paper: Measuring Employment and Unemployment* (6279.0)
- Information Paper: Labour Force Survey—Measuring Teenage Unemployment* (6270.0)

*Job Vacancies and Overtime, Australia* (6354.0)  
*Labour Force, Australia, Preliminary* (6302.0)  
*Labour Force, Australia* (6203.0)  
*Labour Force Experience* (6206.0)  
*Labour Mobility, Australia* (6209.0)  
*Persons Not in the Labour Force, Australia* (6220.0)  
*Superannuation, Australia* (6319.0)  
*Tasmanian Statistical Indicators* (1303.6)  
*Trade Union Statistics, Australia* (6323.0)  
*Training and Education Experience* (6278.0)  
*Underemployed Workers* (6265.0)  
*Working Arrangements, Australia* (6342.0)

**OTHER PUBLICATIONS**

Department of Employment, Education and Training, *Annual Report 1993-94*.  
Department of Industrial Relations, Vocational Education and Training, *Annual Report 1993-94*.

**ACKNOWLEDGEMENTS**

Tasmania—Development and Resources

## 9 Education



The language for the deaf, Auslan, is being taught at Claremont High School, where nine deaf students are studying.

*The Mercury*

IN TASMANIA, the community has its educational and training needs met in a diversity of ways. In terms of the number of students and staff, the Tasmanian Department of Education and the Arts is the most important provider of education. There is also an important non-government sector in Tasmania. As well, a growing number of families are educating their children at home.

For those who have left school and who need vocationally-oriented learning, Technical and Further Education (TAFE) is available. This part of the education system is administered by the (Tasmanian) Department of Industrial Relations, Vocational Education and Training (DIRVET).

Adult education is also administered by DIRVET. Its classes are primarily orientated towards leisure and recreational interests.

In Tasmania, the higher education sector is dominated by the University of Tasmania. Prior to January 1991, the Tasmanian State Institute of Technology existed as an

## Literacy programs

During 1993–94 literacy programs were initiated and developed at all levels of the Tasmanian Government school system. Two major literacy programs were initiated in the Kindergarten and Preparatory years of Tasmanian Government schools. The programs were known as the Kindergarten Screen Program and the Preparatory Literacy Support Program. They aimed to ensure that all children acquired appropriate literacy skills during these important two years prior to compulsory schooling. One of the aims of the programs was to identify children who may be 'at risk' in acquiring the broader foundations for learning, and literacy.

Another initiative—Key Intended Literacy Outcomes or KILOs—was directed at the primary and junior secondary years. This initiative enabled a range of professional development programs provided by the members of various District Literacy Implementation Teams.

In secondary schools the Literacy and Learning Program (General Component) was implemented. This focused on disadvantaged high schools and district high schools. Its main components were a workshop program for teachers, a Key Teacher Network, and a volunteer tutor program.

Key Teachers worked within their schools to develop teachers' knowledge of literacy and its implications across the curriculum. They also led professional development activities for supportive teacher strategies. Interest groups were formed to investigate particular areas: students as researchers, literacy, middle schooling, school planning and peer tutoring.

As well, District Literacy Officers helped a number of schools in their planning for literacy. They provided professional development opportunities through staff meetings, workshops and individual assistance.

Senior secondary colleges also developed links with the Literacy and Learning Key Teacher Network.

The College Key Teachers' work focused on the raising of awareness of literacy issues among teachers and the necessity for support for college planning.

Activities included staff professional development sessions, workshops, interest groups, action research and classroom support. Some students with literacy difficulties were involved in volunteer tutor programs and received TCE accreditation for their work.

independent body, based in Launceston. At that time it merged with the southern-based University of Tasmania, to form the new University of Tasmania.

The Australian Maritime College also caters for higher education students. Its teaching campus is located at Newnham, a suburb of Launceston, and its training facility is at Beauty Point, near the mouth of the Tamar River.

For retired people in Hobart, the University of the Third Age offers an alternative. It is a small, enthusiastic and informal group, who teach a range of subjects depending on the availability of lecturers and student demand.

Tasmania's education and training system, like others around Australia, is operating under enormous cost-pressure. Governments are increasingly concerned to extract the most value from a limited education and training budget.

This cost-pressure manifests itself in the examination, and wherever possible the elimination, of unnecessary levels of administration or decision making. In some cases it has meant the imposition of a user-pays fee structure, to minimise costs to the State. In other situations it has meant closing schools or campuses, or offering courses at fewer locations. Another consequence is that sometimes pupil/teacher ratios have increased.

## Home education

There is a small but growing number of parents who elect to teach and educate their children at home, and not through a school.

Home education occurs when parents choose to assume responsibility for planning, implementing and evaluating their children's learning program from a home base.

In order to monitor home education and provide advice to the Minister for Education, a Home Education Advisory Council was established in February 1993. It advises on the adequacy of individual programs of home education; provides a reference point for inquiries and concerns; maintains liaison with other agencies; and organises support and assistance to home educators.

Apart from a chairperson, the council has three nominees of the Minister for Education, and three nominees of home educators.

The Home Education Advisory Council accepts responsibility for families who have notified the Minister of their intention to home educate and make themselves available for monitoring educational progress. However, the council is not responsible for families who withdraw their children from school—or who do not send their children to school—and who have not notified the Minister of their intention to home educate.

The aims of the Advisory Council are to ensure that home education in Tasmania is recognised and monitored, and to facilitate high standards in the educational practice chosen by individual families.

Among the activities of the Advisory Council during 1993-94 were:

- preparation of an information package for home educators;
- production of a regular newsletter for home educators; and
- meetings with district superintendents, school social workers, the School of Distance Education, and school principals.

The Advisory Council has an important monitoring function. It keeps a register of families who have notified the Minister of their intention to home educate. It has adopted a number of minimum requirements from the recommendations of an earlier Working Party Report on Home Education. These minimum requirements include demonstration and verification of:

- the home educators' aims and purposes;
- the program that is intended to be followed, and specific references to literacy and numeracy;
- details of tutors and specialists, and opportunities for social interaction of home-educated children; and
- records of the student's program including the use of journals, test results, timetables, and work samples.

During 1993, the Advisory Council was notified that 83 children were to be home-educated, of whom about half had a monitoring visit.

Senior secondary colleges, which teach years 11 and 12 exclusively, concentrate on specialist teaching at a few urban centres. Admission policy of the colleges is one of 'open door' to most courses. Colleges, especially those in the Hobart area, now have a number of late afternoon and evening classes to cater for mature-age, part-time students.

The policy of the Department of Education and the Arts is directed towards educating children in their local communities. However, parents are free to choose which government school their child attends.

Rural schools, with their lower than optimum and declining numbers, pose a problem to a government committed to serving Tasmania's dispersed population. Transport is free but any consolidation of schools involves longer travelling times for some students.

## EDUCATION IN THE 1990s

High levels of Tasmanian and Australian unemployment have had implications for Tasmanian education. Schools have responded with curriculum changes so that subjects with a potentially higher vocational relevance, such as computing, are being promoted. There are also efforts being made to educate young people to make more effective use of increased leisure and recreation time.

The primary school curriculum is designed to cater for the mental, physical, social and emotional development of children during their critical formative years. The curriculum emphasises the acquisition of literacy, numeracy and basic language skills, within the wider context of developing a capacity to communicate, think and value. The school's task is to provide programs that enable each pupil to develop skills appropriate to his or her stage of development, which will foster further learning. These programs also provide for creativity and arousing the imagination, as well as giving the opportunity to develop initiative and logical thought.

The secondary curriculum provides a general, comprehensive education within a framework of subjects endorsed by the Schools Board of Tasmania. Most Year 7 and 8 pupils follow a common course developed by the school, suited to their needs. In years 9 through to 12, students follow courses derived from Tasmanian Certificate of Education (TCE) syllabuses. In years 9 and 10, schools generally require all students to follow a core of basic subjects. In addition, students select optional subjects at appropriate levels of difficulty, to meet individual needs and interests.

The TCE is issued to all students who, on leaving school, have successfully completed one or more subjects studied in years 9 to 12. Examinations for externally assessed syllabuses for years 11 and 12 are conducted by the Schools Board in November each year. Requirements for tertiary entrance are determined by the University of Tasmania.

### **Tasmanian Certificate of Education (TCE)**

The Tasmanian Certificate of Education (TCE) has been developed after wide consultation in the community and all sectors of education in the State. After initial reservations by some employer representatives, the TCE now enjoys support from employers and from the University of Tasmania.

The TCE, which covers years 9 to 12, was introduced for Year 9 students in 1990 and was fully operational by the end of 1993. Years 9 and 10 are assessed internally, with standards moderated State-wide. Year 12 and some Year 11 subjects are assessed using a combination of internal and external assessments. In addition to satisfying subject-specific criteria, students are required to show achievement in a range of cross-cur-

ricular skills such as being able to work with others in a group situation, and using initiative.

The awards on the TCE are OA (outstanding achievement), HA (high achievement) and SA (satisfactory achievement). Students who complete a course of study without reaching a level of achievement which is deemed satisfactory will have this recorded on their certificate. In many schools, students keep a record of achievement for each year of their TCE. In these schools these records, together with evidence of other achievements, are included in a comprehensive portfolio or record of achievement, which students may use to assist entry into the workforce.

In rural primary schools, classes are usually co-educational and unstreamed, with teachers devising programs for children of various abilities. Pupils progress to the next grade on the basis of their maturity and age rather than on their intellectual attainments. Composite classes, consisting of pupils of different ages or grades, are common as are double units or team-teaching where two classes are joined from time to time. This allows for teachers' interests or abilities to be better utilised.

There has been positive discrimination towards country children so that, notwithstanding cost, the secondary education available in district high schools is often comparable to that provided in urban areas. For example, staffing in district high schools is usually more generous than in urban high schools. In four country towns, annexes of senior secondary colleges have been established where some year 11 and 12 subjects are taught.

In government schools, strict neutrality is observed on religious dogmas and ethics. Legislation gives limited access by outside religious groups to their adherents; however, full advantage is seldom taken of this access.

The Department of Education and the Arts' policy is directed towards integrating children with special needs into 'normal' schools. Special schools provide for children with different forms of handicap and who are unable to benefit from instruction in normal schools. Instruction varies according to the type of handicap. In cases of physical handicap the main need is to maintain normal or near-normal individual programs. Schools and classes for intellectually handicapped children follow a program that is tailored to meet individual needs.

Non-government schools have paid a valuable part in Tasmanian education. Of the 301 schools operating in Tasmania in 1994, 233 were government schools and 68 were non-government schools. In the non-government sector 38 Catholic schools were attended by 62% of the children who received a non-government education.

Schools which are independent of the State system, and not religiously affiliated, are now a feature of Tasmania's education system. In 1994 there were 8 of these schools. Enrolments are usually less than 100 students. This reflects parent and staff views that pupils learn and socialise better in smaller groups compared with larger ones.

## **PRESCHOOLS**

The Department of Education and the Arts aims to provide kindergartens for children of four years and over, by 1 January of any given year.

Until 1969, government preschools were established on the initiative of groups of parents. The Education Department provided the buildings, but eventually recovered half its outlay from parents. From 1969 all new facilities for preschool education have been provided in kindergartens attached to primary schools. There are now kindergartens which are part of a primary school and others which are not.

In 1994 there were 151 government primary schools with attached kindergartens and three separate kindergartens, with total enrolment of 7,032. Non-government kindergartens form only a minor part of total non-government enrolment. No government assistance is given to these schools.

Most preschools are conducted on a sessional basis (that is, sessions of two to three hours, for two to five days per week). Preschool programs generally favour the free-play approach, with emphasis on children's social and emotional development through creative activities. Parents often assist at sessions or at fund-raisers for the purchase of play materials and educational resources.

**PRIMARY SCHOOLS, TASMANIA**

Particulars	Government		Non-government	
	1985	1994	1985	1994
Number of schools (a)	166	151	41	38
Number of teachers (b)—				
Males	658	468	95	124
Females	2 171	1 689	470	469
<b>Total</b>	<b>2 829</b>	<b>2 157</b>	<b>565</b>	<b>593</b>
Number of pupils (c)—				
Males	19 335	19 012	4 453	5 646
Females	17 951	18 021	4 548	5 668
<b>Total</b>	<b>37 286</b>	<b>37 033</b>	<b>9 001</b>	<b>11 314</b>

(a) Excludes primary schools with secondary classes (e.g. district high schools).

(b) Full-time equivalents.

(c) Includes primary grades in combined primary and secondary schools.

Source: ABS catalogue no. 4221.0

**PRIMARY EDUCATION**

The age of entry to preparatory classes (Prep) is five years and for Year 1, five and a half to six years of age. Most schools offering primary education go from the Prep year, up to and including Year 6. In 1994 there were 151 government primary schools and 26 government schools which were combined primary and secondary schools (district schools and district high schools).

There were 38 non-government primary schools, and a further 24 non-government schools which were combined primary and secondary schools. Of the 38 non-government primary schools, 27 were affiliated with the Catholic Church. Of the 24 non-government combined primary and secondary schools, seven were Catholic and three were Anglican.

For much of the 1980s, the percentage of school pupils enrolled in primary grades decreased. In government schools there was a fall from 59.9% in 1982 to 55.5% in 1986, while in non-government schools the drop was from 54.8% to 51.8%. The percentages in 1994 for government and non-government schools were 57.8 and 53.1 respectively. The major cause of the falling proportion of students enrolled in primary grades was the lower birth rates of the 1970s. Higher birth rates in the 1980s have recently reversed the trend.

**MacKillop College**

One of the changes brought about by the re-structure of Catholic education in Southern Tasmania was the establishment of a new junior secondary, co-educational college on Hobart's Eastern Shore. MacKillop College, under the direction of Brother Tony Smith, occupies the site of the former Mornington Primary School and was officially opened in March 1994.

The College takes its name from Mother Mary MacKillop, the co-founder of the Sisters of St Joseph and the first Australian to be canonized.

In its first year the college had sixty Year 7 students and by 1997 it is anticipated that there will be approximately 360 students.

Students are offered a broad range of subjects in Year 7, including the core subjects of Religious Education, English, Maths, Science and Social Science.

The curriculum also exposes students to specialist subjects including Keyboarding, Music, Art, Drama, Home Economics, French, Japanese, Design in Wood and Physical Education.

## SECONDARY EDUCATION

Almost all Tasmanian children attend some form of secondary school, for at least a short time. Entry age to secondary school is usually between 11 and a half to 13 years. The first four years of secondary education (years 7 to 10 inclusive) are catered for in high schools and district high schools. These schools are non-selective, comprehensive and provide a broad, general education. All high schools and district high schools are co-educational, with the exceptions of the all-girls Ogilvie High and the all-boys New Town High which are both located in the Hobart suburb of New Town.

The majority of high schools commence at Year 7 and go to Year 10. The secondary colleges have only years 11 and 12. Secondary colleges were pioneered by Tasmania in the early 1960s when the two traditional academic high schools, Hobart and Launceston, phased out their junior classes.

The trend in secondary school enrolments is the reverse of primary school enrolments. As birth rates fell in the 1970s, the proportion of pupils in secondary years rose. In 1994 the 27,028 pupils in secondary years in government schools accounted for 42.2% of total enrolment. The corresponding figure for non-government schools was 46.9%. Total non-government secondary enrolments have increased by 24.0%, from 8,049 pupils in 1985 to 9,984 in 1994. This compares with government secondary enrolments which decreased by 8.6% (29,577 to 27,028).

### SECONDARY SCHOOLS, TASMANIA

Particulars	Government		Non-government (a)	
	1985	1994	1985	1994
District and district high schools	26	26	—	—
High schools	34	42	29	30
Secondary colleges	6	8	—	—
<b>Total schools</b>	<b>66</b>	<b>76</b>	<b>29</b>	<b>30</b>
Number of teachers (b)—				
Males	1 494	1 084	342	378
Females	1 179	965	372	401
<b>Total</b>	<b>2 673</b>	<b>2 050</b>	<b>714</b>	<b>779</b>
Pupils—				
Year 7-9	19 016	15 295	5 026	5 773
Year 10	5 818	5 081	1 564	1 775
Year 11 and 12	3 899	6 652	1 459	2 436
<b>Total</b>	<b>28 733</b>	<b>27 028</b>	<b>8 049</b>	<b>9 984</b>
Males	14 634	13 818	3 793	4 888
Females	14 099	13 210	4 256	5 096

(a) Includes the secondary classes of combined primary and secondary schools.

(b) Full-time equivalents.

Source: ABS catalogue no. 4221.0

### Retention rates in secondary schools

The apparent retention rate to Year 12 is a measure of the extent to which students remain in secondary education from Year 7 to Year 12. To calculate the apparent retention rate of students in Year 12 in 1994, the number of students in 1994 is expressed as a percentage of the number of students who were in Year 7 in 1989.

This is called an apparent retention rate because the method and calculation does not take account of net changes to the school population due to migration. Nor does it take account of those students who spend more than one year in the same grade. In addition,

some Tasmanian non-government schools have no senior secondary college for Year 11 and 12 students. As well, some non-government, senior secondary colleges cannot match the range of subjects offered at the government senior secondary colleges. Accordingly, transfers between the government and non-government systems at the end of Year 10 can confuse or distort a simple interpretation of apparent retention rates. Non-government schools generally have higher retention rates than government schools.

The increasing apparent retention rate in Tasmanian secondary education is consistent with the trend Australia-wide. As well as employment considerations, other factors are at work, including a more favourable community perception of, and employer preference for, increased years of secondary schooling.

## TERTIARY EDUCATION

Tertiary education is provided at higher education institutions and Technical and Further Education (TAFE) institutions. The University of Tasmania and the Australian Maritime College provide higher education courses. Vocational education and training courses are provided at a number of institutions including Technical and Further Education (TAFE) colleges and the Australian Maritime College. At the 1991 Census, 19.2% of Tasmania's young people aged 15 to 24 years were attending a tertiary educational institution.

### The University of Tasmania

#### *State-wide responsibility*

The University of Tasmania is unique in the Australian scene in being the only university in the State. It carries a range of teaching and research responsibilities that in other States would typically be shared among several universities.

#### *Organisation*

The university is governed by a council established under the *University of Tasmania Act 1992*. The council consists of the chancellor, vice-chancellor and chairperson of the Academic Senate; members appointed by the council, Minister for Education and the Arts, the Legislative Council and House of Assembly; and members elected by the academic and general staff, students and graduates of the university.

There are ten university-wide faculties responsible, through the Academic Senate (the primary forum for academic decision-making and academic policy formulation in the university) to the council, for monitoring and administering teaching and assessment in award and non-award courses approved by the university. The faculties play a key role in academic quality assurance and also have a role in academic staff promotion. Each faculty includes the academic members of a number of cognate departments, and is presided over by an elected academic dean.

Academic resource management and planning are handled by seven university-wide schools, each headed by an executive dean appointed by the council on the

### APPARENT RETENTION RATES TO YEAR 12, SECONDARY SCHOOLS, TASMANIA

Year	Government	Non-government
1986	27.1	44.5
1987	30.2	44.4
1988	36.1	43.2
1989	38.1	45.9
1990	43.2	50.4
1991	52.1	54.3
1992	59.5	62.7
1993	58.9	65.9
1994	56.2	64.6

Source: ABS catalogue no. 4221.0

recommendation of the vice-chancellor. Schools are responsible for the allocation among academic programs of the resources provided by the university and for the strategic planning of the activities of the school. This includes academic planning in consultation with the relevant faculties.

### Teaching

The university offers 23 distinct degree programs; its activities span 34 of the 47 discipline groups identified by the Commonwealth for funding purposes and it teaches at all levels, from associate diploma to doctorate. Courses offered through Hobart include agricultural science, fine art, humanities and social sciences, economics and commerce, urban design, education, engineering and surveying, law, medicine and pharmacy, music, and science. Through Launceston, courses are offered in applied science, fine art, architecture, business, applied computing, education, engineering, humanities, nursing and social work. Courses are delivered at the main campuses at Sandy Bay in Hobart and Newnham in Launceston. Branch campuses are located in the Hobart city centre in Harrington Street (Conservatorium of Music), Collins Street (Clinical School) and Hunter Street (Tasmanian School of Art). Study centres are located at Burnie and Devonport.

The university is consolidating its presence on the North-West Coast through the establishment of the North-West Centre at Burnie. It will provide a range of functions including support for distance education students, articulation with TAFE, and programs and links with primary industry. Building of the centre began in 1994.

### Student profile

In 1994 the university enrolled 12,030 students, a student load of 9,669 Equivalent Full Time Student Units (EFTSU).

## Tasmania 2010

The TASMANIA 2010 initiative arose from a series of meetings of prominent Tasmanians during 1992. They recognised the importance of developing a sense of common purpose and the need to create a strategic alliance of key decision-makers capable of developing a long-term vision for Tasmania. They are sufficiently influential to encourage and empower Tasmanian political leaders to maintain coherent policy directions on major issues that transcend party-political differences and that require policy consistency beyond the normal Australian electoral cycle.

The University of Tasmania took the lead during 1993 and 1994 in this major public enterprise and acted as an 'honest broker' to promote constructive planning and networking across boundaries that separate such groups as unions and management, and environmentalists and developers.

As the sponsor of TASMANIA 2010 the University acts as the host for initiatives and provides a permanent secretariat. The two goals of TASMANIA 2010 are:

- to make constructive dialogue extend across virtually the full range of key Tasmanian decision-makers into a permanent, effective planning culture; and
- to develop and promote *Plan Tasmania*, an environmentally and socially responsible blueprint for long-term State development.

The initiative received strong support in 1993 and 1994 from the major political parties and their leaders, and from business, industry and the wider community during a series of forums facilitated by the university.

**UNIVERSITY OF TASMANIA, ENROLMENTS, 1994**

Student numbers	Number of enrolments			Per cent
	Launceston	Hobart	Total	
Commencing	1 988	2 584	4 572	38
Female	2 749	3 660	6 409	53
Male	2 246	3 375	5 621	47
Full-time	2 937	5 248	8 185	68
Part-time	2 058	1 787	3 845	32
Full-fee overseas	364	501	865	7
Level of course—				
Higher degree research	75	536	611	5
Higher degree course work	313	302	615	5
Other postgraduate	333	439	772	6
Undergraduate	4 172	5 688	9 860	82
Non-award, enabling	102	70	172	1
Graduates (1994)	999	1 690	2 689	100
<b>Total</b>	<b>4 995</b>	<b>7 035</b>	<b>12 030</b>	<b>100</b>

Source: *Statistics 1994, University of Tasmania*

**UNIVERSITY OF TASMANIA, STAFF, 1994**

Staff	Number of persons			Per cent
	Launceston	Hobart	Total	
Academic	249	551	800	48
General	235	640	875	52
Full-time	420	976	1 396	83
Fractional full-time	64	215	279	17
Female	226	495	721	43
Male	258	696	954	59
<b>Total (a)</b>	<b>484</b>	<b>1 191</b>	<b>1 675</b>	<b>100</b>

(a) Excludes casual.

Source: *Statistics 1994, University of Tasmania*

There were 4,572 commencing students in 1994, 38% of all enrolments. Despite substantial growth in the university intake, the rates of participation in higher education by Tasmanians—both school leavers and mature-age students—remain lower than those of any other State.

Of the 1994 student population, 611 were higher degree research students and 615 (5%) were higher degree coursework students. Approximately 82.2% were enrolled for bachelor degrees. Sixty-eight per cent of enrolments were full time. In 1994, 1,690 students graduated at Hobart and 999 at Launceston.

*Staff profile*

In 1994 the university employed 1,675 staff, 1,191 at Hobart and 484 at Launceston. These numbers included 800 academic staff and 875 general staff.

*Research*

The university is a major partner in three of Australia's Cooperative Research Centres: Antarctic and Southern Ocean Research, Aquaculture, and Temperate Hardwood Forestry. The university has three National Key Centres for Teaching and Research: Economic Geology, Aquaculture, and Antarctic and Southern Ocean Research.

*Funding*

Total operating funds amounted to \$137.5 million in 1993. This included \$79.8 million from the Commonwealth Government and \$18.6 million from the Higher Education Contribution Scheme (HECS). The Commonwealth Government provided \$3.1 million for research assistance, while another \$5.3 million was obtained for research from private sources.

**The Australian Maritime College**

Courses offered by the college can be divided into four broad categories:

- courses for those wishing to become operators of merchant ships and fishing vessels;
- courses for those who wish to become shore-based managers in the shipping industry;
- courses to prepare technologists and managers in the fishing industry; and
- courses to prepare engineers, ship designers and technologists for shore-based careers in the maritime and related industries.

These courses have direct relevance to occupational categories within the maritime and related industries. Maximum use of credit transfer provisions are a feature of the courses for ship operators. Articulation between courses and credit for skills and knowledge gained on-the-job provide an opportunity, for those who have not completed senior secondary schooling, to gain a diploma and professional recognition in their occupation.

*Fisheries*

The college's fisheries courses include the Certificate in Fisheries Operations which is designed to cover the knowledge requirements for the master of a 24-metre fishing vessel. The fisheries degree course teaches the importance of conservation and management of fisheries resources and also covers the marketing side of the industry. Aspects such as fisheries biology; fishing gear, technology; seafood handling; processing and marketing; and fisheries management are covered.

*Naval Architecture*

The Bachelor of Engineering (Maritime) and Naval Architecture is the only

**AUSTRALIAN MARITIME COLLEGE,  
ENROLMENTS, 1994**

<i>Course</i>	<i>Total</i>
Engineering	
B Eng (Maritime/Naval Architecture)	109
B Tech (Marine Eng)	56
B Tech (Marine Electronics and Electrical Engineering)	18
Assoc. Dip Tech (Marine Engineering)	13
Assoc. Dip (Maritime Electronics)	37
Other (Non award)	18
Fisheries	
M Applied Science (Fisheries)	6
Grad Dip (Fisheries)	6
Grad Cert (Fisheries)	8
B Applied Science (Fisheries)	96
Cert (Fisheries Ops)	55
Nautical Studies	
M Bus/Maritime Management	20
Grad Dip Business (Shipping)	84
Grad Dip Business (Port & Terminal Ops)	18
Dip App Science (Nautical Science)	103
Dip App Science (Shipmaster)	60
Ad Cert (Marine Ops)	50
Centre for Marine Operations	
Pre-study for Advanced Certificate	18
Cert Marine Operations (Ind)	142
Cert Marine Operations (Retraitees)	35
Cert (Small Craft Ops)	60
<b>Total</b>	<b>1 012</b>

Source: Annual Report, Australian Maritime College 1994

full-length engineering degree offered in the north of the State. These give specialist training, including preparing graduates for careers in marine transport, port and harbour authorities, government bodies, ship design and production, and research and development.

#### *Merchant navy*

The college also offers courses leading to careers in the merchant navy as an integrated rating, or a navigating or engineering officer. Students on these courses are selected by the maritime industry through cadetships.

#### *Electrical Engineering*

The Bachelor of Technology (Maritime Electronic and Electrical Engineering) provides training in the use, maintenance and repair of electronic communication and navigation systems and electrical systems.

### **Vocational education and training**

Technical and Further Education (TAFE) is the main provider of vocational education and training (VET) in Tasmania. The Australian Maritime College and private training providers also offer some VET courses.

There were nine Tasmanian Government institutions conducting VET courses in 1993: Adult Education; Adult Migrant Education Service; Australian Maritime College; Drysdale Institute of TAFE—Tasmania; Hobart Institute of TAFE; Launceston Institute of TAFE; North West Institute of TAFE—Burnie; North West Institute of TAFE—Devonport; and North West Institute of TAFE—Queenstown. These institutions offer a range of vocational and non-vocational courses including:

- associate diploma courses that are aimed at para-professional personnel in areas such as engineering, accounting, computing, child care and social welfare;
- trade courses that combine theoretical and practical aspects of the trade, and off-the-job training provided in TAFE colleges that is complementary to on-the-job training given by the employer;
- post-trade courses that are available to extend the skills and knowledge of tradespersons; and
- non-trade vocational programs in areas such as fashion, retailing and commercial studies.

There are also programs aimed at providing young people with entry level skills and programs designed for people who are under-represented in mainstream TAFE courses. These include courses for women, migrants and Aboriginal people.

In 1993 of 22,447 students enrolled in vocational education and training courses:

- 57% were male, and 89% were studying part time. This reflects the strong vocational orientation of many courses.
- 28% were studying business administration and economics; 23% art, humanities and social sciences; 18% engineering and surveying; and 14% services, hospitality and transportation.
- 22% were undertaking operatives (initial) courses; 20% basic employment skills courses; 20% other skills (complete) courses; and 18% para-professional higher technician courses.

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**INSTITUTE OF TAFE COURSES, 1993**  
 (where total enrolment is 150 or greater)
 

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Course	Number enrolled
Primary	
Horticulture	274
Manufacturing/Engineering	
Engineering (Electrical)	228
Engineering Tradesperson (Electrical)	285
Engineering (Mechanical)	238
Engineering Tradesperson (Mechanical)	236
Welding	229
Engineering Tradesperson (Fabrication)	218
Building/Architecture	
Carpentry and Joinery (Trade)	253
Business Services	
Business (Accounting)	839
Business (Accounting)—External	167
Business (Information Technology)	466
Business (Management)	430
Small Business Management	821
Commercial Studies	150
Introductory Computing	278
Software Applications	256
Keyboarding	205
Word Processing	334
Workplace Supervision	231
Personal/Community Services	
Social Science (Community Services)	322
Social Science (Child Care)	160
Vocational Preparation	261
Hairdressing	246
Hospitality/Tourism	
Introductory Beverage Service	468
Food & Beverage (Basic)	190
Cookery (Trade)	187
Access/Equity	
Accredited Training for Youth	1 004
Accredited Training for Youth Induction Program	691
Accredited Training for Youth Extension Program	300
Women's Studies	518
Women at Work	286

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Source: Selected Higher Education Statistics, DEET

#### *Changes during 1994*

In March 1994 the Department of Employment, Industrial Relations and Training had a name change, and became the Department of Industrial Relations, Vocational Education and Training (DIRVET), in recognition of the increased importance of vocational education, and training. The employment function was transferred to Tasmania Development and Resources.

At the Hobart Institute of TAFE, the Flexible Learning Centre was formed when External Studies and Computer Managed Learning were merged. The Centre will be able to tailor course work modules to learners' needs. It is expected that learners' or enterprises' needs will increasingly result in more flexible training as industry restructuring gathers momentum.

For some vocational areas, a State-wide centre of excellence has been developed within particular TAFE institutes to enable students to make the best use of available facilities, equipment and teaching expertise. These include automotive trades at Launceston, agricultural studies at Burnie and motorbody repair training at Devonport. A centre for building and construction studies, the Building Services Facility at the Clarence Campus of the Hobart Institute of TAFE, was completed during 1994. It cost \$8.7 million and has state-of-the-art equipment including 50 mobile skills bays that can be moved from one area to another, stored away, and transported to industry locations for special training.

#### *The Australian Vocational Training System*

In Tasmania, the increased participation of industry in training has been reflected in piloting the several Australian Vocational Training System programs. The system follows the Carmichael report on training reform and is an integrated scheme of training linking school, work and vocational training. It focuses on school leavers and it aims to smooth the transition from education to work. There are two types of pilot programs being run: institution based, where students attend senior secondary colleges and do a substantial work placement; and work-place based, where young people combine the early years of employment with additional training. DIRVET has facilitated the submission process, funding, monitoring and evaluation of national pilot projects in Tasmania.

#### **Adult Education**

Adult education is the most decentralised of the education sectors. The Tasmanian Institute of Adult Education provides a range of structured and informal adult learning opportunities throughout the State. These include courses in personal development; culture; recreational, arts and craft; adult literacy and basic education; and community education.

During 1993-94 almost 30,000 students were enrolled in Adult Education courses. They paid about \$1,160,000 in fees. A total of 485 students undertook courses in the Aboriginal Adult Education program. Longer term unemployed people also benefited from Institute of Adult Education courses.

#### **FURTHER READING**

Other statistical tables relating to this chapter are located in the Historical Series at the back of this book.

#### **ABS PUBLICATIONS**

*Schools, Australia* (4221.0)

*Transition from Education to Work, Australia* (6227.0)

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Australian Maritime College, *Annual Report of Council 1994*.

Department of Education and the Arts, *Annual Report*.

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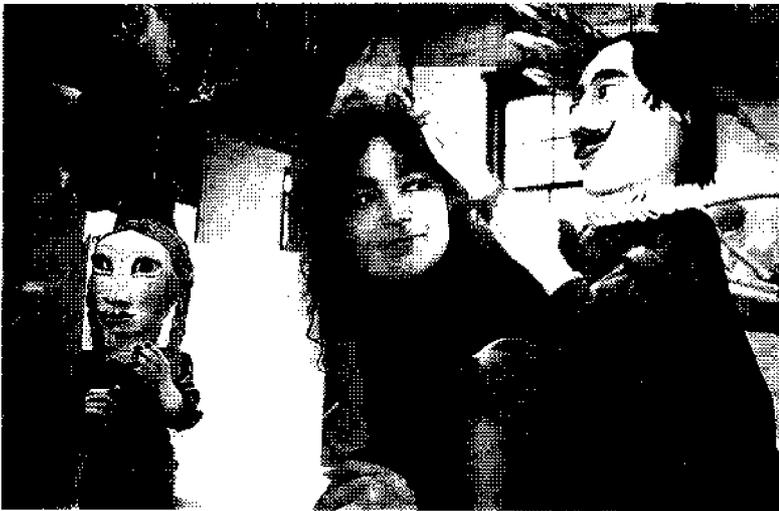
University of Tasmania, *Statistics 1994*.

#### **ACKNOWLEDGEMENTS**

MacKillop College, Hobart

Department of Industrial Relations, Vocational Education and Training

# 10 | Culture and the arts



Terrapin Puppet Theatre's Trainee Designer Anja Reinalda with puppets from the Company's thirteen year history. Based in Hobart, Terrapin Puppet Theatre tours world-class puppetry in Tasmania and interstate. In 1996 the Company will tour internationally, performing at the UNIMA festival in Budapest.

*The Mercury*

CULTURAL ACTIVITIES are essential to a shared sense of quality of life and also make an important contribution to the economy. These activities include cultural heritage, creative and performing arts, literature, film and video, libraries, radio and television, language and religious practice, adult education, active attachment to custom and place, recreation and activities around the conservation and enjoyment of the natural environment.

## CULTURAL HERITAGE

Tasmania's heritage is drawn from its cultural and natural environments. The cultural environment includes Aboriginal sites of all types and historic places of significance such as old towns and residential and commercial buildings, shipwrecks and streetscapes. Tasmania's natural environment is preserved in national parks, nature reserves and wilderness areas as well as smaller sites (see Chapter 2, Environmental issues).

THE REGISTER OF THE NATIONAL ESTATE (a)					
State/Territory	30 June 1993		30 June 1994		Total
	Total	Aboriginal	Historic	Natural	
NSW	3 247	204	2 655	392	3 251
Vic.	2 386	100	2 108	191	2 399
Qld	940	129	564	252	945
WA	1 115	73	836	215	1 124
SA	1 211	133	721	358	1 212
Tas.	1 414	64	1 144	225	1 433
NT	230	80	97	53	230
ACT	147	10	112	26	148
External Territories	31	0	15	16	31
<b>Total</b>	<b>10 721</b>	<b>793</b>	<b>8 252</b>	<b>1 728</b>	<b>10 773</b>

(a) Does not include those on the Interim List.

Source: Australian Heritage Commission, Annual Report 1993-94

### Register of the National Estate

The functions of identifying and conserving Australia's national heritage are shared between all levels of Government. The Register of the National Estate, maintained by the Australian Heritage Commission, is the national list of all those places of Australia's Aboriginal, historic and natural heritage that should be kept for present and future generations. Listing on the Register alerts planners, decision makers, researchers and the community at large to the heritage value of places. During 1993-94 the number of Tasmanian places in the Register increased by a net 19 to 1,433. A further 22 places were placed on the Interim List (12 Aboriginal, 1 historic and 9 natural).

#### Aboriginal places

During 1993-94 the Department of Environment and Land Management drafted an Aboriginal heritage strategy for presentation to the Government. Access to site records is now in Aboriginal hands. Aboriginal people vet permit applications under the *Aboriginal Relics Act 1975*, and a new consultative procedure has been set in place. The program of midden stabilisation on the south-west coast continued with the control of erosion on four important middens using the labour and expertise of members of the Aboriginal community.

In 1994, there were 76 Aboriginal places in Tasmania listed on the Register of the National Estate. The two main place types protected, namely occupation sites (27) and shell middens (18), accounted for 59% of all Tasmanian places on the Register.

#### ABORIGINAL AND TORRES STRAIT ISLANDER PLACES IN THE REGISTER OF THE NATIONAL ESTATE, 30 JUNE 1994 (a)

Types of place (b)	Tasmania	Australia
Occupation site	27	89
Shell midden	18	66
Quarries	5	35
Modified trees (scarred and carved)		45
Art sites	6	196
Stone arrangements	3	53
Sites of spiritual or mythological significance		98
Burials, cemeteries and graves	3	30
Historic and contact sites	1	44
Site complexes	12	107
Organic resource area	1	1
Other	—	69
<b>Total</b>	<b>76</b>	<b>833</b>

(a) Includes registered places and places on the Interim List.

(b) Most of these places encompass a number of Aboriginal sites. There are many thousands of individual sites covering a wide range of site types in the Register.

Source: Australian Heritage Commission, Annual Report 1993-94

## Tasmanian Aboriginal and Torres Strait Islander Culture

The National Aboriginal and Torres Strait Islander Survey was conducted in 1994. It resulted from the Royal Commission into Aboriginal Deaths in Custody and aimed to provide information to address the disadvantaged and unequal position of many Aboriginal and Torres Strait Islander people within Australian society. Those surveyed included people with different lifestyles—from remote and rural to urban and metropolitan centres. People living in remote communities, town camps and households in urban areas were visited as well as people in hostels, boarding schools and prisons. Aboriginal and Torres Strait Islander people were recruited and trained in most areas to conduct the interviews. Information was collected on a wide range of issues such as families and culture, housing, employment and income, education and training, and law and justice.

The extent to which Aboriginal and Torres Strait Islander people identify with and maintain their Indigenous culture may be indicated by their participation in Indigenous cultural activities; their use of Indigenous languages; the extent to which they identify with clan, tribal or language groups; and their recognition of and access to homelands.

In Tasmania, of those Aboriginal and Torres Strait Islanders aged 13 years and over, 31% (2,072 of 6,597 people) said that they had participated in or attended some form of Indigenous cultural activity (such as attending a funeral, festival, carnival or ceremony or being involved in Aboriginal or

Torres Strait Islander organisations) over the past year. This compared with 72% Australia-wide.

Some 18% of those aged 13 years and over (1,166 people) identified with a clan, tribal or language group (compared with 60% Australia-wide); and 66% (4,383) believed that the role of elders is important (compared with 84% Australia-wide).

Approximately 40% of those aged 13 years and over (2,633 people) recognised a homeland, an area of land to which people have ancestral and/or cultural links. This compared with 75% of the Australian Indigenous population.

### ABORIGINAL AND TORRES STRAIT ISLANDERS, CULTURE, 1994

	Persons aged 13 years and over				Persons aged 5 years and over		
	Identifies with a clan (%)	Sees elders as being important (%)	Recognises homelands (%)	Attended cultural activities (%)	Total ('000)	Speaks an indigenous language (%)	Total ('000)
NSW	47.8	82.3	68.6	67.1	52.0	2.7	68.6
Vic.	45.1	80.5	70.6	60.5	12.6	*2.4	16.2
Qld	57.2	81.9	75.0	72.3	52.1	15.1	67.7
SA	67.9	87.6	80.4	75.4	11.9	23.4	15.8
WA	63.7	86.3	75.4	80.7	30.2	20.9	40.1
Tas.	17.7	66.5	39.9	31.5	6.6	*1.0	8.7
NT	92.0	94.7	93.8	84.5	30.9	74.1	40.1
Aust. (a)	59.8	84.4	75.2	72.1	197.5	21.0	258.7

\* Subject to high sampling variability (a) Includes ACT and Jervis Bay.  
Source: ABS catalogue no. 4190.0

**HISTORIC ENVIRONMENT PLACES IN THE REGISTER OF THE NATIONAL ESTATE,  
30 JUNE 1994 (a)**

<i>Types of place</i>	<i>Tasmania</i>	<i>Australia</i>
Residential buildings	448	2 435
Commercial buildings	81	682
Hotels, motels, inns	77	410
Banks and financial institutions	10	184
Government functions		
Government buildings	14	130
Courthouses, police stations, prisons	24	414
Libraries, hospitals, civic structures etc.	11	243
Military barracks, bases, fortifications	12	126
Scientific research facilities	0	7
Places of recreation (theatres, halls, race courses etc.)	24	263
Transport and communications—		
Road, rail and air transport places	8	150
Harbour facilities, ports, piers, docks etc.	2	26
Lighthouses	17	83
Post offices, telegraph stations etc.	15	172
Bridges	18	243
Shipwrecks	1	56
Primary industry (agricultural, pastoral, processing etc.)	150	681
Towns, precincts, conservation areas	32	379
Industrial sites and buildings	11	104
Mines and mineral processing works	2	65
Churches and other places of religion	116	710
Schools and places of education	33	329
Monuments and memorials	2	68
Cemeteries and graves	12	72
Parks and gardens	13	182
Historic places and miscellaneous places	12	93
Historic landscapes	0	9
<b>Total</b>	<b>1 145</b>	<b>8 316</b>

(a) Includes registered places and places on the Interim List.

Source: *Australian Heritage Commission, Annual Report 1993-94*

### *Historic environment places*

The Tasmanian Department of the Environment and Land Management manages the conservation and sustainable use of Tasmania's historic heritage. The Department published the first pamphlets in a cultural heritage series during 1993-94. These provided information on the cultural heritage of Highfield, Mt Field, Eaglehawk Neck and the coal mines on Tasman Peninsula.

Approximately \$400,000 of the One Nation money as well as \$250,000 of the Heritage Asset Management Program was spent on the conservation of historic assets, including Highfield, the coal mines on Tasman Peninsula, Maria Island and Entally.

During 1993-94 a blanket declaration of all shipwrecks older than 75 years was made under the *Historic Shipwrecks Act 1976*. Amnesty was also made in which members of the public could report artefacts from shipwrecks that they held illegally. The amnesty was successful in raising the public's awareness of Tasmania's maritime heritage, bringing six new shipwrecks to the notice of authorities as well as many artefacts. The excavation of the *Sydney Cove*, the oldest shipwreck on Australia's eastern seaboard, was also completed.

Many of the places in the Register of the National Estate are buildings, many of them privately owned. Some 39% of historic places in Tasmania were residential homes (compared with 29% nationally). Because maintenance costs are a major threat to their

**ATTENDANCE AT CULTURAL ACTIVITIES, TASMANIA (a)**

Venue/activity	Age group (%)					
	18-24	25-34	35-44	45-54	55-64	65+
Library	41.5	38.1	55.1	35.8	36.7	32.0
Art gallery	21.7	23.6	36.6	37.5	29.9	17.5
Museum	33.2	39.1	48.5	40.9	33.4	19.8
Popular music concert	59.6	37.6	31.6	25.3	19.4	7.8
Dance performance	9.9	8.5	13.6	10.9	6.0	6.4
Music theatre performance	12.9	12.5	17.5	18.9	15.6	9.3
Other theatre performance	17.2	17.9	25.3	18.1	12.0	7.5
Classical music concert	5.1	6.6	14.1	12.3	13.2	9.9

(a) Those who attended a venue/activity at least once in the 12 months ended June 1991.  
Source: ABS catalogue no. 4114.0

heritage values, a tax rebate scheme that relates to approved conservation works was introduced in 1994-95 to assist in protecting privately owned heritage buildings listed in the Register of the National Estate or in State or Territory heritage registers. The Commonwealth operates the scheme, with advice and help from State Government heritage agencies, at a cost of up to \$1.9 million a year.

**CULTURAL PURSUITS**

In the 12 months to June 1991, Tasmania had higher participation rates for attendance at libraries, art galleries and museums than the Australian rate. This was in line with a trend common to the less populous States. Tasmania also had higher participation rates for attendance at classical and popular music concerts.

Tasmanian attendance levels at all venues/activities tended to drop away at both sides of the middle-age groups, with the greatest number of people attending being aged between 35-54 years. An exception to this can be seen in the large number of young people (18-24 age group) who attended popular music concerts.

People with the lowest participation rates at most venues/activities (the exception being classical music concerts) were in the 65 years and over age group.

**ATTENDANCE AT CULTURAL ACTIVITIES (a)**

Venue/activity	Tasmania (%)	Australia (%)
Library	40.7	36.7
Art gallery	27.9	23.9
Museum	36.8	30.0
Popular music concert	31.0	28.6
Dance performance	9.5	11.2
Musical theatre performance	14.4	20.1
Other theatre performance	17.0	17.8
Classical music concert	10.1	8.2

(a) Those who attended a venue/activity at least once in the 12 months ended June 1991.  
Source: ABS catalogue no. 4114.0

**MUSEUMS AND ART GALLERIES**

An estimated 36.8% of the Tasmanian population aged 18 years and over (117,300 people) had visited a museum at least once in the year ended June 1991. Some 27.9% (89,100) had visited an art gallery. This compared to the Australian figures of 30.0% and 23.9%. The proportion of Tasmanians visiting museums and art galleries was the highest of the States, but in both instances was surpassed by the Territories. Participation rates for those visiting museums ranged from 48.5% of those aged 35-44 years to 19.8% of those aged 65 years and over. For art galleries, the highest participation rates were for those aged 45-54 years

(37.5%); the lowest for those aged 65 years and over (17.5%). An estimated 42.2% of Hobart's population aged 18 years and over visited a museum and 32.7% visited an art gallery in the 12 months to June 1991. This compared with 33.1% and 24.7% of those in the rest of the State.

### The Tasmania Museum and Art Gallery

The Tasmanian Museum and Art Gallery has its origins in early scientific groups formed in Hobart Town in the late 1820s and 1830s. In 1852 the Royal Society of Tasmania established a museum which was vested in a Government Board of Trustees in 1885. The first building on the present site on the corner of Argyle and Macquarie Streets, was designed by one of the city's best-known colonial architects, Henry Hunter (1832–92), and completed in 1863. Work has commenced on the restoration of the Private Secretary's Cottage (c. 1810), located within the site occupied by the museum's buildings. The Commissariat Bond Store, built in 1824, was partially restored in 1988.

The Tasmanian Museum and Art Gallery houses collections in the fields of fine and applied art, zoology, geology, botany, history, anthropology and applied science. It is an integrated institution, concerned with the whole range of natural and human heritage with particular emphasis on Tasmanian exhibits. The Museum's traditional function, and still the major part of its operation today, is to collect, conserve, study and display items of cultural or scientific value to the community. Its income is provided mainly by an annual grant from the State Government, supplemented by a contribution from the Hobart City Council.

#### *Highlights of 1993–94*

Major exhibitions mounted by the Tasmanian Museum and Art Gallery were:

- Antarctica—Secrets of the Frozen World (in conjunction with the Museum of Victoria);
- Arnhem Land Dreaming: Aboriginal bark paintings from Tasmanian collections;
- Translations: drawings by Keeling, De Groen and Amor;
- From Village to Vase: the Art of Colonial Gardening;
- Contemporary Photography (from the TMAG Collections);
- 20th Century Sculpture;
- Visions of the Frozen South: Australian Artists in Antarctica;
- the City of Hobart Award for Sculpture; and
- Elina Brandt-Hansen Ceramics.

The Tasmanian Museum and Art Gallery also hosted a number of travelling exhibitions:

- Arthur Boyd Retrospective (from the Art Gallery of New South Wales);
- ERIC the Pliosaur (Australian Museum);
- Skeletons (Queen Victoria Museum and Art Gallery);
- Flash Pictures by Aboriginal and Torres Strait Islanders (National Gallery of Australia);

#### ATTENDANCE AT MUSEUMS, 1990–91 ('000)

State/Territory	Attendees	Total visits
NSW	1 215.2	2 620
Vic.	849.1	1 830
Qld	559.7	1 210
SA	374.3	920
WA	376.9	910
Tas.	117.3	320
NT	41.6	130
ACT	98.8	310
Australia	3 632.9	8 250

Source: ABS catalogue no. 4114.0

- Dame Edna regrets she is unable to attend: humour and satire in contemporary sculpture (Australian Exhibitions Touring Association);
- Capturing the Orient: Hilda Rix Nicholas and Ethel Carrick Fox (City of Waverley Gallery); and
- Four Artists CAST Travelling exhibition.

There were more than 138,000 visitors in 1993–94 including 90,000 patrons who visited the exhibition 'Antarctica—Secrets of the Frozen World'.

Several staff received awards including Dr Kantvilas, the Coordinating Curator of Sciences and Head of the Herbarium, who received the Banks Alecto Scholarship of the Royal Society of London to study for three months at the British Museum. Mr Noel Kemp, the Curator of Geology, was awarded a National Geographic Society Research Grant to investigate shark fossil deposits in Queensland. He aims to collect shark fossil specimens and it is anticipated that by using acid-digesting techniques a number of sharks' teeth will be collected. Up until now, only about 100 specimens are known in collections, probably too few to draw comparisons about taxa, their relationships, and the environment in which the sharks lived.

A significant addition to the Museum was the acquisition of the bulk of the collection of type and figured fossil specimens of the Geological Survey of Tasmania. This material was transferred following the retirement of the Palaeontologist of the Geological Survey. Most of the collection comprises brachiopods of the Permian era of Tasmania. There are also Tasmanian and mainland trilobites and graptolites.

#### *The Herbarium*

The role of the herbarium is to develop, maintain, and manage the Museum's botanical collections, and to identify, classify and document the relationships of Tasmanian flora. It also provides prompt and accurate botanical advice to a wide range of individuals, government departments, scientific and educational institutions, and other organisations.

The Herbarium's current holdings number about 120,000 specimens of Tasmanian plants. Of these about 50,000 specimens have been entered onto the Museum's computerised database.

One of the highlights of 1993–94 was the completion of the final volume of *The Students Flora of Tasmania, Volume IVB* by Dr Winifred Curtis and Dennis Morris. This volume represented the culmination of a fifty-year-long project by Dr Curtis which she began on her arrival in Tasmania.

Progress was made on the backlog of uncurated material: more than 3,000 specimens were curated and 2,000 more readied for labelling and mounting. In the bryophytes, the historical collections of W. A. Weymouth, L. Rodway, and others were finally packeted and incorporated. An audit of the bryophyte collection was completed. This numbers more than 8,300 hepatics and 14,300 mosses.

During 1993–94 the senior curator undertook further taxonomic study on the Tasmanian lichen flora. Work on the relationships between lichen, bryophytes and their host rainforest type, partly funded by the National Rainforest Conservation Program (NRCP), neared completion. Analysis of the final data has begun.

#### *The West Coast Pioneers' Memorial Museum*

The West Coast Pioneers' Memorial Museum at Zeehan has operated as a branch of the Tasmanian Museum since 1965. It deals with the history of the West Coast of Tasmania, with an emphasis on mining, and is visited by about 90,000 people each year. The Local

Advisory Committee with the support of the Trustees, is developing a proposal which includes the establishment of an underground mine with displays, together with a working electric railway and aerial ropeway.

### Queen Victoria Museum and Art Gallery

The Queen Victoria Museum and Art Gallery was established by the Tasmanian Government in 1891. Since 1895 its management has been vested in the Launceston Corporation with financial support from an annual State Government grant.

In 1993-94, there were divisions of community history, conservations (which consisted of objects, paintings, and paper), creative and decorative arts, exhibitions, fine art, geology, history, library, physical sciences, public programs, zoology, and administration.

The history collection consists of the material culture of Tasmania since European settlement and incorporates the comparative cultural, technology and archaeology collections. It provides information to individuals and organisations as well as undertaking research on Tasmanian industrial and social history. The zoology collection consists of the vertebrate and invertebrate animal collections that are almost entirely of Tasmanian origin.

One of the highlights of the 1993-94 Museum and Art Gallery year was the opening of the Temperate Marine Aquarium by Professor Nigel Fortheath, Head of the School of Aquaculture at the University of Tasmania. The aquarium took two years of preparation. The tidal aquarium simulates a rock pool off the north coast of Tasmania and was stocked with several species of fish and over fifty species of invertebrate animals. The aquarium was one of the Museum's popular exhibits, particularly at feeding time.

There were 7 Honorary Research Associates, and a large number of volunteers in such areas as community history, fine art, public programs, and zoology.

#### *Information*

Over 26,000 additional database records were created during 1993-94. This brought the total number of records to more than 126,000 records. Most of this information was entered by volunteers. The most extensive databases related to zoology with 44,200 records. The next most extensive databases related to community history with 23,600 records. Botany databases held 15,000 records and geology held 9,300 records.

#### *Exhibitions*

A total of 37 new exhibitions were displayed during 1993-94 of which 26 were initiated by the Museum and Art Gallery. The main exhibitions were:

- Skeletons: The Inside Story;
- 66° South: Tales from an Antarctic Station;
- Great Russian Dinosaurs; and
- Eric the Pliosaur.

The *Art of Adornment—Contemporary Australian Jewellery* exhibition curated by Queen Victoria staff, opened at the National Museum of Contemporary Art, Kyoto. It was then successfully shown elsewhere in Japan, and in Korea and Indonesia.

## LIBRARIES

In the 12 months to June 1991, 40.7% of the Tasmanian population aged 18 years and over (129,900 people) had used a library at least once. This compared with the Australian figure of 36.7%. Participation rates ranged from 55.1% for those aged 35-44 years to 32.0% for

those aged 65 years and over. The participation of those in Hobart (42.1%) was slightly higher than that of the rest of the State (39.8%).

### The State Library of Tasmania

#### *Lending services*

During 1993–94 approximately 4.4 million items were borrowed from the lending service. There were 117,500 reservations made. About 45,000 items were added to the book stock, and 36,000 items were retired. The four bookmobiles, with a book stock of about 20,000 items, issued more than 150,000 items on loan. There were 2,500 registered users with special needs, mostly housebound and recorded-book users, who borrowed an estimated 150,000 items from the library.

Regional library services were reorganised into a State-wide structure under a single manager. The number of staff in the service was approximately 130.

Public access terminals, which enable access to information on library holdings, were introduced to city libraries in November 1993. These terminals also enabled reservations to be made.

#### *Reference and information services*

The two reference libraries in Tasmania are in Hobart and Launceston. During 1993–94 approximately 6,500 items were added to stock, and 1,500 items retired. Approximately 7,500 serial titles were held by the libraries.

The Hobart Reference Library had more than 190,000 client visits, and more than 29,000 enquiries were made. The library acquired material in CD ROM format, including Commonwealth Statutes, and the 1991 Census data from the Australian Bureau of Statistics.

The Launceston Reference Library had more than 140,000 client visits during 1993–94, and nearly 20,000 enquiries. The library acquired a number of genealogical products on microfiche or CD ROM, which have proved popular with family historians.

### The Tasmanian Parliamentary Library

This library serviced much of the information requirement of the Parliament and individual Members of Parliament. The Parliamentary Research Service provided 262 briefings for Members, compared to 245 in the previous year. Reference requests doubled to almost 6,400 in 1993–94.

### Special collections

#### *The Tasmaniana Library*

The Tasmaniana Library is a specialised collection of material devoted exclusively to Tasmania. It includes information on news and feature articles in Tasmanian newspapers and periodicals. During 1993–94 the library answered more than 4,500 research enquiries.

Major acquisitions included 13 almanacs and annuals published before 1840, about 700 postcards, a rare printed account of a yacht race from Queenscliff to Low Head in 1907, and several pieces of nineteenth century Hobart performing arts ephemera including two concert programs from the 1860s.

#### ATTENDANCE AT LIBRARIES, 1990–91 ('000)

State/Territory	Attendees	Total visits
NSW	1 409.1	22 990
Vic.	1 142.5	19 170
Qld	713.0	11 340
SA	423.2	7 240
WA	496.8	7 830
Tas.	129.9	2 050
NT	37.7	710
ACT	90.2	1 490
Australia	4 442.5	72 820

Source: ABS catalogue no. 4114.0

*The Allport Library and Museum of Fine Arts*

This library and museum was visited by more than 8,500 people in 1993–94, and handled more than 1,800 research enquiries. Purchases during the period included E. P. Ventenat's *Description des plantes nouvelles*, a pencil sketch of Hobart Town by G. W. Evans, and a proof version of a plate from La Billardière's account of d'Entrecasteaux's voyage.

**The Tasmanian Automated Library and Information System (TALIS)**

This computerised system was introduced at all city libraries in October 1993 and at the reference libraries in November 1993. A number of branch libraries came on-line during 1994. The network also included a number of secondary schools and TAFE colleges.

TALIS arose from the merging of two previously separate computerised information systems, the ADLIB system used by the State Library system, and the STARLITE system used by Tasmanian schools and colleges.

By June 1994, the TALIS central bibliographic database consisted of more than 800,000 records and 2,000,000 holdings. It was available at 52 sites State-wide. These comprised 7 public libraries, 4 reference libraries, 25 schools, 8 senior secondary colleges, and 8 Institute of TAFE libraries.

TALIS also includes a database of frequently asked questions and general information. As well, TALIS has a direct link to the catalogue of the library of the University of Tasmania.

**VISUAL ARTS****Art in Tasmania**

~ *Contributed by Victoria Hammond, Contemporary Art Services Tasmania* ~

In 1852 the colonial artist, Louisa Anne Meredith, noted, 'landscape sketching and watercolour fever raging with an extraordinary vehemence among the sons and daughters of Tasmania'. Tasmania, with its superb natural environment, continues to be highly attractive to artists: there are more artists per capita here than in any other Australian State. Historically, as now, numbers of artists from other States and other countries, particularly Britain, settle in Tasmania, the resultant cross-fertilisation having contributed significantly to the current sophistication and diversity of art produced here.

Visitors to Tasmania keen to acquire a sense of its history may do so most enjoyably by viewing public collections of colonial and later nineteenth century art. The Tasmanian Museum and Art Gallery in Hobart and the Queen Victoria Museum and Art Gallery in Launceston hold nationally significant collections of paintings by early artists working in Tasmania. Besides being a pleasure to view for aesthetic reasons alone, these highly distinctive works offer insights into the colonial attitudes which shaped early Tasmania. For example, Benjamin Duterrau's *The Conciliation* (held by the Tasmanian Museum and Art Gallery) is regarded as Australia's first history painting. It is in fact a fascinating example of colonial propaganda, a heavily fictionalised rendition of the devastating outcomes of George-Augustus Robinson's attempts to 'civilise' the Tasmanian Aborigines. John Glover's paintings of Tasmania as a golden pastoral arcadia indicate how early settlers believed that an essentially European vision of pastoral wealth could be implanted onto the geographically ancient Tasmanian terrain. Nevertheless, Glover's works remain among the most beautiful and topographically accurate of Tasmanian landscape paintings.

In the mid-nineteenth century the painter Charles Piguenit joined scientific exploration parties into wilderness areas of Tasmania. His paintings of sites like Lake St Clair and Cradle Mountain offer those aspects of the Tasmanian landscape which so appealed to the

Victorian romantic imagination: poetic atmospheric effects, majestic isolation and the sweeping grandeur of panoramic vistas. Other highlights of these collections include colonial portraits by Thomas Wainwright and Thomas Bock, maritime paintings—some of which refer to Tasmania's early whaling industry—and the curiously charming still lifes of the convict artist, John Buelow Gould.

A sense of Tasmania's past may be further augmented by a visit to the Allport Library and Museum of Fine Arts, which is situated at the State Library in Hobart. Settling in Tasmania in the early 1830s, the Allports became an important Tasmanian family whose activities straddled both the professional and artistic worlds. They were also dedicated collectors. The Allport Collection, bequeathed to the State of Tasmania in 1968 with the proviso that its contents never leave the State, consists of fine examples of eighteenth and nineteenth century furniture and decorative arts together with paintings, prints and drawings by family members, several of whom were gifted artists, and their circle of artist friends.

Given the promising nineteenth century origins of Tasmanian art, it is perhaps odd that art produced in Tasmania during the first half of the twentieth century is distinctly lacklustre. While accomplished works were produced by Jack Carington Smith and Edith Holmes, their interpretation of modernism is academic and lacks real vigour. During this period Tasmania produced no artists who achieved national prominence. The exception is the outstanding neo-classical modernist, Jean Bellette, who, after studying at the Hobart Technical College, departed for Sydney and the wilder modernist shores of Europe. Works by these artists, along with contemporaries such as Eileen Crow, may be seen at both the Tasmanian Museum and Art Gallery and the Queen Victoria Museum and Art Gallery.

The programs of both these institutions include temporary exhibitions of contemporary art, a number of which focus on recent Tasmanian art. The Macquarie House Gallery in Launceston, an annex of the Queen Victoria Museum and Art Gallery, is dedicated to mounting six contemporary exhibitions annually. The contemporary holdings of the Tasmanian Museum and Art Gallery are rotated for display and visitors to the Museum are usually afforded the opportunity to view recent Tasmanian works, including some fine examples of craft, decorative arts and design produced here.

During the 1960s and 1970s, the Tasmanian artist Bea Maddock emerged nationally as one of Australia's outstanding conceptually-based print makers. Examples of Maddock's prints and works in other media may be seen at both the Hobart and Launceston museums previously mentioned. She is also associated with, and on occasion exhibits with, the Snakepit Gallery in Launceston, an artists' collective with an energetic program focusing on recent work by artists living in the north of the State.

The 1980s witnessed a flourishing of art in Tasmania and it has continued to expand and diversify up to the present. The landscape and world of natural phenomena continue to be vital to artists in Tasmania. Indeed, the 1980s witnessed a resurgence of landscape-based art here, in large part triggered by the Green Debate and the battle for the Franklin River, which focused world attention on Tasmania. As this debate permeated the lives of most Tasmanians, inevitably artists like the photographer David Stephenson and the painter David Keeling saw that powerful socio-political, philosophical or metaphysical questions could be posited through the landscape genre. Landscape art could be rescued from its tired association with traditional watercolours and post-card style wilderness photography to be re-embraced into the realm of contemporary issues.

However, landscape-based art is just one of a multiplicity of artistic concerns here. The sheer diversity of practice forbids any attempt at general, sweeping statements. Several

younger Tasmanian artists have recently achieved a measure of national recognition: Anne MacDonald has the distinction of being the first photographer to be selected for the prestigious Moët et Chandon national touring exhibition; the painter Tim Burns has been twice selected for the Moët. Recently the photographer Jane Eisemann, the photo-media artist David McDowell and the installation artist Julie Gough have been selected for inclusion in *Perspecta* in Sydney.

Regrettably, Tasmania is the only Australian State which does not boast a contemporary art museum, so visitors to the State are obliged to visit a range of public and commercial galleries to acquire some sense of the range of art practice here.

Hobart's Salamanca Place offers four good commercial galleries—Dick Bett, Handmark, Despard and Sidewalk—as well as the Long Gallery in the Salamanca Arts Centre. In Launceston, Watson's Fine Art is situated in York Square.

Public galleries which focus on contemporary art are situated at both campuses of the School of Art at the University of Tasmania. The Plimsoll Gallery, an adjunct to the School of Art at Hobart, runs an excellent program of well curated exhibitions, many of which feature Tasmanian painters, photographers, print makers, sculptors, installation artists and designers as well as those working with computer-generated images and digital technology. The Plimsoll's coordinator is Pat Brassington, a photographer who is known well beyond Tasmania for her mysterious, often surreal, occasionally dark-humoured, images.

Two well-established regional galleries with regularly changing exhibitions are situated in Burnie and Devonport. Contemporary Art Services Tasmania (CAST) supports, presents and promotes contemporary Tasmanian art through publications, special projects and exhibitions, many of which tour nationally and to the aforementioned public galleries in Tasmania.

### Tasmanian craft and design

~ *Contributed by Jim McKee, School of Art, University of Tasmania* ~

As well as gaining Australian and international recognition for the quality of design and manufacture of their products, Tasmanian designers also benefited from the Craft Curators Program of the Australia Council, which has seen three part-time curators of craft employed by the Tasmanian Museum and Art Gallery. Tasmania was also the host for 'Interdesign '95' a significant international conference held annually, usually in Europe or America.

Tasmanian furniture designs were shown at the International Contemporary Furniture Fair (ICFF) in New York in May 1995. This was a preparatory visit for a larger exhibition to be held in 1996. The Tasmanian stand received continuous praise in New York for the quality of its presentation, the designs and pamphlet. Peter Costello's 'Snap Chair' created a lot of interest. Architects and interior designers indicated that they were keen to see Tasmanian products represented in 1996. Liaisons with staff at the ICFF were established, as were links with the wider design community. Four leading design magazines and two newspapers have expressed interest in publicising Tasmanian design.

Tasmanian designers also featured at 'Interior Designex '95,' the largest interior design and decoration show in Australia, which was held at Darling Harbour in Sydney. The stand, organised by Tasmania—Development and Resources, showed a range of Tasmanian products including furniture, lighting and other domestic objects. Enthusiastic interest was shown in the Tasmanian stand, which was ideally placed, being directly in front of the entrance, and it was one of the highlights of the show. Designers shown were those represented by the Tasmanian Design Development Company, Witt Design and De Jong Furniture.

Locally, the Tasmanian Museum and Art Gallery, has employed three part-time craft curators with funding from the Australia Council's Craft Curators Program. This gives a significant boost to crafts people, designers and the wider community as it has provided the opportunity for craft to take its place in the Museum's agenda alongside other arts as a significant contributor to Tasmanian culture. Dolla Merrillees, Stuart Thorne and Sara Lindsay were appointed in May 1994.

They have separately and collectively organised several exhibitions of craft and design. 'Colonial Pastime to Contemporary Profession', a major exhibition, was jointly curated. This large multidisciplinary display was a significant show of women's work from the gallery's collection and gave its audience a chance to appreciate the depth and innovation in the women's art practice from colonial times to the present. The show presented works typically classified as fine art alongside design and craft. Other exhibitions included:

- 'Australian Ceramics from the Hood Collection and the Easterbrook Bequest', a show of domestic-scale Australian ceramics;
- 'Cups and Saucers', a small show of works from the collection that included designs by some internationally recognised masters such as Walter Gropius and Robert Venturi;
- 'The Meaning of Dress', a contemporary textile installation supported with selections from the collection; and
- 'Designers Inc.', a presentation of objects illustrating the entrepreneurial initiative of studio-based designers who are manufacturing their own designs.

Perhaps the most significant single event within the State in 1995 was the 'Interdesign '95' conference held in Launceston. This conference is one the most significant international conferences on design and is endorsed by the International Council of Societies of Industrial Design. Twenty-five delegates from overseas, many of whom have international reputations for their design expertise, met and exchanged ideas with local and other Australian designers and experts from various fields. The conference's theme—Sustainable Development: The Design Imperatives—was particularly appropriate for Tasmania. The keynote speaker Tapio Peräjäinen, managing director of Design Forum Finland for twenty-five years, is a recognised design theorist and educator. The conference's major sponsors included the Hydro-Electric Commission, the University of Tasmania and the Association for the Development of Design in Tasmania.

Another significant development for furniture makers in Tasmania was the formation and incorporation of the Furniture Designers Association Inc. early in 1995. This organisation encourages innovation in design and supports professional practice in furniture design.

The Association, which holds regular meetings and forums on topics such as marketing, forestry and design-related matters, is open to designers, manufacturers and, through associate membership, to other interested parties.

A significant and developing feature of Tasmanian design over the year has been the growth of designers who are manufacturing and marketing their own work. Significant among these are two Launceston-based designers Dan Whiting and Rex Heathcote who both featured in the 'Designers Inc.' exhibition. Whiting and Heathcote share a large workshop in the Coats Paton building in Launceston. They are typical of a maturity in the design and craft community, which has recognised Tasmania's reputation for quality, and combined this with contemporary design and an astute use of native timbers to produce designs that are marketable.

## Public art

~ *Contributed by Sean Kelly, Arts Tasmania* ~

Public art in Tasmania could be described as art which is shown in public places, rather than in art galleries or private collections. Apart from monuments and civic statuary there is a rich assortment of public art in Tasmania. Much of this is the result of the State Government's Art for Public Buildings Scheme. The Scheme was the first such scheme in Australia and has been running for fifteen years. In operation the scheme allows for 1% of the cost of new or refurbished buildings (up to a ceiling of \$20,000) to be allocated to the purchase of artworks for the site. Many of the projects undertaken are within the Department of Education and the Arts, and the majority of these are in schools.

The Scheme is administered by the Tasmanian Arts Advisory Board through Arts Tasmania, the State Government's policy and funding body. The Scheme is facilitated by the services of consultants from the private sector, with overall management of the Scheme conducted by Arts Tasmania. Approximately 35 projects were current in 1995 on a State-wide basis, employing up to 40 artists at any time.

Among the many innovations of the Scheme is an increasing involvement of artists at the earliest stages of project development. This allows for a closer and more complete involvement with the architect and building user in determining the most appropriate artwork placement for the site. Most of the artworks are commissions, not purchases, and therefore they often reflect the ideas and needs of the various stakeholders through a strongly consultative focus, resulting in some highly innovative designs. As well as traditional media like painting and sculpture, artists have been employed to design floor patterns, playground equipment, shelters, interactive works, ceramic murals and signage. In recent cases such as the Government Analyst Laboratories, the 'cutting edge' computer-based digital imaging processes have been employed. The artforms utilised also employ the work of the excellent furniture designers and craftspeople in Tasmania, as in the Hobart Magistrates Court, in which the furniture has been custom designed for the project.

In 1995 a landmark project was completed that employed the services of three artists and the architect as a design team, addressing all aspects of the building. This was the Futures Technology Centre at Elizabeth College in which the artwork component is not immediately identifiable as it is embedded in the whole design concept. The artists on this project designed floor patterns, oxide-coloured exterior cement wall panels and signage.

Artists are also working closely with interpretive teams on a number of projects which require consideration of heritage and wilderness concerns. The Lake St Clair Visitor Centre is an example of artists working closely with Parks and Wildlife officers to identify and interpret the values and history of our national parks.

Other recent developments in public art have been the completion of a major monument at the site of the old Women's Prison or 'Female Factory' in South Hobart and opportunities for major civic art placements in the redeveloped Elizabeth Mall and Wapping in Hobart.

Many centres within the State are now evaluating the need to undertake townscape studies to improve towns and cities and to identify and interpret the heritage of the centre of the region. Such studies usually involve the input of artists working alongside architects, urban designers and landscape architects resulting in the integration of art into many aspects of town and city redevelopment. These developments not only provide employment for many artists and designers but also bring the experience of art to many people who may not normally encounter it.

## MUSIC AND PERFORMING ARTS

### Music

Music is another important aspect of the cultural life of Tasmanians. An estimated 31.0% of the Tasmanian population aged 18 years and over (99,100 people) attended a popular music concert and 10.1% (32,200 people) attended a classical music concert at least once in the year ended June 1991. There was a large difference in participation rates across all ages. The participation rates for those attending a popular music concert ranged from 59.6% of those aged 18–24 years to 7.8% of those aged 65 years and over. The profile of those attending a classical music concert was different: the highest participation rate was 14.1% for those aged 35–44 years, the lowest was 5.1% for those aged 18–24 years.

### Performing arts

The performing arts sector includes all forms of theatre, dance, opera and music theatre, variety and cabaret. An estimated 9.5% of the Tasmanian population aged 18 years and over (30,400 people) attended a dance performance, 14.4% (46,000) attended a performance of musical theatre and 17.0% (54,400) attended a performance of other theatre at least once in the year ended June 1991. Theatre performances include performances before a live audience of a play or drama, a play reading, a poetry reading, a puppet show or children's theatre.

The highest participation rate for those attending dance performances was for people aged 35–44 years (13.6%); for musical theatre it was people aged 45–54 years (18.9%), although the highest attendance level was for those aged 35–44 years (11,700 people); and for other theatre performances it was people aged 35–44 years (25.3%).

ATTENDANCE AT POPULAR MUSIC CONCERTS, 1990–91 ('000)			ATTENDANCE AT CLASSICAL MUSIC CONCERTS, 1990–91 ('000)		
State/Territory	Attendees	Total visits	State/Territory	Attendees	Total visits
NSW	1 166.2	4 860	NSW	342.3	1 100
Vic.	869.7	3 370	Vic.	243.8	750
Qld	604.5	2 100	Qld	142.4	430
SA	279.6	1 060	SA	86.2	230
WA	331.9	1 440	WA	97.7	330
Tas.	99.1	380	Tas.	32.2	120
NT	31.6	130	NT	7.7	30
ACT	73.9	270	ACT	33.6	120
Australia	3 456.4	13 610	Australia	985.9	3 110

Source: ABS catalogue no. 4114.0

Source: ABS catalogue no. 4114.0

ATTENDANCE PERFORMANCES, 1990–91 ('000)				
Performances	Tasmania		Australia	
	Attendees	Total visits	Attendees	Total visits
Dance	30.4	70	1 349.4	3 460
Musical theatre	46.0	80	2 427.4	5 280
Other theatre	54.4	130	2 151.3	5 790

Source: ABS catalogue no. 4114.0

## CULTURE AND THE ECONOMY

### Employment in cultural activities

Cultural, and leisure, activities make an important contribution to the economy. As well as those employed full time, the cultural industry employs a large number of people in their second jobs and the industry is heavily supported by voluntary work.

During the 12 months ended March 1993, 12.5% of the Tasmanian population aged 15 years or over (44,300 people) were involved in selected culture and leisure activities (excluding involvement solely for respondents' appreciation or that of their family). Of these people, 36.6% received some payment. The most common activities were organising fetes and festivals (11,400 people), teaching cultural activities (9,000 people), involvement in music and the performing arts (12,100 people), and writing and publishing (6,800 people).

#### PERSONS INVOLVED IN PAID AND UNPAID CULTURE AND LEISURE ACTIVITIES (a)

	Unit	Tasmania			Australia		
		Males	Females	Persons	Males	Females	Persons
People involved—							
Paid only	('000)	4.2	3.2	7.4	137.2	139.5	276.7
Unpaid only	('000)	11.2	16.9	28.0	431.9	613.6	1 045.5
Paid and unpaid	('000)	4.4	4.4	8.8	135.7	142.8	278.5
<b>Total involved</b>	<b>('000)</b>	<b>19.7</b>	<b>24.5</b>	<b>44.3</b>	<b>704.8</b>	<b>895.9</b>	<b>1 600.7</b>
People not involved	('000)	155.1	154.9	310.0	6 038.6	5 958.3	11 996.9
<b>Total people</b>	<b>('000)</b>	<b>174.8</b>	<b>179.4</b>	<b>354.3</b>	<b>6 743.4</b>	<b>66 854.2</b>	<b>13 597.6</b>
Participation rate	(%)	11.3	13.7	12.5	10.5	13.1	11.8

(a) People aged 15 years and over, 12 months to March 1993.

Source: ABS catalogue no. 6281.0

### Household expenditure on cultural and recreational activities

Results of the 1988–80 Household Expenditure Survey showed that, not surprisingly, as household income increased, expenditure on culture also increased. However, as a proportion of income, expenditure on culture decreased as income increased.

The proportion of expenditure spent on culture was highest for households with more males than females, 4.5% of expenditure, compared with 3.7% and 3.5% for female and neutral households respectively.

Male households spent nearly five times the proportion of their expenditure on musical instruments and accessories than female households, and nearly 3.5 times on video cassette recorders and equipment, whereas female households spent nearly twice the proportion of their expenditure on cultural education than did male households.

#### ANNUAL HOUSEHOLD EXPENDITURE ON SELECTED CULTURAL AND RECREATIONAL GOODS AND SERVICES, AUSTRALIA 1988–89

Admission to—	(\$ million)
Live theatre	259.3
Cinema	200.1
National park and zoo	22.5
Art gallery and museum	14.1
<b>Total</b>	<b>496.0</b>
Paintings, carvings and sculptures	62.0
Music (e.g. instruments, equipment, records, audio-cassettes and tapes)	949.9
Cultural education (e.g. lessons, fees)	245.3
TV, radio, video, computing, etc.	2 331.0
Literature (e.g. books, newspapers, magazines)	1 640.7
Photography	465.1

Source: ABS catalogue no. 4153.0

## FURTHER READING

### ABS PUBLICATIONS

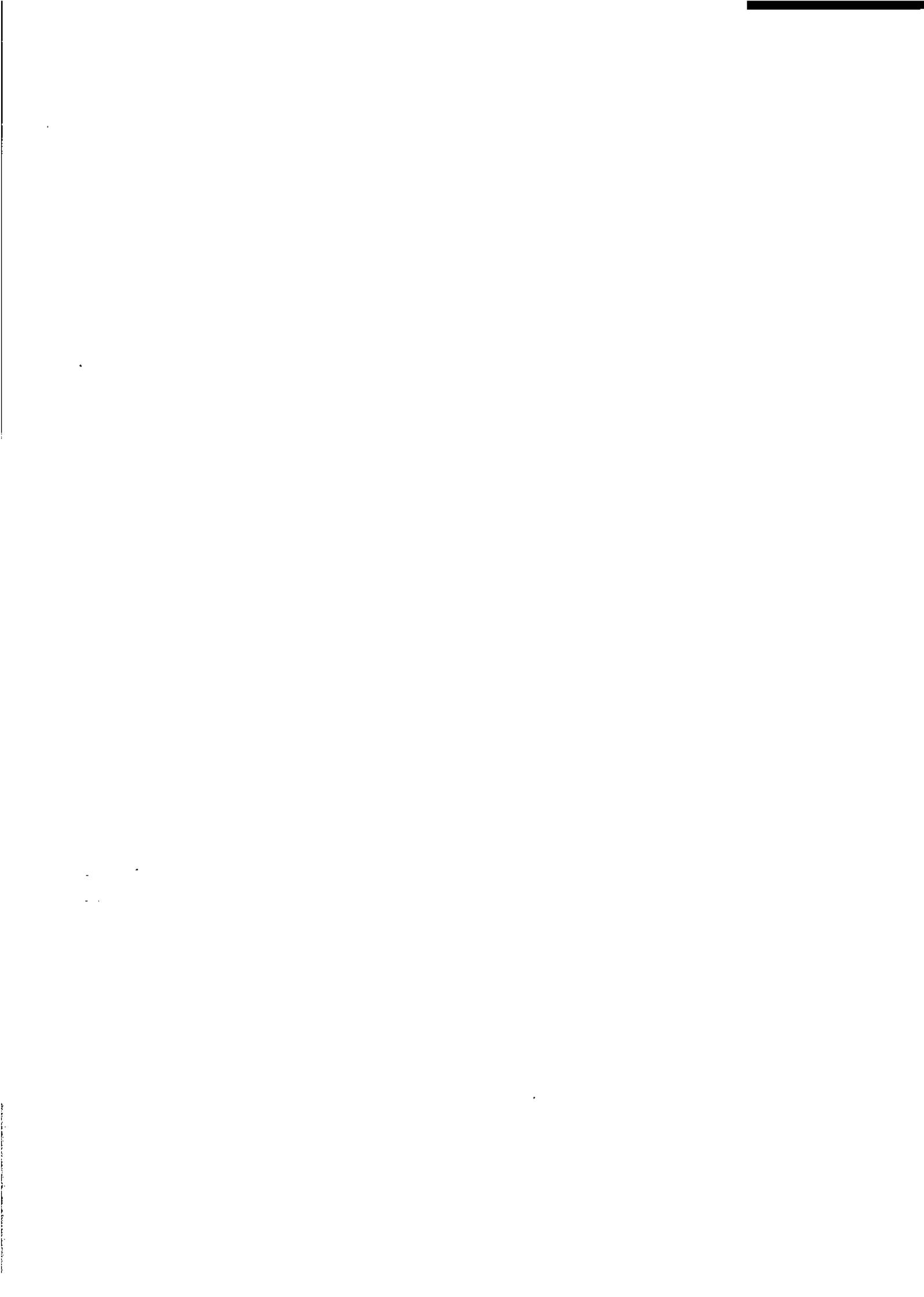
- Attendance at Selected Cultural Venues, June 1991* (4114.0)  
*Cultural Trends in Australia, No.1: A Statistical Overview* (4172.0)  
*Employment in Selected Culture/Leisure Occupations, Australia, August 1991* (6273.0)  
*How Australians use their Time—Selected Findings from the 1992 Time Use Survey, Australia* (4153.0)  
*Music and Performing Arts, Australia, 1991* (4116.0)  
*Music and Performing Arts at Major Venues in Capital Cities* (4171.0)  
*National Aboriginal and Torres Strait Islander Survey 1994, Detailed Findings* (4190.0)  
*National Aboriginal and Torres Strait Islander Survey 1994, Regional Overviews* (4192.0)—  
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### ACKNOWLEDGEMENTS

- Jim McKee, School of Art, University of Tasmania  
Victoria Hammond, Contemporary Art Services Tasmania (CAST)  
Sean Kelly, Arts Tasmania



# 11 | Sport and recreation



Fishing is second only to walking as a sport or physical recreational activity for Tasmanians.

*The Mercury*

TASMANIANS HAVE A GREAT LOVE for the outdoors, perhaps deriving from the rugged wilderness island that they inhabit. They have long had an interest in both competitive and recreational activities and enjoy easy access to, and a diverse range of, sporting facilities and recreational pursuits.

The success and dedication of clubs, the community, and the State government in developing sport and physical recreation activities is illustrated by the 28 national events held in Tasmania during 1993–94. These brought approximately 8,000 competitors and spectators to the State, generating in excess of \$9 million in direct expenditure. The Tasmanian sport and recreation industry consists of State, regional and local community sport and recreation groups, facility providers, commercial operators and both local and State government bodies.

The Tasmanian Department of Tourism, Sport and Recreation lists almost a hundred different categories of sport for which they have registered participants.

Volunteer groups are the backbone of sport and recreation organisations and they have adopted an increasingly professional outlook which is supported by an expanding network of professionals within government, private industry and community groups.

Sixty per cent of Tasmanians (aged 15 years and over) participated in some form of sport or physical recreational activity for the twelve-month period between October 1993 and September 1994. The most popular activities were walking, fishing and swimming with participation rates of 32.9%, 14.6%, and 12.2% respectively. Walking was undertaken for a variety of reasons including exercise, pleasure or social reasons. The main competitive sports played by Tasmanians were netball, golf, and Australian Rules Football.

The highest participation rates for males were:

- walking (23.8%);
- fishing (21.9%); and
- golf (17.1%).

The highest participation rates for females were:

- walking (43.4%);
- aerobics (22.0%); and
- swimming (15.6%).

## SPORT

Residents and visitors have the opportunity to participate in a wide range of sporting activities; both organised and social sport are available at various levels. Tasmania has facilities and events catering for a variety of sports at national and international level. These include archery, basketball, car racing, cricket, cycling, golf, hockey, horse racing, lawn bowls, rowing, surfing, tennis, trout fishing, triathlons and yachting.

### MOST POPULAR SPORT AND PHYSICAL RECREATIONAL ACTIVITIES, TASMANIA, 1993-94

	Males	Females
Aerobics	2 200	21 500
Australian Rules Football	10 700	200
Bushwalking	10 000	9 700
Cricket	9 800	800
Fishing	24 800	6 100
Golf	19 400	2 600
Netball	1 800	12 700
Swimming	10 500	15 300
Tennis	6 800	4 400
Walking	27 000	42 400

Source: ABS catalogue no. 4175.6

### PARTICIPATION IN MAJOR SPORTS AND PHYSICAL RECREATIONAL ACTIVITIES, TASMANIA, OCTOBER 1994 (a)

Sports and physical recreational activities	Persons	
	('000)	per cent (b)
Walking	69.4	32.9
Fishing	30.9	14.6
Swimming	25.8	12.2
Aerobics	23.7	11.2
Golf	22.0	10.4
Bushwalking	19.7	9.3
Netball	14.5	6.8
Basketball	14.0	6.7
Jogging	12.2	5.8
Billiards/snooker/pool	11.2	5.3
Tennis	11.2	5.3
Australian Rules Football	11.0	5.2
Cricket	10.6	5.0
Cycling (incl. mountain bike riding)	10.3	4.9
Hunting	9.3	4.4
Dancing (social, disco)	9.1	4.3
Weightlifting	8.8	4.2
Surf sports	7.2	3.4
Lawn bowls	6.9	3.3
Squash	6.6	3.1
Indoor cricket	6.4	3.0
Soccer	5.8	2.8
Equestrian (pony club, riding)	5.6	2.7
Martial arts (judo, karate etc.)	5.5	2.6
Sailing/yachting	5.4	2.6
Athletics, track & field	5.2	2.5
Off-road motoring (4WD, trail bikes)	5.1	2.4
Snow sports (skiing etc.)	4.8	2.3
Badminton	4.6	2.2
Bodybuilding	4.5	2.1
Powerwalking	4.4	2.1
Under-water activities	4.4	2.1
Volleyball	4.3	2.0

(a) By persons aged 15 years and over during the previous 12 months. (b) Proportion of the 211,200 persons who participated. Source: ABS catalogue no. 4175.6

## History

Sporting custom and folklore are deeply etched within the Tasmanian psyche. With the colonisation of Van Diemen's Land by the British, many English pastimes were instituted by the settlers. The first public horse race occurred around 1814, and the first cricket club, Hobart Town, was formed in 1832. With the commencement of Australian Rules Football in Victoria around the mid 1850s, Tasmania followed suit shortly with the game eventually gaining State-wide acceptance as a major winter sport.

Many of the State's sporting grounds have become multi-purpose facilities arising from duality of function: the cricket fields of summer become football ovals for winter. Various cycling and athletic events overlapping these seasons resulted in the formation of perimeter racing tracks around the ovals.

From humble beginnings, Tasmania now hosts events attracting competitors and interest from the mainland and overseas. Accordingly, for a State with a limited population, an impressive array of sports men and women have achieved national or international success.

The Tasmanian Sporting Hall of Fame was inaugurated during 1988 in recognition of those who represented their State or nation with distinction. Ian Stewart, Margaret Caldwell BEM, Ross Livingston, Maxwell Walker, David Lean, Royce Hart, Kathryn Foster, Lindy Goggin, Maree Fish OAM, and Don Murray were inducted in the Sporting Hall of Fame in 1994.

## Sporting achievements

In 1994, Tasmanians were successful at both national and international levels. There were a number of outstanding achievements over this period.

David Boon had passed Neil Harvey as Australia's fourth-highest Test run-maker in 1993. In 1994 he continued his international cricketing success, scoring 760 runs in ten Tests at an average of 47.50.

David Foster continued to dominate woodchopping by adding another four world titles to his collection, taking his total number of world titles for woodchopping past 150.

Melissa Carlton won Australia's first swimming gold medal at the Commonwealth Games in the 100 metres freestyle for disabled swimmers. Paul Wiggins also won gold at these Games for the wheelchair marathon which he followed with a tenth place in the world wheelchair marathon championships.

In the old and exclusive sport of royal tennis, Robert Fahey won the world title, and in doing so, became the youngest world champion ever in this sport.

Stephen Hawkins, a 1992 Olympic gold medal rower, was virtually unbeatable at the national selection regattas, and won the lightweight single scull and the lightweight quad scull at the national championships.

The Australian Dragon class championships were won for the fifth time by Nick Rogers. A month later, he won the State championships as well as the Barry Calvert match racing series. Rogers, for his brilliant performances, was named Tasmanian Yachtsman of the Year.

As a member of the Australian kayak team for five years, Daniel Collins was in outstanding form in 1994, winning the silver medal for the K1 500 metres at the world kayak championships in Mexico.

Another brilliant canoeist, Julian Norton-Smith won two bronze medals at the 1994 Senior Australian Championships. He also made the finals of the K2 1000 metres at the 1994 World Championships and gained a seventh place in the K2 1000 metres in an international regatta in Paris.

**TASMANIAN SPORTING HALL OF FAME  
1994 HONOUR ROLL**

**THE MEMBERS**

ATKINS, Ron—Snooker	HALLAM, John—Rowing
ATKINSON, J. (Snowy)—All-rounder	HARRISON, Lucilla—Golf
BADCOCK, Jack—Cricket	HARRISON, Virginia—Swimming
BAKER, Max—Jockey	HART, Royce—Australian Football
BALDOCK, Darrel—Australian Football	HITE, Bev—Badminton
BARWICK, Bill—Athletics	HODGSON, Arthur—Australian Football
BATT, H. Neall—Yachting	HORDER, Denise—Table Tennis
BATT, Harry—Yachting	HUDSON, Peter—Australian Football
BATT, W. (Skipper)—Yachting	KENT, Julie—Diving
BURGESS, Judy—Hockey	KING, Dulcie—Badminton
BURKE, Nita—Basketball	LEAN, David—Athletics
CALDOW, Margaret—Netball	LIVINGSTON, Ross—Badminton
CARTER, Bruce—Australian Football	MARSHALL, Sperry—Shooting
CASHION, Terry—Australian Football	MARTIN, Geoff—All-rounder
CAZALY, Roy—Australian Football	McVILLY, Cecil—Rowing
CHARLESWORTH, Connie—Hockey	MOORE, Audrey—Swimming
DALGLEISH, Betty—Golf	MURDOCH, Elvie—Golf
DEVLIN, Wayne—Boxing	MURRAY, Don—Badminton
DUNBABIN, Penny—All-rounder	NASH, Laurie—All-rounder
EADY, Charles—Cricket	NETTLEFOLD, Len—Golf
FISII, Maree—Hockey	PENNEY, Trevor—Shooting
FOSTER, Kathy—Basketball	PICKETT, Ted—All-rounder
FREE, Reg—Rowing	SHERRIFF, Ron—Woodchopping
FREEMAN, Gerald—Boxing	SMITH, Bill—Boxing
GARWOOD, Rex—All-rounder	STEWART, Ian—Australian Football
GILMORE, Graeme—Cycling	STOKES, Ray—All-rounder
GOGGIN, Lindy—Golf	THOMPSON, Tim—Badminton
GORRINGE, Horrie—Australian Football	TOOGOOD, Peter—Golf
GOURLAY, Helen—Tennis	TURNER, Ken—Badminton
GOWER, Ron—Boxing	WALKER, Max—Cricket
GREENDA, Alfred—Cycling	YOUD, Doug—Woodchopping
GREENDA, Michael—Cycling	YOUD, Merv—Woodchopping
HALE, Ted—Rowing	

*Source: Department of Tourism, Sport and Recreation*

Simon Burgess, Tim Hawkins, and Darren Balmforth represented Australia at the Commonwealth Rowing Championships. Burgess won a gold medal in the lightweight quad scull, which was followed by a fifth place in the lightweight quad scull at the 1994 world championships in Indianapolis. Hawkins won a bronze medal in the lightweight double scull and Balmforth, silver in the lightweight eights.

Tassie Islanders captain, Lucille Hamilton, was selected for the Australian Opals basketball team which toured China in November 1994.

One of the top female weightlifters in Australia, Amanda Inman, had a very successful year winning gold medals in both senior and junior events at the national weightlifting championships. She finished eleventh at the world championships in Turkey.

Brett Partridge represented Australia in golf. He was selected for the Eisenhower Cup team and played a vital role in Australia's gaining fourth place.

John Bowe was part of the high profile Shell-FAI touring car racing team which won two of Australia's premier endurance races—the Sandown 500 in Melbourne and the Toohey's 1000 at Bathurst.

### Tasmanian Institute of Sport

The Tasmanian Institute of Sport (TIS) through the Department of Tourism, Sport and Recreation assists Tasmania's elite athletes as they compete on the international sporting arena. The TIS awards scholarships each year to elite athletes. These scholarships provide funding and support to help athletes travel to train and compete nationally and internationally. Scholarships also provide the athletes with sport services which include access to testing, nutrition, sports psychology and strength training programs. The TIS also provides athletes with career and education support through a national program called SportsLEAP.

In 1994 the TIS awarded 35 individual scholarships and supported another 62 athletes in Elite Development Squads. These scholarships covered over thirteen different sports ranging from archery to equestrian events and including basketball, hockey, cricket, athletics, rowing and cycling. Five TIS scholarship holders, Andrea Hughes, Brendan Hanigan, Simon Hollingsworth, Aaron Everett and Justann Crawford, were Commonwealth Games team members who competed in Victoria, Canada in 1994.

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### TASMANIAN INSTITUTE OF SPORT SCHOLARSHIPS FOR 1994

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Scholarship holders	Sport
Susan Doust	Rowing
Aaron Everett	Boxing
Michael Harkness	Archery
George Piggott	Yachting
Burl Reid	Swimming
Jamie Rowe	Rowing
Justin Sires	Rowing
Alison Rogers	Weightlifting
Kathryn Gregory	Cycling
Stephen Hawkins	Rowing
Simon Burgess	Rowing
Tim Hawkins	Rowing
Darren Balmforth	Rowing
Daniel Collins	Kayaking
Julian Norton-Smith	Kayaking
Tony Homan	Cycling
Matthew Gilmore	Cycling
Justin Boocock	Slalom canoeing
Matthew Newton	Slalom canoeing
Jane Gilchrist	Slalom canoeing
Justann Crawford	Boxing
Andrea Hughes	Athletics
Simon Hollingsworth	Athletics
Susan Andrews	Athletics
Brendan Hanigan	Athletics
Clint Freeman	Archery
Amanda Inman	Weightlifting
Lydia Lawrence	Equestrian
Nick Rogers	Yachting

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Source: Tasmanian Institute of Sport

## The 50th Sydney-Hobart Yacht Race

~ Ian McCausland, Editor, *The Mercury* ~

Australia has many wonderful sporting occasions, among them the AFL grand final, the Australian open tennis championship, the Australian Formula 1 grand prix, and, yes, the rugby league grand final.

But only three events are truly national in their participation, in their interest and as spectacles—the Melbourne Cup, the Ashes series, and the Sydney-Hobart Yacht Race. It is remarkable that the capital of Australia's smallest State is the venue for one of the big three. It also is a matter of pride an event which had its genesis as 'a casual cruise' has become a classic, the focus not only of Australian but also international attention.

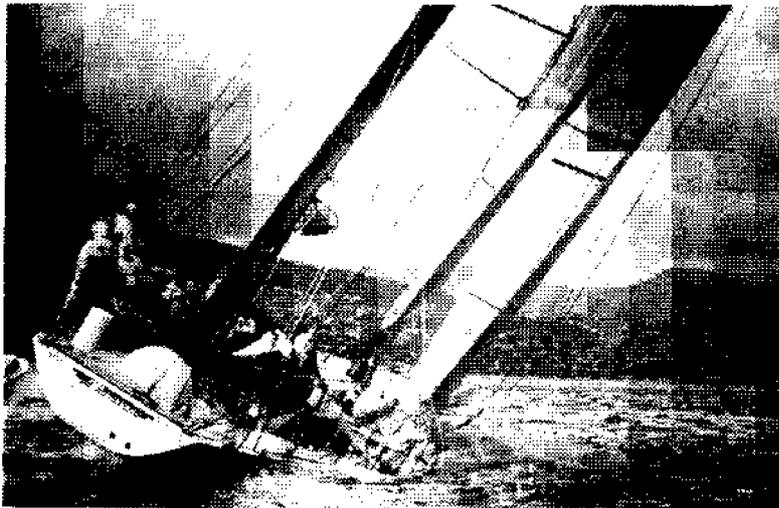
The Sydney-Hobart race is unique . . . and the 1994 event—the 50th—historic.

A total of 370 yachts, including veterans, lined up on Sydney Harbour for the traditional Boxing Day start. More than 4,000 sailors—competitors—were aboard the boats, conservatively valued at \$100 million.

In the sights of all was Hobart, 630 miles to the south; in the sights of some the 1975 record of *Kialoa*.

The majority of the fleet made it to Constitution Dock; the record remained intact, though only just.

And yet again history was made when the host State took line-honours for the first time—with a yacht named *Tasmania*—and a German boat *Raptor* was the overall handicap winner.



*Tasmania* sails past Sandy Bay Point on the way up the Derwent to win the 1994 Sydney-Hobart Yacht Race.

*The Mercury*

### Government support

The Tasmanian Government through the Department of Tourism, Sport and Recreation funds sporting and recreational bodies through the Recreational Development Program, the Sports Development Program, the School Holiday Program and the Minor Capital Works Program.

Funding is allocated according to criteria established for each program. For the 1993-94 financial year, the State Government provided financial support for sport and recreation in Tasmania totalling around \$1,500,000.

Government support is administered through several different programs in the Department of Tourism, Sport and Recreation. The main financial assistance is provided through the Special Events Unit, Sports Development Program, Tasmanian Institute of Sport, and the Recreational Development Program.

Financial assistance to individual athletes and teams is provided through the Tasmanian Institute of Sport. In 1993-94, 51 sports were provided with grants totalling \$475,175 and a further four programs were given a total of \$16,825 in support by the Department of Tourism, Sport and Recreation. Subsidies totalling \$101,000 were paid to 31 sporting and recreation organisations to assist the employment of personnel and a further three programs were provided with a total of \$41,000.

International and national sporting and recreation events are supported through the Department of Tourism, Sport and Recreation's Special Events Unit. These events include Targa Tasmania, Skyrace Tasmania, the Vic Health Sun Tour, and the Wooden Boat Festival.

#### *Sports Development Program*

The Department of Tourism, Sport and Recreation provided State sporting organisations with \$434,000 in the 1993-94 financial year. Each sport submits to the Department an annually updated three-year development plan outlining its funding priorities in line with developmental targets which are set in conjunction with that sport and the Department.

Areas that have had priority funding are coaching, education developmental programs, umpires, officials and referees education, hosting national events, and junior development.

#### *Coaching Development Program*

Coaching development and education has been a high priority. Programs have been established for all levels of coaching.

Coaching programs include a High Performance Coaching Program which targets coaches of high-performance athletes; a coaching scholarship program which enables coaches of development squads and talented athletes to gain further knowledge and skills; Level 0 and 1 programs which aim to raise the standard of coaching at the base level of sport; and a coach-in-residence scheme which brings international standard coaches to Tasmania over a short time for coaches of all standards to have exposure to contemporary methodologies and philosophies.

### **GOVERNMENT FUNDING FOR SPORT AND RECREATIONAL ACTIVITIES, TASMANIA, 1993-94 (a)**

	(\$)
Special events grants	613 111
Sport development grants	434 810
Minor capital works	114 600
School holiday recreation activities	16 716
Recreational development grants	132 520
Coaching	15 560
High performance coaching assistant grants	10 100
TIS coaching grants	5 200
Women in sport	10 276
TIS scholarships	167 869
<b>Total</b>	<b>1 520 762</b>

(a) Expenditure exceeding \$5,000.

Source: Department of Tourism, Sport and Recreation, Annual Report 1993-94

### **GOVERNMENT GRANTS FOR SPECIAL SPORT AND RECREATIONAL EVENTS, TASMANIA 1993-94 (a)**

Event	(\$)
Air Navigation	13 000
Skyrace Tasmania 1994	193 449
Targa Tasmania	186 921
The Tasmania Run	38 355
Vic Health Sun Tour	45 000
Wooden Boat Festival	18 352
World Canoe Slalom	17 375
World Womens Basketball	100 659

(a) Expenditure exceeding \$5,000.

Source: Department of Tourism, Sport and Recreation, Annual Report 1993-94

*Women in Sport and Recreation*

The Women in Sport and Recreation Policy provides a framework to guide the actions of the Department of Tourism, Sport and Recreation as well as State sporting organisations with respect to the future involvement of women and girls in sport. Highlights of the policy include direction on participation, administration and leadership, use of the media, developing sponsorship and awareness programs for lifestyle and fitness. The State Government provided the Hobart Triathlon Club, Launceston Triathlon Club, Tasmanian Surf Riders, and Tasmanian Sportswomen's Association with support under the guidelines of this policy.

**RECREATION**

Tasmanians are becoming more aware of the physical, social and psychological benefits that can be gained through participation in satisfying leisure activity.

Figures produced from the 1988-89 Household Expenditure Survey (HES) published by the Australian Bureau of Statistics show that the average weekly household expenditure on recreation represents \$48.95 or 11.51% of Tasmanian household expenditure.

An estimate based on 1984 HES figures prepared by J. Hagan (1993) indicates that expenditure on sport and recreation in Tasmania was in the order of \$490 million to \$590 million.

In 1993-94 around \$245,000 in grants was provided by the State government, through the Department of Tourism, Sport and Recreation, to State and local organisations to upgrade facilities and to develop recreation projects.

A broad range of strategies was employed by the Department of Tourism, Sport and Recreation to further enhance the access to recreational activities for Tasmanians. In particular, the State Government implemented programs to improve opportunities for women, older adults, Aboriginal and Torres Strait Islander people and people with disabilities. Learn-to-swim and water safety programs were also supported.

Recreation opportunities for older adults were encouraged and supported through the collection, collation and distribution of information in '50+ Recreation' booklets which are produced and distributed biannually.

In 1994 work began on a project to develop long-term strategies so that people with a disability will have increased opportunities for recreation and sporting activities. The study focused on access, finance, transport, status of recreation, social isolation, attitudes and information, minimum standards, current level of practice, and expected level of practice.

The diversity of Tasmania's outdoor areas encourages many people to explore our mountains, forests, inland waters and coastal regions. Project Hahn is a wilderness-based personal development program aimed at Tasmanians aged 15-25 years, especially those who are disadvantaged. The aims of the program include developing self-esteem and confidence, communication skills, conflict resolution skills, team work and leadership skills. There were around 130 participants in 1993-94.

To increase sport and recreation opportunities for Aboriginal and Torres Strait Islander people, a consultant was appointed in February 1994. Extensive consultation on sport and recreational issues was held over the following 12 months and a report was prepared which responded to increased indigenous participation.

Recreation trails advocacy, planning and development was implemented through the Tasmanian Trails Steering Group and the Tasman and Forestier Peninsula's Outdoor Recreation Advisory Group.

A pilot program for a State-wide vacation aquatic program, including swimming and

## Recreational fishing

The key distinction between recreational and commercial fishing is that people fishing recreationally take fish for recreation and their own use whereas commercial fishers take fish for sale. People fish mainly for pleasure and interest, so the size of the catch is not the only measure of quality fishing. The anticipation, the preparation, and the experience itself can be equally important.

A feature of recreational fishing in Tasmania is the high level of community involvement in a range of fishing activities that are an important part of the lifestyle in an island State that is endowed with plentiful and readily available marine resources.

### Fishers

A 1994 ABS sport and recreation survey found that fishing was second only to walking as the most popular physical recreation activity of Tasmanians. An estimated 30,900 people regularly fished during the 12 months to October 1994. Some 80% of these (24,800 people) were males. Most recreational fishers fished frequently, with 81% fishing at least once a month.

People of all ages fished: of those fishers aged 15 years and over, about 23% were aged between 15 and 24 years, 17% were aged between 25 and 34 years, 21% between 35 and 44 years, 19% between 45 and 54 years and 21% were aged 55 years or over.

Some 3,700 fishers stated that they belonged to a club or association during the previous 12 months. But for most fishers, while they fished with others, they organised their outings individually. Some 39% (10,200) fished alone, while 55% (14,300) fished with others. The Department of Primary Industry and Fisheries has estimated that, in 1983 over 80% of fishers fished in salt water. The Inland Fisheries Commission issued 28,574 angling licences for freshwater fishing in 1993-94.

Recreational fishing is also popular among visitors to Tasmania. In 1992 about 7% of all visitors (27,500 visitors) fished during their trip to Tasmania, with 4% of all

visitors (16,000) fishing in salt water and 3% (11,500) in freshwater. Angling licence sales by the Inland Fisheries Commission show that in 1993-94 of 3,979 visitors obtaining licences 43% came from Victoria, while 27% came from New South Wales, 8% from Queensland, and 13% from the rest of Australia. Some 9% of those obtaining licences came from overseas, particularly the United States of America (41% of overseas licences), the United Kingdom, Japan, Germany, New Zealand and Canada.

### The catch

In the 12 months to April 1992 an estimated 24% of Tasmanian households (40,600) had members who caught seafood. This compared with the Australian average of 18%. Those in Tasmanian households caught 1,191 tonnes of fish, compared with an estimated commercial catch of 37,510 tonnes for the year ended June 1992 (Australian Bureau of Agricultural and Resource Economics).

Important marine recreational fisheries in Tasmania include crayfish, scallops, abalone, game fish and a range of scale fish, squid and octopus.

### RECREATIONAL FISHING CATCH, YEAR ENDED APRIL 1992 (tonnes) (a)

Type of seafood	Tasmania	Australia
Abalone	25.1	126.0
Crabs	10.2	2 841.5
Fish	1 014.7	23 151.7
Lobster, crayfish	56.9	698.9
Mussels	21.6	123.9
Octopus	2.3	171.5
Oysters	16.5	330.0
Scallops	7.5	197.7
Squid	32.1	811.4
Other seafood	4.3	2 490.4
<b>Total</b>	<b>1 191.1</b>	<b>30 943.2</b>

(a) Tasmanian figures exclude the catch by visitors to the State who were not residing in Tasmanian households.

Source: ABS catalogue no. 7110.0

CRAYFISH are mainly caught using pots and rings baited with fish, or taken by diving on reefs. In 1994, 8,321 recreational licences were issued to take crayfish, 4,982 with crayfish pots and 3,339 by diving. However, the non-commercial dive licence has covered both abalone and crayfish and the number of people diving for each species is not known.

ABALONE are taken by divers on reef areas around the State, often while diving for crayfish. The number of people diving specifically for abalone is not known. There is little concern about the impact of legal recreational fishing activity on stocks.

SCALLOP fishing for recreation using both dredges and diving was once important, but since the collapse of the fishery in 1971 opportunities for recreational fishing in State waters have been limited.

SCHOOL SHARK AND GUMMY SHARK recreational fishing is important in some areas, particularly off the beaches in north-eastern Tasmania and around the Bass Strait islands.

GAME FISHING in Tasmania is recognised internationally and several world records for Southern Bluefin Tuna are held. As it is an open water fishery, boats and expertise are required to catch tuna, billfish, shark (including the Mako) and small numbers of Striped Marlin. There are four game fishing clubs in Tasmania, and a number of private boats capable of targeting game fish. In addition, between 15 and 20 charter vessels enable more than 5,000 people to enjoy the sport each year. Charter fishing has been developed only on the eastern coastline of Tasmania, with boats operating out of Pirates Bay, Port Arthur, Triabunna, Coles Bay, Bicheno, St Helens and Lady Barron (Flinders Island). It is seasonal and unpredictable, being totally dependent on the arrival of fish, which is influenced by currents, water temperature and food. The season can start around Christmas but is more likely to start around March and go through until late June.

Important freshwater recreational fisheries in Tasmania include native Blackfish, eel and

Giant Freshwater Crayfish as well as the introduced Redfin Perch and trout, but it is trout fishing that is the undisputed drawcard.

THE TROUT FISHERY in Tasmania is dominated by the Brown Trout. Since being introduced in 1864 from England, it has thrived under Tasmanian conditions so that it is now so thoroughly established and widespread that the fishery is essentially independent of stocking. The Rainbow Trout has not been as successful, although it inhabits most waters in low numbers, and many fisheries are maintained by hatchery liberations as is the Brook Trout fishery. Several private trout fishing developments cater especially for anglers. They offer exclusive access to private lakes, together with on-site accommodation and optional guided fishing.

Although fly fishing captures much of the attention, recreational fishers catch far more trout on lure and bait in Tasmania. Only a handful of lakes are actually reserved exclusively for fly fishing, and although a number of the best known waters are reserved for the use of artificial lures (lure and fly), the great majority of lakes and virtually all rivers are open to the use of natural bait as well. The Inland Fisheries Commission estimated a trout catch of 220 tonnes in 1992.

#### *Economic impact*

Investment in fishing assets and the expenditure of those Tasmanians who fish generate substantial economic activity and jobs throughout Tasmania. Coastal towns rely in part on expenditure by fishers to maintain business and to support the community infrastructure. The Department of Primary Industry and Fisheries has estimated that, by applying national averages to Tasmania, the likely value of tackle, clothes and boats owned by Tasmanian fishers in 1983-84 was around \$145 million, with annual expenditure of \$49 million. The Inland Fisheries Commission conducted a survey of local anglers who had taken out a full season licence in 1990-91 and found that each angler spent more than \$1,000 over a season, largely on equipment, accommodation and travel. The

Commission estimates that the angling industry is worth at least \$28 million per year to the Tasmanian economy. However, fishing was not an expensive recreation for most, as, according to a 1994 ABS survey, 47% of fishers spent less than \$100 a year on their interest.

#### *Management of recreational fisheries*

Left unmanaged, the increase in fishing effort that results from competition is reflected in lower individual catches in the recreational fishing sector, and over-capitalisation and reduced financial returns in the commercial fishing industry. Regulation is only part of the management process. Education of fishers and the community is also important as is community involvement in caring for the resource. The building of businesses and jobs based on recreational fishing is also considered.

To address these objectives, the Department of Primary Industry and Fisheries has

developed strategies and specific controls and actions in a proposed Recreational Fisheries Management Plan. In June 1995 the Government announced a new licence system for recreational sea fishers that will govern all activities except fishing with an attended rod or line. Under the new scheme a basic licence will include an endorsement to cover one form of fishing, such as the use of a graball net or a mullet net, a beach seine net or for the use of a cray pot or to dive. Additional endorsements on a licence can be made. No licence will be needed to fish with a rod and reel or a handline.

#### *Conclusion*

The increasing ownership of boats, better navigation and fish-finding gear, improved access roads and the increasing number of 4-wheel drive vehicles have all contributed to expand the accessibility and range of recreational fishing for Tasmanians and visitors to the State.

water safety skills, was conducted in January 1994 at 15 venues State-wide. The success of this program prompted a review by the Water Safety Council to develop strategies for its expansion.

The Department of Tourism, Sport and Recreation continued its support for the Water Safety Council's safe boating media campaign in 1994. Recreational boating drownings decreased but there was an increase in the number of drownings of professional fishers.

## FURTHER READING

### ABS PUBLICATIONS

- Home Production of Selected Foodstuffs, Australia, Year Ended April 1992* (7110.0)  
*Household Fish Consumption and Non-commercial Fishing Activities, Tasmania, October 1983*  
 (7601.6)  
*Participation in Sporting and Physical Recreational Activities, 1993-94* (4175.6)

### OTHER PUBLICATIONS

- Department of Primary Industries and Fisheries, *Charter Fishing for Tuna in Tasmania*, Recreational Fishing Report No 1, October 1994.  
 Department of Primary Industries and Fisheries, *Policy Document and Fishery Management Plan for the Recreational Fishery of Tasmania* (draft), December 1994.  
 Department of Primary Industry and Fisheries, *Recreational Sea Fishing in Tasmania*, 1994.  
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 Hagan, J., Occasional Economic Paper No. 2, *Household Expenditure on Recreation in Tasmania and Australia*, Department of Tourism, Sport and Recreation, Hobart, 1993.

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Inland Fisheries Commission Newsletter, Volume 21 Number 1, March 1992.

*The Mercury*, 'World-class field for prestigious award', December 21, 1994, pp. 60-61.

#### ACKNOWLEDGEMENTS

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# 12 Health



Water aerobics is growing in popularity as a form of exercise and for injury rehabilitation.

*Photo: Don Carter (The Advocate)*

THE DESIRE TO ATTAIN GOOD HEALTH is universal. Throughout history people have always endeavoured to protect their health, at first by devising techniques and selecting special individuals to ward off 'evil spirits'. Observation and experience gradually identified ways for keeping well. Laws were developed to govern health and, as large communities developed, methods of sanitation were devised. But it was not until the 1800s with the discovery that germs caused disease, that significant advances in society's understanding of illness, and ability to successfully treat it, were made. Today, many major health problems are the result of lifestyle or environmental factors that are themselves amenable to change. Health promotion and disease prevention appear the key to further improvements in the health status of Tasmanians.

Yet, for all the knowledge and resources now directed towards attaining good health, death, disease, injury and illness are still part of everyday life, present everywhere and affecting all of us.

**MORTALITY**

In 1993 the deaths of 3,637 resident Tasmanians were recorded. This was 102 less than the 1992 figure of 3,739, and represents a crude death rate of 7.7 per 1,000 mean population. Of the deaths, 1,965 were males and 1,672 were females, a ratio of 118 male for every 100 female deaths.

Up until age 75, male deaths outnumbered female deaths. The reversal in the 75 and over age group occurs because of the higher number of females of that age in the population. In most groups the age-specific death rate of males is higher than that of females and for many age groups the male rate is almost twice the female rate.

**Causes of death**

The great killers of earlier times, such as gastroenteritis and pneumonia among young children and tuberculosis at all ages, now comprise only a very small proportion of all fatalities. In recent years the trend has been for a declining frequency of deaths under the age of 40 years.

Infant mortality has declined dramatically in Tasmania during this century. In 1900 the infant mortality rate was 80.0 deaths per 1,000 live births, down from well over 100 in the 1880s.

By 1973 the infant mortality rate had declined to 18.7 and by 1993 to just 5.9. This low 1993 rate followed rates of 9.0 in 1991 and 6.6 in 1992. In recent years, results of the Menzies Centre's research into sudden infant-death syndrome (SIDS) has had a significant impact. Most infant deaths (children aged less than one year) now occur within the first 28 days after birth (neonatal deaths).

Three causes of death—heart disease, cerebrovascular disease (stroke) and malignant neoplasms (cancer)—accounted for two-thirds (66.3%) of all deaths in Tasmania in 1993. These were followed by diseases of the respiratory system, 9.0% of all deaths, and accidents, poisonings and violence, 6.2%.

There is a marked variation in the major causes of death by age. The main cause for those under one year was 'certain conditions originating in the perinatal period'—16 out of a total of 40 deaths. The risk of death diminishes considerably after the first year of life. It then increases progressively with increasing age.

Accidents, poisonings and violence are the main cause of death for the 1–14 and 15–24 age groups. For higher age groups (25–44 and up) heart disease and cancer are the leading causes of death.

**DEATHS, TASMANIA, 1993**

Age group (years)	Males	Females	Persons
Under 1	25	15	40
1–4	6	2	8
5–14	12	5	17
15–24	39	17	56
25–44	131	64	195
45–54	107	70	177
55–64	246	135	381
65–74	526	341	867
75–84	601	519	1 120
85 and over	272	504	776
<b>Total</b>	<b>1 965</b>	<b>1 672</b>	<b>3 637</b>

Source: ABS catalogue no. 3312.6

**AGE-SPECIFIC DEATH RATES, TASMANIA, 1993**

Age group (years)	Males (deaths/'000)	Females (deaths/'000)
Under 1	7.1	4.5
1–4	0.42	0.15
5–14	0.33	0.14
15–24	1.08	0.50
25–44	1.86	0.90
45–54	3.87	2.62
55–64	12.42	6.76
65–74	32.68	18.55
75–84	80.60	46.64
85 and over	192.50	159.70
<b>All ages</b>	<b>8.40</b>	<b>7.04</b>

Source: ABS catalogue no. 3312.6

**PRINCIPAL CAUSES OF DEATH BY AGE GROUP AND SEX, TASMANIA, 1993**

Cause	Number			Per cent persons (a)
	Males	Females	Persons	
Under one year				
Certain conditions originating in the perinatal period	13	3	16	40.0
Congenital anomalies	2	9	11	27.5
Sudden death, cause unknown	6	3	9	22.5
<b>All causes</b>	<b>25</b>	<b>15</b>	<b>40</b>	<b>100.0</b>
1-14 years				
Accidents, poisonings and violence	8	4	12	48.0
Malignant neoplasms	1	2	3	12.0
<b>All causes</b>	<b>18</b>	<b>7</b>	<b>25</b>	<b>100.0</b>
15-24 years				
Motor vehicle traffic accidents	13	4	17	30.4
Suicide	9	2	11	19.6
Malignant neoplasms	1	4	5	8.9
<b>All causes</b>	<b>39</b>	<b>17</b>	<b>56</b>	<b>100.0</b>
25-44 years				
Malignant neoplasms	25	28	53	27.2
Suicide	32	6	38	19.5
Diseases of the circulatory system	20	9	29	14.9
Motor vehicle traffic accidents	15	6	21	10.8
<b>All causes</b>	<b>131</b>	<b>64</b>	<b>195</b>	<b>100.0</b>
45-54 years				
Malignant neoplasms	37	38	75	42.4
Heart disease	25	11	36	20.3
Cerebrovascular disease	5	3	8	4.5
Accidents, poisonings and violence	18	6	24	13.6
<b>All causes</b>	<b>107</b>	<b>70</b>	<b>177</b>	<b>100.0</b>
55-64 years				
Malignant neoplasms	92	61	153	40.2
Heart disease	83	35	118	31.0
Cerebrovascular disease	12	7	19	5.0
Diseases of the respiratory system	11	9	20	5.2
<b>All causes</b>	<b>246</b>	<b>135</b>	<b>381</b>	<b>100.0</b>
65-74 years				
Malignant neoplasms	178	118	296	34.1
Heart disease	158	91	249	28.7
Cerebrovascular disease	39	33	72	8.3
Diseases of the respiratory system	57	43	100	11.5
<b>All causes</b>	<b>526</b>	<b>341</b>	<b>867</b>	<b>100.0</b>
75 years and over				
Malignant neoplasms	204	135	339	17.9
Heart disease	289	386	675	35.6
Cerebrovascular disease	97	185	282	14.9
Diseases of the respiratory system	120	79	199	10.5
<b>All causes</b>	<b>873</b>	<b>1 023</b>	<b>1 896</b>	<b>100.0</b>
Total all ages				
Malignant neoplasms	538	386	924	25.4
Heart disease	570	530	1 100	30.2
Cerebrovascular disease	157	230	387	10.6
Diseases of the respiratory system	193	135	328	9.0
Accidents, poisonings and violence	161	64	225	6.2
<b>All causes</b>	<b>1 965</b>	<b>1 672</b>	<b>3 637</b>	<b>100.0</b>

(a) Of all deaths in the same age group.

Source: ABS catalogue no. 3312.6

*Accidents, poisonings and violence*

These were the major cause of death in Tasmania in 1993 for the 1–14 years age group. For the 15–24 years age group, motor vehicle traffic accidents was the cause of 30.4% of deaths. Suicide was the second major cause for the 15–24 and 25–44 years age groups, accounting for 19.6% and 19.5% of all deaths respectively. As well as differing by age, the relative importance of certain causes of death varies by sex. For all ages, 8.2% of male deaths were due to accidents, poisonings and violence compared with 3.8% of female deaths.

*Malignant neoplasms (cancer)*

Cancer was the major cause of death for the 25–44 years age group in 1993, accounting for 27.2% of deaths. Cancer remained the major or second major cause of death for all older age groups, being responsible for 42.4% of deaths in the 45–54 years age group (main cause); 40.2% in the 55–64 years age group (main cause); 34.1% in the 65–74 years age group (main cause); and for 17.9% of deaths in the 75 years and older age group (second main cause).

There was a higher rate of cancer among men than women for the 55–64 years age group and above. Many more men (140) than women (58) died from cancer of the respiratory and intrathoracic organs, where tobacco smoking is a major factor. Also, death from cancer of the digestive organs and peritoneum was more common among men (155) than women (90).

For women, death from cancer of the genitourinary organs (106) was more common than for men (65). Some 65 women died from breast cancer in 1993. For all ages, 538 men (27.4% of all male deaths) and 386 women (23.1%) died from malignant neoplasms in Tasmania in 1993.

*Heart disease*

This becomes a major cause of death from the 25–44 years age group up—10.8% of deaths. It accounted for a larger proportion of deaths in older age groups and was the major cause of death for those 75 years and over (35.6% of deaths for that age group).

*Cerebrovascular disease (stroke)*

Strokes accounted for 14.9% of deaths among people 75 and over in 1993. It becomes a significant cause of death from the 45–54 years age group (4.5% of deaths) up. Strokes were more common among men in the lower age groups. However, they were more common for women in the 75 years and older age group where they accounted for 18.1% of female deaths but only 11.1% of male deaths in 1993.

*Changes over time*

Over the past 20 years, there have been some significant changes in the major causes of death in Tasmania. Deaths from malignant neoplasms (cancer) have increased from 17.1% of all deaths in 1973 to 25.4% in 1993. In 1973, the average cancer death rate per 100,000 of the population was 157 for males and 131 for females; these rates increased to 230 for males and 162 for females in 1993.

The proportion of all deaths from heart disease dropped from 34.6% in 1973 to 30.2% in 1993. Over the same period, the death rate per 100,000 of the population decreased quite dramatically for men, from 351 to 244; for females, the death rate per 100,000 decreased from 292 to 223.

Deaths from cerebrovascular disease (stroke) decreased from 13.4% of all deaths in 1973 to 10.6% in 1993. Rates fell for both males and females, from 93 to 67 per 100,000 for males and from 133 to 97 per 100,000 for females.

## Heart and Stroke Facts 1995

In July 1995, the National Heart Foundation of Australia released a report titled 'Heart and Stroke Facts 1995'. Heart attack and stroke remain the major cause of death in Australia and people living in Tasmania and the Northern Territory are more likely to die of a heart attack than people living elsewhere in Australia.

Heart and blood vessel disease kill one Australian every 10 minutes, on average. The estimated annual cost to the economy of cardiovascular disease is approximately \$3.5 billion.

During the 1980s women gained, on average, an extra three kilograms in weight and men an extra two kilograms. Medical experts believe Australians are eating more junk food, which is a significant factor. Also, while smoking levels continue to decline, more than one-quarter of the population still smoke, seriously increasing their risk of heart disease and other health problems. One in six middle-aged Australians have high blood pressure.

Dr Andrew Tonkin, Medical Vice-President of the Heart Foundation's Victorian Division, said at the launch of the report that,

despite gains in cutting heart disease in Australia, the realities are grim. He said,

'Cardiovascular disease is still the commonest cause of death in this country and in 1993 accounted for about 44% of all deaths'.

Dr Tonkin called for more government funding for research into heart disease. He said that health campaigns should concentrate on the parents of the future—young people between 18 and 24 years, who were the greatest consumers of junk food.

During the 1980s cholesterol levels remained stagnant. The Heart Foundation's National Medical Director, Dr Paul Magnus, said that all adult Australians should know their cholesterol levels and be re-tested every five years.

Based on figures from the ABS and the Heart Foundation, on average in 1993, 31 Australians under the age of 70 years died prematurely from heart disease every day. For young and middle-aged Aboriginal Australians, death rates from heart disease were 10 to 20 times higher than for non-Aboriginal Australians.

## HEALTH EXPENDITURE

Expenditure associated with health care constitutes a significant part of the economy. In Australia, total health expenditure was estimated to be \$34.3 billion in 1992-93 (Australian Institute of Health and Welfare, AIHW). That expenditure amounted to 8.5% of the Australian gross domestic product (GDP) for 1992-93, compared with an estimated 7.7% of GDP on estimated total health expenditure in 1982-83 (AIHW). In comparison, the health expenditure of the United States of America, which has the highest proportionate expenditure on health care of any country (Organisation for Economic Co-operation and Development), was an estimated 14.0% of GDP in 1992, up from 10.3% in 1982.

## ABS NATIONAL HEALTH SURVEYS

Despite impressive health gains during the 20th century many people still die prematurely while many more suffer a reduced quality of life through health problems, many of which are the results of life-style or environmental factors that are themselves amenable to change. For example, the adverse effects of the use of tobacco on health and of excessive alcohol consumption are well known and widely publicised. Research also shows that a large proportion of premature deaths (especially those caused by heart attack and stroke)

are diet related and preventable; as are many visits to doctors. Organisations like the Menzies Centre in Tasmania, the Australian Institute of Health and Welfare, the National Health and Medical Research Council and the National Heart Foundation are promoting means of disease prevention and awareness of better health.

The ABS's National Health Surveys, run at five-year intervals, provide some valuable insights into the health status and health-risk factors of Australians.

### Health status of Tasmanians

In 1989-90 in Tasmania, 79% of the population aged 18 years and over reported that their health was good or excellent. Just 4.4% reported that their health was poor while 16.5% reported that their health was fair.

<b>SELF ASSESSED HEALTH STATUS, TASMANIA, 1989-90 (a)</b>				
Status	Males	Females	Persons	
	(%)	(%)	Number ('000)	Proportion (%)
Excellent	32.3	30.9	103.2	31.6
Good	47.1	47.7	154.8	47.4
Fair	15.5	17.5	53.9	16.5
Poor	5.1	3.8	14.5	4.4
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>326.4</b>	<b>100.0</b>

(a) Persons aged 18 years and over.

Source: ABS catalogue no. 4370.6

### Illness conditions

An estimated 81.2% of Tasmanians in 1989-90 experienced an illness or injury in the two weeks prior to the Survey.

Long-term illness conditions were reported by 64.5% of the population and recent conditions were reported by 67.0%, including 50.3% who reported both long-term and recent conditions. More females (68.9%) reported long-term conditions than males (62.7%).

The most common recent conditions reported were 'symptoms, signs and ill-defined conditions', 32.2% of persons reporting recent conditions; diseases of the respiratory system, 29.6%; diseases of the musculoskeletal system and connective tissue, 18.8%; diseases of the circulatory system, 18.3%; and diseases of the digestive system, 17.5%.

Of all people reporting long-term conditions, the most common illness conditions reported were diseases of the nervous system and sense organs, 58.1%; diseases of the musculoskeletal system and connective tissue, 39.7%; diseases of the respiratory system, 27.8%; diseases of the circulatory system, 20.2%; and diseases of the digestive system, 8.7%.

### Type of action taken

In 1989-90 an estimated 72.6% of Tasmanians took one or more health-related actions in the two weeks prior to the survey. The most common action taken was the use of medication other than vitamins/minerals, 60.6% of the population; this was followed by consumption of vitamins/minerals, 22.0% of the population. Next were doctor consultations, with 18.9% of Tasmanians having at least one consultation with a doctor in the previous two weeks. A further 9.2% of Tasmanians had at least one consultation with other health professionals within the previous two weeks.

**ACTION TAKEN IN THE TWO WEEKS PRIOR TO INTERVIEW, TASMANIA, 1989-90**

	Males ( <i>'000</i> )	Females ( <i>'000</i> )	Persons	
			Number ( <i>'000</i> )	Proportion (%) ( <i>b</i> )
Hospital inpatient episode	1.9	3.3	5.2	1.1
Visit to casualty/outpatients	4.5	3.7	8.2	1.8
Doctor consultation	34.9	50.9	85.8	18.9
Dental consultation	11.2	11.6	22.8	5.0
Consultation with other health professional	17.3	24.3	41.6	9.2
Taken vitamins/minerals	41.5	58.3	99.8	22.0
Used other medications	121.4	154.0	275.3	60.6
Days away from work/school	13.9	13.1	27.0	5.9
Other days of reduced activity	18.4	22.1	40.5	8.9
<b>Total taking action (a)</b>	<b>149.5</b>	<b>180.5</b>	<b>330.0</b>	<b>72.6</b>
Took no action	76.0	48.3	124.3	27.4
<b>Total</b>	<b>225.5</b>	<b>228.8</b>	<b>454.3</b>	<b>100.0</b>

(a) Persons may have taken more than one type of action during the two weeks prior to interview and therefore components do not add to totals.

(b) Of total persons.

Source: ABS catalogue no. 4375.6

**Health risk factors**
**Smoking**

Health risks associated with smoking include cancers, respiratory diseases such as bronchitis and emphysema, and circulatory diseases including thrombosis and heart disease. The 1989-90 National Health Survey showed that, for Australia, a greater proportion of smokers (11%) and ex-smokers (10%) aged 65 years and over had bronchitis and emphysema as a long-term condition than people of the same age who had never smoked (3%).

For Tasmania, the survey showed that 28.8% of people aged 18 years and over were smokers, 23.3% were ex-smokers and 47.9% had never smoked. A higher proportion of males were smokers, 31.4%, than females, 26.3%. There was also a higher proportion of male ex-smokers, 27.7% than females, 19.0%. Over 70% of smokers had smoked for over 10 years while over 45% of ex-smokers had smoked for over 10 years.

**SMOKERS AND EX-SMOKERS, SMOKER STATUS BY DURATION OF SMOKING, TASMANIA, 1989-90 (*'000*) (a)**

Duration of smoking	Smokers			Ex-smokers (b)		
	Males	Females	Persons	Males	Females	Persons
Less than 1 year	**	**	*0.5	**	**	**
1 to 4 years	5.3	3.7	9.0	3.5	4.8	8.3
5 to 9 years	6.2	7.0	13.2	5.3	5.0	10.4
10 to 19 years	14.3	12.4	26.7	10.0	9.6	19.6
20 years or more	24.3	20.3	44.6	14.5	11.2	25.7
<b>Total smokers</b>	<b>50.4</b>	<b>43.6</b>	<b>94.0</b>	<b>44.4</b>	<b>31.5</b>	<b>75.9</b>

(a) Smokers and ex-smokers aged 18 years and over.

(b) Components do not add to totals as duration of smoking was not recorded for ex-smokers of pipes, cigars and roll your own cigarettes.

\* Subject to sampling variability between 25% and 50%.

\*\* Subject to sampling variability too high for most practical purposes.

Source: ABS catalogue no. 4380.6

**SMOKER STATUS, TASMANIA, 1989-90 (a)**

Status	Males		Females		Persons	
	No. ('000)	Proportion (%)	No. ('000)	Proportion (%)	No. ('000)	Proportion (%)
Smoker	50.4	31.4	43.6	26.3	94.0	28.8
Ex-smoker	44.4	27.7	31.5	19.0	75.9	23.3
Never smoked	65.7	41.0	90.8	54.7	156.5	47.9
<b>Total</b>	<b>160.4</b>	<b>100.0</b>	<b>166.0</b>	<b>100.0</b>	<b>326.4</b>	<b>100.0</b>

(a) Persons aged 18 years and over.  
Source: ABS catalogue no. 4380.6

*Alcohol*

Excess alcohol intake is associated with many chronic diseases and conditions, including coronary heart disease, stroke, hypertension, certain types of cancer, cirrhosis of the liver and brain damage. Alcohol is one of the most widely used drugs in Australia. The ABS's February 1995 Population Survey Monitor showed that 57% of Australians aged 18 years and over said that they had consumed an alcoholic drink in the survey week.

The results of the 1989-90 National Health Survey showed that for people 18 years and over who consumed alcohol, 15.3% of males and 9.2% of females had either a medium or high health risk based upon their level of consumption. In the week prior to the survey, 73.6% of males aged 18 and over and 51.3% of females aged 18 and over had consumed alcohol.

*Excess weight for height*

Being overweight or obese are risk factors for many diseases, including coronary heart disease. The 1989-90 National Health Survey showed that, for Tasmania, 43.3% of males and 29.9% of females aged 18 years and over were either overweight or obese.

*Exercise*

In 1989-90 an estimated 35.1% of Tasmanians aged 18 and over did not exercise in the two weeks prior to the survey, 33.6% exercised at a low level, 17.2% at a medium level and 14.0% at a high level. A much higher proportion of males (19.6%) exercised at a high level than females (8.6%); but many more females (40.3%) exercised at a low level than males (26.7%).

**BODY MASS INDEX, TASMANIA, 1989-90 (a)**

Body mass index	Males		Females		Persons	
	No. ('000)	Proportion (%)	No. ('000)	Proportion (%)	No. ('000)	Proportion (%)
Underweight	9.2	5.7	25.3	15.2	34.5	10.6
Acceptable weight	75.9	47.3	81.3	49.0	157.2	48.2
Overweight	57.6	35.9	36.3	21.9	93.9	28.8
Obese	11.9	7.4	13.2	8.0	25.1	7.7
Not available	5.9	3.7	9.9	6.0	15.7	4.8
<b>Total</b>	<b>160.4</b>	<b>100.0</b>	<b>166.0</b>	<b>100.0</b>	<b>326.4</b>	<b>100.0</b>

(a) Persons aged 18 years and over. Derived from self-reported height and weight.  
Source: ABS catalogue no. 4380.6

**EXERCISE LEVEL, TASMANIA, 1989-90 (a)**

Exercise level	Males		Females		Persons	
	No. ('000)	Proportion (%)	No. ('000)	Proportion (%)	No. ('000)	Proportion (%)
Did not exercise	58.1	36.2	56.5	34.0	114.7	35.1
Low	42.8	26.7	66.9	40.3	109.7	33.6
Medium	28.0	17.5	28.3	17.0	56.3	17.2
High	31.5	19.6	14.3	8.6	45.7	14.0
<b>Total</b>	<b>160.4</b>	<b>100.0</b>	<b>166.0</b>	<b>100.0</b>	<b>326.4</b>	<b>100.0</b>

(a) Persons aged 18 years and over. Based on reported intensity, frequency and duration of exercise undertaken for recreation, sport or fitness in the two weeks prior to interview.

Source: ABS catalogue no. 4380.6

## HEALTH SERVICES

With the creation of the Department of Community and Health Services in September 1992, eight program areas were established, five of which operate on a regional basis (Aged and Disability Support Services; Acute Care Services; Mental Health Services; Child, Family and Community Support Services; and Housing Services). Direct services are delivered through the Department's Regions—North, South and North West—with the Corporate Office coordinating State-wide issues (Ambulance and Population Health), including Commonwealth/State negotiations. There is a Corporate Support Program which provides support services to the Department.

The broader content of the health-related programs is outlined below (see Chapter 13, Community Welfare, for an outline of the Aged and Disability Support Services, the Child, Family and Community Support Services and the Housing Services Programs.)

### Acute care services

The Acute Care Program has the responsibility for Commonwealth/State liaison and negotiations, overall State directions in Acute Care and providing assistance to the regions as required. Program Coordination is also responsible for the licensing of private hospitals and for the allocation of funding under Medicare Incentives Programs.

Acute Care Services is the Department's largest program in budgetary terms, representing about half the Consolidated Fund appropriation. While the services delivered principally include those provided through, and associated with, the State's public hospitals, important links exist with community and residential care services. The focus of district hospitals, in particular, is moving towards providing care for people after they leave hospitals.

### Mental health services

This program delivers a wide range of psychiatric services on a regional basis. The client group comprises people of all ages with mental health problems. Services range from secure, close management of severely mentally ill people, to the clinical management of children and adolescents with varying degrees of emotional or behavioural problems.

The only psychiatric institution in the State, the Royal Derwent Hospital, offers residential, medical and nursing care in the specialist streams of acute, rehabilitation and long-term support, psychogeriatric and secure services.

In 1993–94 there were several initiatives in the mental health services area.

- A Mental Health Advisory Group to facilitate consumer participation in service planning was established.
- The *Mental Health Act 1963* (Cwlth) was substantially reviewed and the Government authorised the redrafting of the legislation to reflect current practice and trends.
- In consultation with the Mental Health Program, the Housing Program allocated \$800,000 to enable specifically targeted housing projects to be developed for people with psychiatric disabilities in each region.
- A large house in Hobart was purchased to accommodate people with Huntington's disease, units were purchased in New Town for clients of the Peacock Centre, and units in Launceston were committed for special targeted use by people with mental illness.
- Initiative funding was obtained to provide 20 new community mental health workers around the State, with the intention of improving community support to prevent or reduce institutional admissions; and
- State initiative funding was also obtained for the provision and monitoring of the new drug Clozapine, a breakthrough treatment for severe psychotic illness unresponsive to other medications.

### **Ambulance services**

The Department of Community and Health Services coordinates and directs the development of all ambulance organisations and services throughout the State—mainly the Tasmanian Ambulance Service. The need for both a road and air ambulance network involves the operation of a complex response framework, including professional and volunteer officers organised into two operational regions as well as some independent ambulance services. The Tasmanian Ambulance Service seeks to ensure:

- prompt pre-hospital treatment of persons needing medical care;
- the availability of transport services to and between medical facilities, with en-route advanced life support;
- the availability of integrated rescue and patient transport services (covering rescue from vehicle accidents, industrial accidents, wilderness, sea and locations which are difficult to reach);
- reduced mortality and morbidity; and
- the availability of trained ambulance officers on location at sporting and leisure events.

### **Population health**

The Department of Community and Health Services aims to improve the health of the Tasmanian population by addressing public health and safety needs, targeting programs for specific population groups, planning and developing policies, promoting health, regulating, coordinating and advocating.

During 1994–95 the Implementation of Health Goals and Targets for Tasmania proceeded through initiatives such as the State Immunisation Strategy, the Tasmanian Food and Nutrition Policy that was endorsed by State Cabinet, the mobile mammography screening service that began on the North-West Coast, a program to promote cervical cancer screening, task forces for youth suicide prevention, the funding of the Menzies Centre for Population Health for injury, cancer research and data collection, and the creation of positions for Regional Aboriginal Health Liaison Offices.

## EMPLOYMENT INJURIES

Employment injuries, as defined in the *National Data Set for Compensation-Based Statistics*, relate to all injuries resulting from accidents arising out of, or in the course of, employment (occupational and commuting injuries); and all occupational diseases.

In 1993-94, there were 18,918 compensatable injuries reported to the Workers Compensation Board. Of this number, there were 18 fatalities: 15 men and 3 women. The estimated cost of those fatalities was \$1.37 million, an estimated average cost per fatality of \$76,008.

The number of non-fatal compensatable injuries during the year was 18,900. Of this number, 26.8% (5,063) were women and 73.2% (13,837) were men. In addition, of all non-fatal injuries, 42.6% (8,043) involved no lost time injuries while 57.4% (10,857) involved the loss of one calendar day or more. In 1992, the National Occupational Health and Safety Commission (NOHSC) changed the severity indicator to define severe injury conditions as permanent disability cases or those injuries or diseases which result in 60 working days or more off work. Using lost time of 60 working days or more as a measure of severity for non-fatal injuries, 4.5% (856) of all non-fatal injuries in 1993-94 were considered severe.

For the year, all compensatable injuries reported to the Workers Compensation Board recorded an estimated total compensation of \$81.44 million. Total cost includes actual payments made by insurers plus estimated outstanding payments for each compensatable claim. The estimated average cost per claim for all non-fatal injuries was \$4,237, with an estimated average cost of \$1,327 per claim for no lost time injuries and \$6,392 per claim with recorded lost time of one day or more. The estimated average cost for severe injuries was \$45,471.

### EMPLOYMENT INJURIES, 1993-94

Persons	Fatalities	Employment injuries
Males	15	13 837
Females	3	5 063
<b>Total</b>	<b>18</b>	<b>18 900</b>

Source: Workers Compensation Board

## HOSPITALS

With 3.75 public hospital beds per 1,000 population in 1991-92, Tasmania was a little above the 3.68 recorded for Australia. For private hospitals, Tasmania (1.17) was almost the same as the national average (1.19).

In the public hospital sector, Tasmania had the lowest separation rate of the States—154 per 1,000 population were discharged or left for other reasons (for Australia the rate was 175). However, Tasmania had the second highest separation rate from private hospitals with 79 separations per 1,000 population while the lowest was for New South Wales with 54 separations per 1,000 population.

Overall, average length of stay varied from 5.9 days in Tasmania down to 4.9 days in Western Australia. Tasmania had the longest average length of stay in the public sector (7.1 days) but the shortest in the private sector (3.7 days). Tasmania's average occupancy rate for all hospitals at 76.7% was just a little above the Australian average of 75.0%.

In the public sector, average costs per separation ranged from a high of \$3,696 for Tasmania down to \$2,771 for Queensland. For private hospitals, Tasmania's average cost per separation of \$1,573 was in between those for other States and compared with a figure of \$1,689 for Australia.

## Australian Red Cross Blood Transfusion Service

~ Article contributed by the Blood Transfusion Service, Tasmanian Division ~

The Australian Red Cross Blood Services aims to provide a safe blood supply for both the expected and the emergency needs of Tasmanians. Maintaining a safe, high quality supply of blood and blood products is a far more complex operation today than in past years. Both the screening of donors and the testing of blood, once collected, are operations that need to be carried out with adherence to stringent safeguards.

There are Red Cross blood centres in Hobart, Launceston, Devonport and Burnie. Purpose-built laboratories were opened in June 1991 and a reorganisation of the different departments State-wide was undertaken. Blood throughout the State is now distributed from Hobart.

In 1995 Blood Services Tasmania obtained the Certificate of Registration to the standard of Quality ISO 9002/AS 3902/NZ 9002, the first Blood Service in Australia to achieve this level of accreditation.

Donors are interviewed and assessed before the donation is taken. It usually takes about half an hour from the time the donor fills in the necessary forms until the cup of tea, coffee or milkshake is provided by the volunteers at the end of the donation. A healthy person can donate whole blood about every twelve weeks. Whole blood donations from registered donors are split into several components, such as red cells, platelets and plasma.

### AUSTRALIAN RED CROSS TRANSFUSION SERVICE, TASMANIA, ACTIVITY 1993-94

	<i>Number</i>
Individual donors	11 587
Donations collected	22 069
Units of plasma for separation into other products	20 162

Autologous blood collection was commenced in the early 1980s. This involves the collection of a person's own blood prior to undergoing elective surgery. The blood collected this way can only be used for the particular person who has donated it.

In 1991 the plasmapheresis service began. Using sophisticated equipment, the donor's blood is taken, passed through a machine that removes only the plasma, and is then returned to the donor. As they do not lose their red blood cells, plasmapheresis donors can donate more frequently than whole blood donors. The process usually takes about forty minutes.

A clinical service is also provided to hospital-based clinical oncology services by providing an instrument-based procedure for cell removal from the blood stream. This allows peripheral blood stem cells to be harvested. These can be used to transplant in place of bone marrow.

### PRODUCTS SUPPLIED BY BLOOD SERVICES TASMANIA, 1993-94

<i>Product group</i>	<i>Units shipped</i>	<i>Active components</i>
Albumin solutions	6 868	151 626 grams
Intravenous immunoglobulin	1 346	14 775 grams
Factor VIII (clotting factor)	4 651	1 162 750 IU
Intramuscular immunoglobulin—		
Normal	2 377	
Specials		
Anti D	1 593	
Tetanus antibodies	1 164	
Other	104	
Red cells	19 485	
Platelets	5 992	
Fresh frozen plasma	1 793	
Cryoprecipitate	201	

At the accreditation laboratory blood screening tests are performed, ranging from blood grouping; testing for antibodies to human immunodeficiency virus type I and II, hepatitis C, and human T leukaemia virus; testing for the hepatitis B virus and screening for syphilis.

In 1992 the Australian Bone Marrow Donor Registry was initiated, which allowed volunteers to have their names placed on a register of people willing to donate bone marrow for use in the treatment of leukaemia. The Donor Centre and Tissue Typing are undertaken by the Australian Red Cross Blood Services Tasmania on behalf of the Australian Bone Marrow Registry. Tissue Typing is also performed by the laboratory for clinical patients within Tasmania.

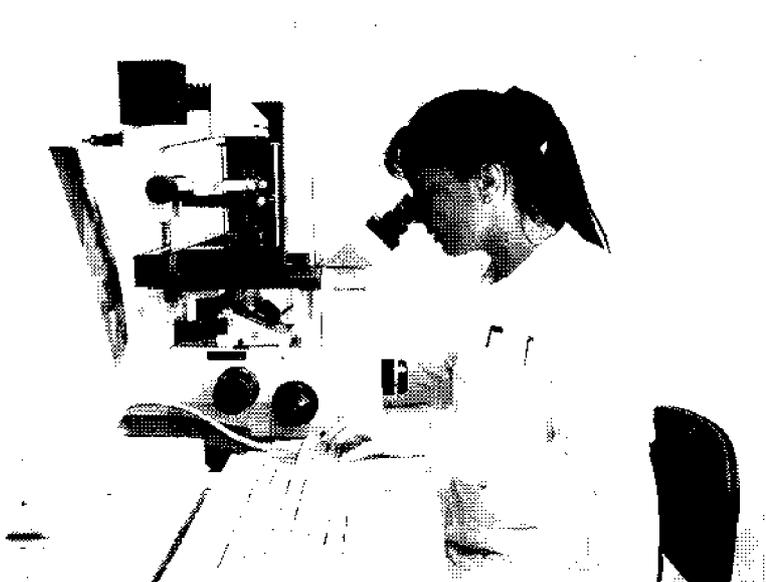
Blood is released from quarantine after the necessary tests have been performed and found satisfactory. Then blood and blood products are distributed throughout Tasmania to hospitals, doctors and pathology departments. Great care needs to be taken in the handling of the products to ensure they are maintained in the optimum condition.

**DONOR BLOOD GROUPS, AVERAGE OCCURRENCE**

Type	Proportion (%)
ABO and Rh(D) (a)	
O Pos	36
O Neg	9
A Pos	32
A Neg	8
B Pos	9
B Neg	2
AB Pos	3
AB Neg	1

(a) Rhesus factor: positive has the Rhesus antigen factor; negative does not have it.

The Blood Service is often taken for granted, but a large scale emergency can highlight the importance of maintaining a regular supply of blood and blood products. Victims of accidents or patients undergoing prolonged treatment appreciate the generous gift of life. The voluntary donors' reward is the knowledge that they perform a vital service.



A medical scientist reading trays to obtain patients' HLA type using a fluorescent microscope.

Australian Red Cross

**PUBLIC AND PRIVATE ACUTE AND PSYCHIATRIC HOSPITALS, TASMANIA, 1991-92 (a)**

Particulars	Unit	Public	Private	Total
Facilities	no.	20	8	28
Beds per 1,000 population	no.	3.75	1.17	4.92
Separations per 1,000 population	no.	154	79	232
Occupied bed days per 1,000 population	no.	1 092	288	1 381
Average length of stay	days	7.1	3.7	5.9
Occupancy rate	%	79.6	67.3	76.7
Average recurrent expenditure—				
Per separation	\$	3 696	1 573	2 978
Per occupied bed day	\$	520	428	501

(a) An acute hospital provides at least minimal medical, surgical or obstetrical services for inpatient care, together with 24-hour qualified nursing services; it must be licensed; the average stay per admission is relatively short.

Source: ABS catalogue no. 4391.0

Some of the findings on a national basis were:

- Total recurrent expenditure in acute hospitals in Australia in 1991-92 was \$11.1 billion, or 2.8% of Gross Domestic Product.
- The average cost per admission was \$2,417 in the public sector, considerably above the private sector cost of \$1,783 (adjusted costs: exclude non-inpatient costs; include private patient medical costs).
- Public hospitals treated almost two-thirds of all cases requiring surgery.

**FURTHER READING****ABS PUBLICATIONS**

*Australian Social Trends* (4102.0)

*Causes of Death, Australia* (3303.0)

*Deaths, Tasmania, 1993* (3312.6) final issue (a)

*Deaths, Australia* (3302.0)

*Demography, Tasmania* (3311.6)

*Hospitals, Australia* (4391.0)

National Health Survey, 1989-90:

*Health Status Indicators, Tasmania* (4370.6)

*Health Related Actions, Tasmania* (4375.6)

*Health Risk Factors, Tasmania* (4380.6)

*Summary of Results, Australia* (4364.0)

*Perinatal Deaths, Australia* (3304.0)

(a) Detailed death statistics are now included in 3311.6.

**OTHER PUBLICATIONS**

Australian Institute of Health and Welfare:

*Australia's Health, 1994*, AGPS, Canberra, 1994.

*Health Expenditure Bulletin No. 10* (Canberra, Dec. 1994).

*Heart and Stroke Facts Report, 1995*, National Heart Foundation, Canberra, 1995.

*International Classification of Diseases, Ninth Revision* World Health Organisation, 1975.

National Health Strategy Issues Paper No. 7, *Pathways to Better Health*, Department of Health,

Housing and Community Services, Canberra, 1993.

*The Vital Factor*, Australian Red Cross Blood Transfusion Service, Melbourne, 1992.

**ACKNOWLEDGEMENT**

Department of Community and Health Services

# 13 | Community welfare



DIRVET

In 1993, 45% of Tasmanian children used child-care services.

THE CHANGING DEMOGRAPHIC STRUCTURE of our community (including an increasingly aged population), and changes in the workforce (including the demand for more skilled workers and the participation of more women) are changing the demands on the community as a whole. It is the Commonwealth Government (with income maintenance), the Tasmanian Government (with direct services) and non-government welfare organisations that, in the main, respond to these community needs.

The main objective of the Australian social welfare system is the alleviation of poverty. Support for families with children is also provided in accordance with the high value Australians have traditionally placed on family formation and child rearing.

In the 1990s, Tasmania has had the highest unemployment rate of any Australian State. Furthermore, Tasmania's relatively severe winters mean that Tasmanian Government departments and charities often have to allow for more resources per individual or family than their mainland equivalents.

## INCOME MAINTENANCE

Income maintenance payments are provided to individuals by the Federal Government, primarily through the Department of Social Security (DSS) and the Department of Veterans' Affairs (DVA).

Pensions for aged people were introduced in Australia in 1909, which was the beginning of the national provision of social security payments. Since then many other regular income payments have been added to provide income security to groups such as:

- the retired;
- people with disabilities;
- the sick;
- unemployed people; and
- families.

The provision of income to these groups aims to ensure that people have adequate levels of income to support themselves and their dependants. Carers of these particular groups are also entitled to various benefits.

### Income security for the retired

#### *Age pensions*

The DSS provides income maintenance payments for aged people. Women aged 60 years and over and men aged 65 and over are eligible for the Age Pension, subject to income and assets tests and residential conditions.

At 30 June 1994 there were 43,860 people receiving an Age Pension (not including Wife/Carer Pensions), 56% of the estimated 77,840 Tasmanians aged 60 years and over.

There are two other types of pensions provided to support retired people. A Wife Pension may be paid to the wife of an age pensioner if she does not qualify for a pension in her own right. Carer Pensions are payable to a person who provides a severely disabled

### DEPARTMENT OF SOCIAL SECURITY PENSIONS, BENEFITS AND FAMILY PAYMENTS, TASMANIA, 1993-94

<i>Pension, benefit or family payment</i>	<i>Number of recipients at June 1994</i>	<i>Expenditure (\$'000)</i>
Age Pension	43 860	(b) 322 827
Disability Support Pension	14 357	(b) 143 570
Sole Parent Pension	10 016	81 067
Rehabilitation Allowance	12	155
Class B Widow Pension	1 375	12 218
Widowed Person Allowance	2	33
Wife/Carer Pension	6 071	—
Job Search & Newstart allowances (a)	30 058	255 633
Mature Age Allowance	1 068	} 2 976
Mature Age Partner Allowance	396	
Sickness Allowance (a)	1 059	8 960
Special Benefit (a)	397	3 465
Mobility Allowance (a)	596	748
Basic Family Payment—		
Children	104 588	} 60 554
Clients	53 946	
Additional Family Payment—		
Children	55 140	} 107 470
Clients	27 470	
Child Disability Allowance—		
Children	2 694	} 5 623
Clients	2 433	
Double Orphan Pension—		
Orphans	29	} 26
Guardians	23	
<b>Total</b>	<b>..</b>	<b>1 005 327</b>

(a) June monthly average.

(b) Includes expenditure on Wife/Carer Pensions.

Source: Department of Social Security

### AGE PENSIONS, TASMANIA (a)

<i>Year</i>	<i>Number at 30 June</i>	<i>Financial year expenditure (\$m)</i>
1989	38 557	214.9
1990	38 839	230.8
1991	39 664	259.9
1992	41 288	277.1
1993	43 223	293.9
1994	45 168	322.8

(a) Includes Wife/Carer Pensions.

Source: Department of Social Security

age pensioner with substantial personal care or attention, or constant supervision at home. The carer must live in the same house or in an adjacent house to the person being cared for. In Tasmania at 30 June 1994, there were 1,308 Wife/Carer Pensions being paid.

Overall there were 45,168 aged pensioners (including wife/carer pensioners) who were paid a total of \$322.8 million in Tasmania during the 1993-94 financial year.

#### Service pensions

In addition to the DSS Age Pension, the DVA provides Service Pensions to male veterans aged 60 years and over and female veterans aged 55 years and over. This pension is also subject to an income and assets test.

At 30 June 1994 there were 15,802 Service Pensions being paid (including Wife and Widow Pensions). For 1993-94 this involved an expenditure of \$104.2 million.

#### Income security for people with disabilities and the sick

The provision of income maintenance payments for disabled and sick Australians changed in November 1991 when the Disability Reform Package was introduced to help people with disabilities find employment instead of being dependent on long-term income support programs. It also aims to encourage participation in education, training and rehabilitation activities.

#### Disability Support Pension

To be eligible for this support a person must be permanently blind, or have a 20% impairment rating, or be unable to work at least 30 hours a week at full award wages, for a minimum of two years (due to a physical, intellectual or psychiatric impairment). At 30 June 1994 there were 14,357 people (not including wife/carer pensioners) receiving this pension.

Wife Pensions may be paid to the wife of a disability support pensioner, if she does not qualify for a pension in her own right. At 30 June 1994 there were 4,731 wife/carer pensioners in Tasmania.

#### SERVICE PENSIONS, TASMANIA, JUNE 1994

War service	Number of pensions (a)
World War I	29
World War II	11 821
Korea and Malaya	452
British Commonwealth	2 080
Allied Forces	670
Special Overseas Service	608
Miscellaneous	142
<b>Total</b>	<b>15 802</b>

(a) Comprises service pensions payable to veterans, and partners and widows/widowers of veterans.  
Source: Department of Veterans' Affairs

#### SERVICE PENSIONERS, TASMANIA

Year	Number at 30 June	Financial year expenditure (\$m)
1989	16 162	80.8
1990	16 778	91.2
1991	16 611	100.2
1992	16 407	102.9
1993	16 154	103.7
1994	15 802	104.2

Source: Department of Veterans' Affairs

#### DISABILITY SUPPORT PENSIONS, TASMANIA

Year	Number at 30 June (b)	Financial year expenditure (\$m)
1989	11 930	73.7
1990	12 532	78.4
1991 (a)	13 421	90.8
1992	15 421	107.8
1993	17 705	124.1
1994	19 088	143.6

(a) In 1991 the Disability Support Pension replaced the Invalid Pension, with minor changes to the eligibility conditions.

(b) Includes Wife/Carer Pensions.

Source: Department of Social Security

At 30 June 1994 there were 19,088 people (including wife/carer pensioners) receiving this pension, at a cost of \$143.6 million during the 1993-94 financial year.

#### *Disability Pension*

In addition to the Disability Support Pension provided by the DSS, the DVA provides a similar pension to veterans to compensate for service-related injury or disease. At 30 June 1994, 14,876 disability pensions were being paid, at a cost of \$46.4 million in 1993-94.

#### *Sickness Allowance*

The payment of Sickness Allowance is usually only for 12 months, but it is extendable to 24 months in special circumstances. In Tasmania the average number of people receiving allowances during 1993-94 was 1,059. This cost \$9.0 million.

#### *Mobility Allowance*

The DSS also provides a Mobility Allowance for disabled people who are unable to use public transport without assistance. This particular allowance aims to encourage self-help and independence for disabled people. In Tasmania for 1993-94, a total of \$748,000 was spent on Mobility Allowances. At the end of the financial year, there were 596 disabled people receiving a Mobility Allowance.

#### *Child Disability Allowance*

To provide further financial help to families with disabled children who need extra care, the DSS provides a Child Disability Allowance. This allowance aims to encourage family-based care rather than institutional care of disabled children. In Tasmania at 30 June 1994, there were 2,694 disabled children eligible for this allowance. The total expenditure for 1993-94 was \$5.6 million.

### **Income security for the unemployed**

The DSS provides income maintenance payments to unemployed people. To be eligible, women must be aged 16 to 59 years old and men must be 16 to 64 years old and they must be actively looking for work. Payment of this benefit ensures that unemployed people receive adequate income for themselves and their dependants. Re-entry to the workforce is also encouraged.

Since July 1991 income support for unemployed people has been divided into two separate payment programs: Job Search Allowance and Newstart Allowance.

### **DISABILITY PENSIONS, TASMANIA**

Year	Number at 30 June (a)	Financial year expenditure (\$m)
1989	15 164	54.6
1990	15 771	61.6
1991	15 495	44.0
1992	15 455	44.5
1993	15 177	45.8
1994	14 876	46.4

(a) Includes Wife/Carer Pensions.

Source: Department of Veterans' Affairs

### **SICKNESS ALLOWANCES, TASMANIA**

Year	Number of recipients at 30 June	Financial year expenditure (\$m)
1989	1 312	9.4
1990	1 358	10.2
1991(a)	(b) 1 329	11.3
1992	1 125	10.0
1993	991	8.4
1994	1 059	9.0

(a) Sickness Allowance replaced Sickness Benefit from 1991.

(b) From 1991 the figure is the annual average number on benefits during the year.

Source: Department of Social Security

*Job Search Allowance*

To be eligible to receive Job Search Allowance (JSA), people must be aged 16–17 years old (some 15 year olds are also eligible) and must be unemployed. JSA is also paid to clients aged from 18 to Age Pension age, for the first 12 months that they become unemployed. In 1993–94, there was an average of 13,700 Tasmanians being paid \$106 million through JSA.

The primary aim of JSA is to support (and require) people to actively search for work or training activities which will enhance their employment potential. For people who have been employed and then become unemployed, the allowance aims to encourage an early return to work.

*Newstart Allowance*

Newstart Allowance is paid to people who have been unemployed for more than 12 months. For the 1993–94 financial year, there was an average of 16,358 clients receiving the Newstart Allowance. This amounted to \$149.6 million in expenditure for Tasmania. Newstart aims to offer as many practical options as possible to help long-term unemployed people to overcome barriers to employment.

**Payments for families with children***Basic Family Payment (formerly family allowance)*

This is payable, subject to income and assets tests, to a person in respect of dependent children under 16 years, or dependent full-time students aged 16–24 years who are not in receipt of a pension, benefit or allowance in their own right or a prescribed education scheme payment. Hardships provisions exist to assist those who do not meet the assets test but are in genuine hardship. Payments are usually paid to the mother and are indexed each January to maintain their real value.

At 30 June 1994 there were 53,946 Tasmanian families receiving a basic family payment. Expenditure on basic family payment for 1993–94 was \$61 million.

*Additional Family Payment*

In January 1993, additional pension, benefit or allowance paid in respect of children, family allowance supplement, guardian allowance and rent assistance for eligible families with children were combined into Additional Family Payment.

The number of families in receipt of Additional Family Payment at 30 June 1994 was 27,470. The amount paid during 1993–94 on this additional payment was \$107 million.

**BENEFITS FOR UNEMPLOYED, TASMANIA**

Year	Number of recipients at 30 June	Financial year expenditure (\$m)
1989	17 463	122.9
1990	17 839	127.7
1991(a)	20 521	172.7
1992(b)	26 399	228.4
1993	29 936	248.3
1994	30 058	255.6

(a) From 1991 the figure is the annual average number on benefits during the year.

(b) Consists of Job Search Allowance and Newstart Allowance.

Source: Department of Social Security

**BASIC FAMILY PAYMENT, TASMANIA**

Year (a)	Number of dependants	Number of families	Financial year expenditure (\$m)
1989	110 000	56 508	38.2
1990	109 329	56 124	53.6
1991	109 826	56 461	56.1
1992	110 098	56 765	68.6
1993	109 430	56 566	60.8
1994	104 588	53 946	60.6

(a) As at June.

Source: Department of Social Security

### *Sole Parent Pension*

Sole Parent Pension may be paid to a sole parent who has a 'qualifying child', or a child under 16 years. To be eligible for this pension, a person must be:

- a separated wife or husband, or a separated de facto wife or husband;
- 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; or
- an unmarried person.

At 30 June 1994 there were 10,016 parents receiving a Sole Parent Pension. In Tasmania for the 1993-94 financial year, \$81.1 million was spent on this particular benefit.

### *Double Orphan Pension*

If both parents of a child are deceased, a guardian or an approved care organisation may be paid a Double Orphan Pension for a child under 16 years of age or a dependent full-time student aged 16-24 years. The pension is also payable where only one parent is deceased but the other is unable to provide for the child. This pension may apply if the surviving parent's whereabouts are unknown, they have been sentenced to jail, or they require care in a mental hospital or nursing home etc. for an indefinite time.

In the 1993-94 financial year, 29 Tasmanian children and students received this pension, at a cost of \$26,000 for the year.

### *Jobs, education and training*

The Jobs, Education and Training (JET) program aims to assist sole parent, widow B and carer pensioners, widow allowees and certain sole parent special beneficiaries back into the workforce and improve their financial situation. JET provides assistance with individual needs assessment, vocational advice, training, education, job search assistance and help with finding child care. For the financial year 1993-94 the JET advisers in Area Tasmania interviewed 2,595 customers. Of those interviewed, 20% were referred to labour market programs by the Department of Employment, Education and Training, 20% undertook further education and 27% took up jobs.

### **Provision for special circumstances**

This group of income payments is provided for circumstances which are not covered by other maintenance payments.

### *Special Benefit*

A Special Benefit may be paid to a person who is not eligible for a pension or allowance, if they are in hardship and unable to earn a sufficient livelihood for themselves (and their dependants) for reasons beyond their control. People entitled to Special Benefit payments include, for example, expectant mothers and refugees who do not qualify for other benefits because they do not meet the necessary residential qualifications. It is designed to meet special need cases and payment can be made immediately in an emergency situation.

For Tasmania in 1993-94 there was an average of 397 people receiving Special Benefit payments. The total expenditure for the year amounted to \$3.5 million.

#### *Widow B Pension*

This pension provides payments to particular categories of older widows. The Widow B Pension is gradually being phased out and is confined to women who have reached the prescribed age of eligibility (45 years of age if previously receiving a Sole Parent Pension, or 50 years of age) before 1 July 1987. For the year ending 30 June 1994, there were 1,375 women in Tasmania receiving the Widow B Pension. The amount paid over the 1993-94 year totalled \$12.2 million.

#### *Widowed Person Allowance*

This allowance provides short-term assistance for recently bereaved widows or widowers. It can be paid to a person who was either legally married to, or living in a de facto relationship with, the deceased (immediately prior to their death).

In 1994 there were 2 Tasmanians receiving a Widowed Person Allowance at a cost of \$33,000 for the 1993-94 financial year.

#### *Bereavement Assistance*

This is paid in most situations to the surviving member of a pensioner couple immediately after notification of death. This ensures that assistance is provided at the time it is most needed and with the least intrusion into the person's grief.

#### *Supplementary Payments and Fringe Benefits*

Recipients of Social Security benefits may also be eligible for a range of supplementary payments and other non-cash, fringe benefits. For example, different clients could receive:

- Pharmaceutical Allowance;
- Rent Assistance;
- Additional Payments for each child;
- Guardian Allowance;
- Remote Area Allowance;
- Employment Entry Payment; and
- Health and Concession cards.

## STATE GOVERNMENT DIRECT SERVICES

The Federal Government provides almost all income maintenance payments and a large proportion of the funding for State Government welfare programs which provide more personalised help to assist people in need. The broader content of the Social Welfare component of Department of Community and Health Services (DCHS) programs includes Aged and Disability Support Services; Child, Family and Community Support Services; and Housing Services.

### **Aged and Disability Support Services**

These services aim to meet the needs of people who are aged and/or have a disability to enable them to live safely and independently in communities of their choice. The services provided include accommodation such as nursing homes, hostels and group homes, in-home support such as home nursing and home help, and a range of assessment, rehabilitation and specialised services such as occupational therapy, provision of aids and advocacy. Overall, the 1993-94 expenditure level for this program was \$88.5 million. In 1993-94 funding of \$26.9 million was provided to community organisations through the program.

Accommodation support includes:

- CONGREGATE CARE, such as the Willow Court Centre, which provides accommodation and a range of other services to people with intellectual disability in an institutional environment. Accommodation is provided in congregate care settings and share homes on campus. The DCHS Community Integration Project has continued to support residents of Willow Court to return to their chosen community within Tasmania. It also provides support to individuals in the community who are at risk of entering Willow Court. Most of the participants in the Community Integration Project are living in shared accommodation. During 1993–94, 11 participants were transferred from Willow Court Centre to the community. At the end of 1993–94, a total of 181 people with intellectual disabilities were supported in the community, 129 of whom transferred from Willow Court. Willow Court will continue to provide accommodation for those residents who have expressed a wish to remain at Willow Court.
- STAFFED ACCOMMODATION, such as St John's Park Nursing Home, which provides nursing care and social and emotional support for the dependent and frail aged and younger people with a disability.
- RESPITE CARE which includes centre-based care, host family care, in-home respite and supported holidays.

During 1993–94 the provision of respite services was identified as an area of critical need. State and Home and Community Care (Cwlth/State) funds were therefore directed primarily towards the expansion of day respite centres and in-home respite centres. In 1993–94 there was a slight increase in the average use of respite services for people with developmental disabilities, in the Southern region from 22.9 to 26.2 days per user. During 1993–94 funding was allocated to provide respite for carers of people suffering from dementia. Further funding was also provided to Family Based Care for in-home respite.

Family Based Care (FBC) also offers State-wide respite care for frail elderly people and younger people with disabilities who are at risk of early or inappropriate admission to long-term residential care. The service is offered on a regular or occasional basis and allows family carers to have a break from their usual routine.

#### *Community access*

Community access offers a range of activities and services that provide the aged or disabled person with socialisation or recreation opportunities, community activities and support services. During 1993–94, twelve organisations received a total of \$1.77 million to provide leisure/recreation or occupational support services for people with a range of disabilities.

#### *Home support*

This assists clients with personal care and health services, home maintenance and nursing, enabling them to remain in their own homes.

Changes have been introduced to produce a service that is more streamlined and flexible to achieve better results for clients. The appointment of an Assistant Director of Nursing, responsible for rural services, was made in the Southern Region during 1994. A flexible pool of nursing staff has been established to enable Community Nursing to respond to emergency nursing, palliative care and post-acute needs, particularly in rural areas. At a local level enhanced coordination and better resource-sharing arrangements have been established.

The trial of a Post Acute Home Based Care Program for the elderly, under the Medicare Incentive Program, has provided a valuable service to clients in the Mersey area. Without

this service, these clients would not have had sufficient support to be discharged from hospital.

#### *Aged care assessment*

Aged Care Assessment Teams (ACAT) were established to assess the physical, medical, psychological and social needs of frail aged people in order to assist them to choose the most appropriate combination of services to meet those needs and their expressed wishes. During 1993–94, 4,437 clients were assessed by ACAT. The Northern ACAT received \$360,850 in 1993–94 for a national pilot, with the aim of reducing the likelihood that frail aged people will be inappropriately admitted to residential care following an acute illness.

#### *Advocacy and community education*

DCHS develop, maintain and enhance a range of advocacy activities and information services to assist people who are aged or who have disabilities to exercise their individual rights, participate in decision making, exercise choices and to maximise control over their lives. Activities that educate the community and promote understanding of the means for preventing disability are also developed and encouraged. In 1993–94 funding of \$245,476 was provided to seven organisations that play a vital role in the provision of information and community education relating to a range of disabilities. A further \$65,000 was directed to organisations providing advocacy services for and on behalf of people with disabilities and \$359,000 was provided to eight organisations to provide advocacy, information and coordination of volunteer training in the Southern region.

During 1993–94 Disability Services coordinated and delivered 130 education and training activities to both the government and non-government sectors. Areas covered in these courses are aimed directly at course participants developing a better understanding of intellectual disabilities. Other educational activities developed include health promotion activities and an aged care nutrition project.

#### *Seniors Bureau*

The Seniors Bureau was established in 1993, in line with Government policy to improve the position of older people. The purpose of the Bureau is to facilitate closer links, coordination and understanding between agencies who represent the needs and concerns of older Tasmanians. The Bureau also undertakes specific projects relating to older people.

A major focus in 1993–94 was the introduction of the Tasmanian Seniors Card to assist seniors pursue a more active retirement through the commercial offers and leisure opportunities linked to the card. Since its launch in February 1994, nearly 30,000 people, 54% of the target population, have taken up the offer and over 170 businesses have joined the scheme.

### **Child, Family and Community Support Services**

These services include:

- health assessment and management services for infants, children, adolescents and their parents;
- community-based health services which address needs related to dental health and to alcohol and drug abuse;
- child protection and placement services for children without safe adult care;
- services for young offenders; and
- community education programs.

Expenditure for 1993–94 was \$42.3 million.

*Child care*

Under the *Child Welfare Act 1960*, the Department of Community and Health Services licenses operators of child-care services for children under the age of seven years. The Department also has responsibility for reviewing services; developing and maintaining standards; and planning, developing and funding.

Child-care services in Tasmania include long day care (centre-based, family day care and home-based), play centres, vacation care and occasional care. Responsibility for the funding and development of many of these services is shared between the Commonwealth Government and the State Government under the 30,000-place National Child Care Strategy. In 1992-93 the Commonwealth/State Expanded National Child Care Strategy agreement was signed which provided for the joint funding of 870 child-care places over the following three years at an approximate joint cost of \$2.5 million.

There are also a number of commercial services providing long day care which are licensed by the State.

**Child care**

In 1993, nearly 23% (107,600) of Tasmania's population were aged 0 to 14 years.

In June 1993, 45.0% (38,100) of the 84,700 Tasmanian children under 12 years of age used child care, compared to 45.7% in 1990 and 48.5% in 1987. Of Tasmanian children who used formal care:

- 29.0% attended long day care centres;
- 27.5% attended family day care;
- 22.1% attended preschool or kindergarten; and
- 16.0% attended occasional care.

Some 35.1% (29,800) of Tasmanian children under 12 years of age used informal care in 1993 compared to 41.5% (35,000) in 1990 and 33.7% (28,300) in 1987. In 1992 a family survey revealed that informal care was usually provided by family members (73.1%).

**CHILD-CARE PLACES, TASMANIA, 1993-94**

<i>Type of service</i>	<i>No. of places</i>
Long Day Care	
Child Care Centres	1 787
Family Day Care	1 612
<b>Total</b>	<b>3 399</b>
Occasional or part-time care	
Neighbourhood Model Centres	223
Neighbourhood Houses	420
Play centres	434
Neighbourhood Centres (licensed)	98
<b>Total</b>	<b>1 175</b>
Outside school hours care	
Before/after school hours programs	1 335
Vacation care programs	592
<b>Total</b>	<b>1 927</b>

*Source: Department of Community and Health Services, Annual Report*

*Family and child health*

This focuses on those anticipating having children and on families with infant children and adolescents. It assesses the health and development of 0 to 18 year olds and provides support services and appropriate referral.

*Community support*

This assists communities to be self reliant by ensuring they have the opportunity for full integration into community life including employment, education and other opportunities for personal development through the provision of information, skills and support services.

The State Government provided funding of \$1.6 million to 40 non-government organisations in 1993-94 to provide support services to families in need. Grants to non-government organisations to provide community-based family support services are both cost effective and socially beneficial. Services rely on volunteer management committees and support workers and encourage self supporting groups.

**NEIGHBOURHOOD HOUSES** Thirty-one neighbourhood centres were funded throughout the State at a cost of \$583,000 for 1993-94. These centres provide a wide range of community services, including recreational activities, meeting facilities, effective parenting courses and life skills classes. The aim is to facilitate a pathway to paid employment, reduce individual and family isolation and bring communities together. During the week beginning 20 June 1994, 1,923 people attended neighbourhood centres. The majority of these (83%) were women. Approximately 77% of the attendees had children and of these children, 39% were under school age. Back-up child care is provided to allow parents the opportunity to participate in activities.

**COUNSELLING SERVICES** All families are subject to stress at different times and periodically families need support in their parental role. Strengthening the family unit is a key area of Government policy and in order to achieve this goal, family support agencies are funded to provide a range of services which include parent education, counselling, information, referrals to other services, parent support groups and mediation. In 1993-94, eight personal and family counselling services received \$231,000 and 32 Family Support Services received \$1.384 million. Anglicare received \$208,000 to provide a State-wide financial counselling service to assist people to renegotiate loan arrangements and consolidate debts. Education programs were also provided for groups and individuals on credit and consumer issues.

**OUTREACH AND ACCOMMODATION SERVICES TO THE HOMELESS** Reasons for homelessness are diverse. Recent research (1993) indicated that the most frequently reported reasons for homelessness were spouse/partner conflict, parent conflict, sexual abuse, psychiatric/health problems, and financial problems.

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*Supported Accommodation Assistance Program at a glance*

Services	42
Outlets	68
Beds available	708
Bed utilisation rate	79%
Average of people assisted from total number seeking assistance	87%

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The Supported Accommodation Assistance Program (SAAP) is a jointly funded Commonwealth/State program which provides funds to eligible community organisations and local councils for accommodation and related support services to homeless people in crisis. Both crisis and medium-term accommodation are provided as well as outreach support to people who are living in houses and flats. Two sexual assault counselling services are also funded.

The total recurrent salaries and operational grants allocation for SAAP services for 1993-94 was approximately \$6.1 million (not including administrative, training and planning and advisory costs).

## Homelessness

The Department of Social Security's Young Homeless Allowance (YHA) is paid to young people under the age of 18 years who have no parental home, are not allowed to live at home or for whom family home life is intolerable.

Eligibility must first be established for a basic payment, either Job Search Allowance, Sickness Allowance or Special Benefit. The YHA is paid at a higher rate to young people who meet eligibility criteria if they already qualify for one of the above basic payments.

As at May 1994 there were 362 clients in Tasmania receiving the Young Homeless

Allowance from the Department of Social Security. Of these, 172 were aged 16 and under.

The Commonwealth Department of Employment, Education and Training reported that there were 275 AUSTUDY recipients at the homeless rate in May 1994.

When assessing figures for the number of homeless, it is important to keep in mind whether the figure is taken over a year or at a particular in time. There is a high turnover in the homeless population and the annual figure can be substantially larger than a point-in-time estimate.

### *Protective services and family support*

This program is designed to ensure that children who have been abused, or are at risk of being abused, have increased safety and choice. It provides investigation, assessment and referral, placement and case-planning services for children and families at risk or without adequate support. Service provision includes parent education, counselling, information, referral, support groups, mediation and community education to families in need. Young people in conflict with the law are assisted to become law-abiding members of the community by the provision of advice to the courts, diversion, supervision and community-based opportunities and where necessary, custodial care.

The Child Protection Board met regularly during 1993-94 and provided advice on a range of issues, including a review of case assessment practices. During 1993-94, 1,635 notifications of child maltreatment were received by the Child Protection Units compared with 1,574 for 1992-93. Of these notifications 20% were substantiated (where there is reasonable cause to believe that the child has been, or is being, abused or neglected) compared with 32% for the previous year. Following legal intervention 283 of the 294 children found to have been maltreated were able to return to their families. Parents or guardians were identified as the people believed to be responsible for the abuse in 62% of the substantiated cases.

Children and young people at risk of abuse, or without safe adult care, are assessed and receive coordinated services. During 1993-94 a total of 1,303 children were receiving these services. Of these children, 37% remained within their immediate or extended family with the assistance and support of the Department. This compares with 32% for 1992-93.

In the 1993-94 period a total of 130 children appeared before the Children's Court in need of care and protection. Of these children, 82 were re-established with their family under supervision with the support of the Department, five cases were dismissed and 43 children were placed in family-based care.

*Domestic violence services*

Domestic Violence Crisis Services provide daily and after-hours support for victims of domestic violence in crisis. The cost of providing these services State-wide in 1993-94 was \$475,450. The State Government provided a total of \$140,160 to two community organisations, Support, Help and Empowerment (SHE), and Survivors, to provide counselling, information and support for women living with abusive partners and women escaping domestic violence.

*Alcohol and drug services*

Through health promotion and community education this sub-program aims to improve community awareness and promote the concept of harm minimisation. Grants totalling \$1.440 million were provided to undertake 21 programs in 1993-94. The Methadone Maintenance Program continued during 1993-94 with a number of enhancements.

*Dental services*

This sub-program provides accessible, affordable and universal preventive and restorative dental services to school children and Health Care Card holders and their adult dependants. The Emergency Dental Scheme (part of the Commonwealth Dental Health Program) commenced in January 1994 and enables eligible people to receive treatment in the public or private sector up to the value of \$100 per visit. In 1993-94 a total of 1,840 clients received emergency treatment in the public sector and 5,872 clients were referred to the private sector.

The Tasmanian Denture Scheme commenced in January 1994 and aims to assist eligible people to obtain dentures. Under this scheme an extra 812 people received denture treatment than would otherwise have been possible at a cost of \$495 per person.

*Alternative care*

This includes adoption and information services; foster care; support to wards of State; and support for young offenders. Adoption services in Tasmania are provided by the Department of Community and Health services and the approved Catholic Private Adoption Agency operated by Centacare. The number of children placed with a view to adoption remained small at 11 for 1993-94.

The Adoption Information Service is maintained to provide information to adult adoptees, birth and adoptive parents and natural relatives of adopted people. Information was provided to 191 people during 1993-94. Over 75% of the requests continued to be from adopted people and approximately 18% from birth parents. The percentage of people registering that they do not wish to be contacted by a related person remains steady at 5.5% of all registrations.

The DCHS assumes legal guardianship in cases where the ongoing safety and well-being of a child cannot be assured within a child's immediate or extended family. At 30 June 1994, 339 children were under State guardianship compared with 353 at June 1993. During the year, 39 children were declared wards compared with 53 in 1992-93.

It is Departmental policy to offer a range of care options for children and their families.

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**ADOPTIONS FINALISED, TASMANIA,  
1993-94**


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Country of origin	DCHS (a)	CPAA (b)	Total
Australia	4	13	17
Overseas	14	0	14
Total	18	13	31

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(a) Department of Community and Health Services.

(b) Catholic Private Adoption Agency.

Source: Department of Community and Health Services  
Annual Report 1993-94

Family-based care is the most utilised and cost effective type of care. During the 12-month period ending 30 June 1994, 935 children were cared for in 1,652 placements. The Department recruits and assesses families and individuals who are able to provide care in their own homes for children and young people.

Foster care provides both short-term and long-term care for children of all ages. Community-based foster care programs are funded to provide family-based respite and emergency care for children of families without support networks, experiencing emergencies and crises. In 1993-94, 507 children were cared for in these programs.

Other alternative care options include Special Contract Care which is time-limited care for children aged 12 and over who are displaying behavioural difficulties as a result of childhood trauma, and 14 Group homes throughout the State which provide time-limited accommodation in cottage style care for older children in need of intensive care.

Approved children's homes run by charitable bodies also exist across Tasmania and provide short-term and long-term care for children in cottage and hostel type environments. For the 12-month period to 30 June 1994, 86 children were cared for in approved children's homes.

#### *Youth justice*

This sub-program provides supervision and support to young offenders (who have offended repeatedly or because their offences are not considered trivial) and their families. In 1993-94 a total of 131 young people were supervised by youth justice officers.

Property offences were the most common category associated with these young people (44% of all offences). Most offenders were male (80%). Aboriginal young people accounted for 7% of all young people admitted to the Ashley Youth Detention Centre.

#### **Housing Services**

This program is planned and developed within the objectives of the Commonwealth State Housing Agreement (CSHA). It is delivered on a regional basis through local office outlets managed within each region. Stock acquisition and management and planning functions are coordinated centrally. The program provides public rental dwellings, rental subsidies to public housing tenants and assistance to those renting in the private sector and home finance. Programs are also developed to meet special needs. Overall the 1993-94 expenditure on the program was \$43.2 million.

Tasmania received \$30,079,000 in 1993-94 under the CSHA. In accordance with the matching requirements of the CSHA, the State contributed non-repayable grants of \$12,320,000 for rental housing assistance and \$828,000 for mortgage rent assistance.

The Building Better Cities Program is a Commonwealth/State funded initiative which finishes at the end of 1995-96. Its objective is to demonstrate innovation in city living and maximise the use of existing infrastructure. The Commonwealth provided \$750,000 in 1993-94 towards the cost of projects approved for funding including two urban consolidation projects, both in the Southern region.

#### *Provision of rental housing*

The public housing rental stock totalled 14,449 at the end of 1993-94. Stock was acquired for the general public rental housing program and to meet the needs of special client groups, through new construction and spot purchase. There was an increased reliance on the non-government sector to meet stock production targets. During 1993-94, 225 dwellings were added to the general rental stock of which 73 were newly constructed dwellings and 152 were purchased in the private market.

#### *Asset management*

Land previously purchased for the construction of public housing and no longer required is developed and sold on the open market. In areas where there remains a demand for public housing, a percentage of lots may be retained for public housing construction. During 1993–94, 79 lots were developed with 71 sold to private purchasers and 8 retained for public housing.

General landscape and vacation maintenance as well as reconditioning of public rental properties is undertaken to ensure that they continue to provide adequate accommodation. During 1993–94, \$8.525 million was expended on general and routine maintenance.

Capital upgrading of existing public rental stock is undertaken to meet particular client needs. During the year, DCHS focused on upgrading dwellings to meet the needs of people with disabilities and those at risk of domestic violence. A total of \$258,000 (360 requests) was expended on modifying rental stock to suit the needs of people with disabilities. Approximately \$75,000 (299 requests) was spent on provision of physical security measures in response to the incidence of domestic violence in the community.

#### *Tenancy management*

Public Rental Tenancy Services assist low-income households to obtain and maintain affordable, adequate and appropriate housing by giving access to public housing. Tenancy management services include assessment of applicants, allocation of available housing, rent assessment and ongoing tenancy services. Some 90.5% of public housing applicants are dependent on Department of Social Security pensions, benefits or other allowances.

The number of households on the public housing waiting list at the end of 1993–94 was 3,834, a decrease over the previous year's figure of 4,966. A total of 2,567 applicants were housed during the period, an increase of 509 over the 1992–93 figure of 2,058.

Single people with no dependants represent the major household type of applicants followed by single people with dependants. This indicates a slight shift from 1992–93 where single people with dependants were the major group of applicants.

#### *Assistance to private tenants*

Private rental assistance is provided through the joint Commonwealth/State funded Mortgage and Rent Assistance Program. The major components of the program are the Rent Subsidy Scheme (RSS) and the Private Rental Support Scheme (PRSS).

The RSS provides a weekly subsidy to low-income people renting in the private market who are paying more than 45% of their income in rent. The PRSS provides information, advice, referral, advocacy and cash assistance to people seeking to establish or maintain rental in the private market.

At the end of 1993–94, 40% of people receiving RSS were paying rents greater than 60% of their income. Single parents, tertiary students and young people under 21 form the predominant client groups. Those assisted with rent subsidies increased from 1,301 in 1992–93 to 1,499 in 1993–94.

#### *Supply of special needs housing*

The DCHS also provides housing for particular target groups. The Crisis Accommodation Program provides housing for homeless people and others in crisis situations. The Aboriginal Rental Housing Program (ARHP) aims to ensure that Aboriginal people gain access to appropriate and affordable rental housing in locations they prefer. During 1993–94, 13 additional dwellings were purchased which brought total ARHP dwelling stock to 279 at 30 June 1994.

As a result of low income and a lack of low-cost private rental accommodation, young people have limited housing options. During 1993–94 the move to dedicate appropriate public housing properties for youth continued. At the end of 1993–94, 32% of the total housing waiting list was made up of applicants aged 24 years or under.

#### *Community housing projects*

Housing Services actively encourages community involvement in the management and delivery of housing options. This includes the leasing of rental stock to community-based organisations and the funding of dwelling purchases or construction in the non-government and local government sectors, primarily through the Community Housing Program. At the end of 1993–94, 182 houses were leased and managed by community organisations. There are in addition 97 properties funded under the Community Housing Program (its forerunner the Local Government CHP). Examples of community involvement in the direct provision of housing services include the development of cooperative rental housing projects and the establishment of Abbeyfield models for elderly people.

#### *Home Ownership Assistance Program (HOAP)*

The Home Ownership Assistance Program (which replaced the Tasmanian Development Authority's scheme and the Home Purchase Scheme) offers loans to eligible households who can afford to buy a home but cannot obtain a loan from a bank, building society or credit union. HOAP commenced lending in April 1994 and in the two months to June 1994 settled 49 loans at a total value of \$2,851,300. A further 28 loans were approved and awaiting settlement. Public tenants who are eligible for a HOAP loan continue to have the opportunity to purchase the public rental dwelling they currently occupy if it is surplus to the stock requirements of Housing Services. At the end of 1994 the Director of Housing held just over 2,300 home purchase contracts at a total value of nearly \$27 million. The Program also offers short-term financial assistance to private sector home purchasers experiencing difficulties in maintaining their commitment to home ownership. At the end of 1993–94 there were 38 mortgage relief loans outstanding, at a total value of \$156,500.

## NON-GOVERNMENT AGENCIES

The most obvious economic feature of the 1990s has been the recession in parts of the industrialised world. In Australia this has had a significant impact on the level of unemployment. Demographic changes, particularly the greying of the population, have also contributed to a dramatic increase in the demand for welfare services.

It has long been recognised that many volunteer agencies provide effective and efficient welfare services. This is partly because the non-government (or community) sector is usually more able to respond quickly to emerging community needs. It also provides significant voluntary support to government-funded services. Due to changes in government taxing policies, the increased need for services and reduced resources available as a result of the recession, there has been increased pressure on existing social services. With the increased scrutiny of welfare expenditure and the overemphasis on targeting of services, much needed funding increases have not occurred. The overall outcome of this environment, has been that more people are falling through the welfare safety net.

#### **Tasmanian Council of Social Service Inc. (TasCOSS)**

TasCOSS is an independent, non-government organisation which represents voluntary social welfare agencies and consumer groups.

TasCOSS (as part of the Australian Council of Social Services or ACOSS) acts in an advocacy role to the State Government as well as providing some direct services. Each year TasCOSS submits an Annual Social Priorities Report for Tasmania, which may recommend social justice and welfare changes to government legislation, expenditure and policy.

As part of the national network, TasCOSS provides input into Federal Government issues such as Federal/State Government Funding Agreements and other critical social policies. The objectives of TasCOSS are to:

- act as the coordinating body within Tasmania for non-government welfare organisations;
- promote and uphold the rights of disadvantaged members of the community;
- inform the public of the causes and effects of poverty, injustice, disability, sickness and related matters;
- provide representation and advice to non-government welfare organisations;
- liaise and cooperate with Federal, State and local governments, government departments, statutory authorities and other organisations; and
- cooperate with ACOSS and other national and international organisations in promoting the interests and objectives of non-government welfare organisations.

The Volunteer Training Service (VTS) is an example of a project which is under the auspices of TasCOSS. It is part of the Home and Community Care Program (HACC) which is jointly funded by the Commonwealth Government and the State Government.

The VTS offers Statewide services to groups and organisations which service elderly people, people with disabilities and their carers. It offers resources, books, manuals, videos, information, support and networking opportunities for coordinators of volunteer programs. It also conducts training programs and workshops, and coordinates training opportunities.

## Volunteers

In the twelve-month period to October 1993, there were about 117,000 people in Tasmania who were involved in some form of volunteering activity. Of all volunteers about 47% were males and 53% were females. About 88% of all volunteers had done some type of formal volunteer work (volunteers through organisations), contributing almost 11 million hours of service in the 12 months to October 1993.

About a quarter of all volunteers had done some form of informal volunteer work (volunteers independent of organisations) contributing over 3 million hours of service. Some 16.9% of formal volunteers were involved in community service while 20.4% of informal volunteers were involved in visiting the aged and/or disabled.

### FORMAL VOLUNTEERS, TASMANIA (a)

	<i>Persons ('000)</i>	<i>Total hours provided ('000)</i>
Education	17.6	1 368.1
Sport	27.9	3 259.9
Emergency Service	5.9	424.7
Recreation	8.3	884.5
Health/welfare	12.8	1 441.4
Religion	8.9	1 452.2
Community Service	17.4	1 498.2
Other	4.1	503.2
<b>Total</b>	<b>102.9</b>	<b>10 832.2</b>

(a) Type of voluntary organisation, 12 months to October 1993.

Source: Statistical Indicators, June 1994

The VTS also promotes an awareness of the rights and responsibilities of volunteers, the agencies they are involved with and the people receiving the services. The underlying philosophy of the service is that volunteer work is a satisfying experience and not a substitute for paid work.

### **Religious agencies**

In addition to their usual worship and other church activities, many churches provide a range of social welfare services for the wider community. Services are offered to all disadvantaged groups in society. Churches provide accommodation; financial, emotional and spiritual assistance; and other welfare services to people in need.

In Tasmania, major welfare assistance is provided by the Salvation Army, the Anglican Church (Anglicare) and Catholic Church (Cenacare), city missions and the Society of St Vincent de Paul.

#### *Anglicare*

Anglicare sponsors a wide range of welfare programs: accommodation, counselling services and employment to needy Tasmanians.

Anglicare's financial counselling service encourages people to take control of their finances and to help them out of debt. It also provides consumer education for schools, colleges and community centres. During 1994, a total of 3,653 people used this service.

Youthcare offers accommodation options in Southern Tasmania for young teenagers and families. The Shelter provides food, shelter, counselling and short-term crisis accommodation for homeless young people. In 1994 some 316 people sought accommodation for the first time at the Shelter. Since opening in 1985, over 2,300 people have stayed at the Shelter. The Youthcare shelter assisted children aged under 16 years old more than 56 times during 1994 by providing accommodation. This figure is double that of the previous year.

The Northern Outreach Service and the North West Housing Outreach Service provide medium-term to long-term accommodation for families, single adults and young people. They also offer financial assistance, financial advice, counselling and support, referral and advocacy services.

Anglicare provides four other accommodation locations, all in Devonport. During 1994 there were 19 families (32 children) who used the Stewart Street units. The Charles Street youth accommodation housed 10 young people in 1994. Limani provides housing for single adults and registered 25 new tenants during 1994. Plans have been approved for two units for youth accommodation at Wise Court in Devonport.

Anglicare is also involved in marriage and relationship education and counselling, and intends to broaden the present pre-marriage education program to include sessions for married couples. Funding has also been received to extend the education program to the east and west coasts of Tasmania. In 1994 there were 495 marriage counselling cases.

Other counselling programs run by Anglicare include the Hassles Mediation Centre, and Options. Both of these programs deal with parent/adolescent conflict. In 1994, 317 families contacted Hassles. Options assists young people and parents to resolve conflict and also aims to foster in the community understanding of conflict and conflict resolution.

During 1994 over 400 individuals were seen at Options involving some 700 interview hours. Of these individuals, over 45% were adult females, and 27% were young females. Demand for this type of service has increased from 146 family cases in 1991 to 209 cases in 1994 (a 43% increase).

ITeC Tasmania was established in 1988 to provide computer-based training for unemployed Tasmanians. In 1994 ITeC trained 365 people, of whom 275 were long-term unemployed. ITeC targets disadvantaged groups and those participating in training during 1994 included people with disabilities (55), sole parents (30), and Aboriginal and Torres Strait Islanders (5).

#### *Centacare*

Centacare is the Catholic Church's primary social welfare agency. It provides help for families (including single parent families) and their children, married couples, and the long-term unemployed.

Centacare offers education sessions, self help and support groups, accommodation, counselling and adoption services.

Centacare is one of two marriage counselling agencies which are approved by the Attorney-General's Department in Tasmania. During 1993 Centacare's counselling services dealt with over 1,000 cases involving more than 3,000 interviews State-wide.

At present, counsellors operate in Hobart, Launceston and Burnie. Centacare and Marriage Guidance Tasmania have been allocated Federal funding to extend their marriage counselling service to isolated, rural communities on the West, North-West, North and North-East coasts of the State.

Violence within relationships continued to be the subject of many counselling sessions that were undertaken during the year. In response, Centacare has initiated a new group program for men who abuse their families, aiming to help break the cycle of violence.

Centacare also provides a range of services to meet the needs of young parents (including pregnant women) and their children. PRAM (Pregnancy and Motherhood Program) helps young parents establish social networks within their peer group. The program disseminates information about parental care, labour and delivery, and parenting skills. During 1993 there were 14 participants and four births in the PRAM group.

Another Centacare group which aims to help single parents is the LASAR (Lifeskills and Support and Relationships) Lone Parent support group. The program covers areas such as communication skills, personal growth, discipline of children, and coping with difficult behaviour in children. In 1993, a total of 20 participants attended the program at an average of 12 participants a week.

An Independent Family Accommodation and Support Program (IFAS) is also provided by Centacare. This service offers four independent two-bedroom cottages, providing medium-term accommodation and support to single parents and their children. IFAS accommodated 15 families from June to December of 1993, with eight families progressing to independent living.

Centacare is also a registered adoption agency, the only private agency in Tasmania. The services offered include counselling for birth parent(s) and their families, assessing couples who have applied for adoption, foster care of infants prior to adoption, special needs adoption and the preparation of court documentation. As at June 1993 there were 46 couples on the approved adoption list. Twelve official applications for assessment were received during the year and a further 34 couples made preliminary enquiries. The year 1993 saw a higher proportion of special needs adoption with six of the twelve babies placed during the year being assessed as special needs children.

In 1991 the Agency's Endeavour Program was introduced to help families in crisis. It involves a residential parenting program and operates from a campsite at Coningham near Hobart. The program facilitates parents' personal development and improves their

parenting skills. Endeavour Camp ran seven camps during the latter part of 1993. The largest attendance at Endeavour was 40, with an average attendance per camp of 12. In addition to the live-in program, one-day seminars for parents going through difficulties with adolescent children were introduced in 1992. The concept behind the Endeavour project has since been introduced to welfare workers all over Australia.

Centacare's Family Life Education (FLE) is based on the principle that parents are the first educators of their children. Information nights on sexuality and relationships are offered in schools throughout Tasmania. Parents attend with their children so that they are also involved in the discussions. 1993 saw the development of the Family Life Education Programs in-class sessions in the State school sector. Eighteen schools were involved.

Fertility Counselling and Family Planning is a Centacare service that specialises in promoting natural methods of family planning and health care. It is popular with couples who seek natural rather than artificial methods of birth control.

The organisation also provides two emergency accommodation centres for families with financial and family problems: St Joseph's in Taroona and Barton Lodge in Mowbray. They are staffed 24 hours a day, seven days a week. Funding is partly provided through the Supported Accommodation Assistance Program (SAAP). During 1993 St Joseph's had requests for accommodation from 1,092 people. The average length of stay decreased from its 1992 level, from 48.5 days to 39 days. The occupancy rate at Barton Lodge increased in the latter part of the year with a noticeable increase in the number of cases involving domestic violence.

The Willson Training Centre is part of Centacare's Family Services. It provides long-term unemployed and other disadvantaged groups with opportunities to re-enter the workforce through gaining new work-related skills. During 1993 over 800 people were trained in the Willson Centre with 245 gaining jobs or being placed in further training opportunities. Since 1981 when the Centre opened, approximately 4,000 trainees have attended job training courses. Support for the Willson Centre is provided by the Department of Employment, Education and Training through the Skillshare Program, The Commonwealth Employment Service (CES), the Tasmanian College of Hospitality, and the wider community.

#### *The Society of St Vincent de Paul*

This Society is a voluntary, nonprofit, charitable organisation providing:

- support to those in need of material (food, clothing, etc.), financial, emotional or spiritual help;
- accommodation for homeless men, young people, recent arrivals in the State (particularly refugees) and the aged;
- assistance to intellectually disabled people through supported employment, life skills training and a halfway house; and
- other general assistance, including help given through the secondhand shops, a home nursing service, meals on wheels, a child care centre, and an alcohol and drug dependency program.

The Society has experienced an increasing demand for financial assistance. In addition, members of the Society make regular visits to homes, hospitals and other institutions.

The primary work of Society members is visiting people in their own homes. Assistance may be given in the form of food, clothing, furniture, advice or friendship. Visits are made on a regular basis to facilitate the friendship aspect of their service. Members of the Society also regularly visit public hospitals, nursing homes and Risdon Prison.

St Vincent de Paul offers accommodation services for various types of disadvantaged groups. Bethlehem House, situated in North Hobart, provides shelter, food, health and welfare support for up to 43 men each night. The House receives funding from the Commonwealth and State governments. The Society also runs A. A. Lord Homes for the Aged which provide 90 single and 36 double units for elderly people. In the Devonport area, St Vincent Nursing Home provides 44 beds for aged nursing care.

Another of the services offered by the Society is St Vincent Industries Recycling Centre, which provides employment for 30 intellectually disabled people. The principal activities of the Supported Employment Centre are the collection and sorting of donations of clothing. The very best items are given to needy families. Good items are sold in Society centres/stores and the proceeds are used to assist families through the purchase of food etc. Even unwearable clothing is of use to the Society. It is cut up by the disabled, bagged and sold as cleaning rag to factories and garages.

Also operating under the auspices of the Society of St Vincent de Paul is Tastex, a sheltered workshop environment for people with disabilities. Training and employment opportunities are provided for these people through the manufacture of knitwear.

## FURTHER READING

Other statistical tables relating to this chapter are located in the Historical Series at the back of this book.

### ABS PUBLICATIONS

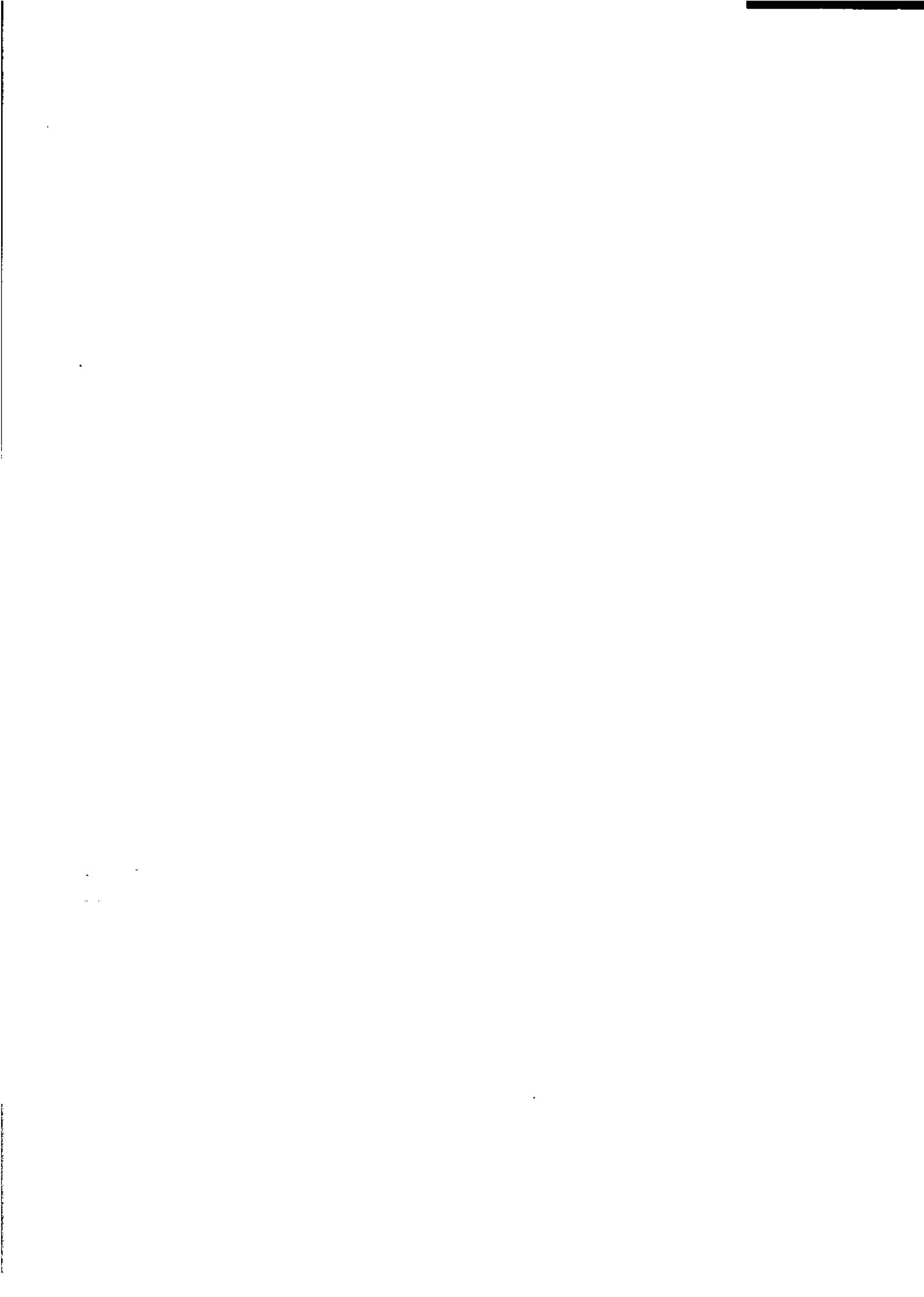
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### ACKNOWLEDGEMENTS

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- Department of Social Security, Statistical Information Section, Canberra
- Department of Veterans' Affairs, Benefits Planning and Statistics Section, Canberra



# 14 | Tourism



Convicts labouring,  
re-enacted at Beating  
the Retreat, Port  
Arthur, in January  
1995.

*The Mercury*

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, accommodation establishments, transport and tour operators, museums and historic sites, restaurants, travel agents and souvenir retailers.

During 1994, some 878,310 passengers (including Tasmanians returning home to the State) arrived in Tasmania, an increase of 7.8% since 1993 and a 28.4% increase since 1990. Approximately 85% of passengers arrived by air and 15% by sea. Sea travel is becoming more popular, with passenger numbers increasing from 1993 by 11.5% to 128,644 in 1994. However, the record levels of 1991 have not been surpassed. Arrivals by air from interstate increased by 7.4% to a record high of 745,500. There was a total of 4,166 air arrivals from New Zealand in 1994, a 19.0% decrease since 1993, and a 51.7% decrease since 1990.

## VISITORS

The total number of visitors to Tasmania, who stayed at least one night, was 456,408 in 1994, a 24.5% increase on 1990 levels. Victoria remained the main source of visitors, accounting for nearly 39% of the total in 1994. From 1990 to 1994 the number of Victorian visitors increased by 14.2%. South Australians showed an increasing interest in the State, with 1994 visitor numbers up 33.3% on 1993 and up 49.1% since 1990. In 1994 they accounted for 7.2% of all visitors to the State.

In 1994, 14.3% of all visitors into Tasmania were from overseas. Europeans accounted for 42.4% of all overseas visitor arrivals. The largest growth in overseas visits came from the South East Asian market, with 1994 visitor arrivals up 100% on 1993. However, they still accounted for only 8.2% of all overseas visitor arrivals and 1.2% of total visitors to the State.

### Visitor activities

During 1994, 91,132 people visited the State for business and conferences. Of these, 63,862 people came for business or employment reasons (an increase of 20.7% on 1993) and 27,270 came for conventions, conferences and seminars (a fall of 5.5% on 1993).

In general, from 1990 to 1994, figures show that Tasmania has increased in popularity as a holiday destination. A major drawcard is the many world-class sporting events that the State hosts, including the Sydney-Hobart Yacht Race, Skyrace, Targa Tasmania and the Three Peaks Race. These events attracted 11,218 visitors, both spectators and competitors during 1994.

The most popular sites visited by tourists while in the State have consistently been Port Arthur, Launceston Cataract Gorge, Mt Wellington, Sullivans Cove and Queenstown. All of these experienced an increase in visitors during the past few years. Port Arthur Historic Site is the major drawcard, with consistent visitor growth over the 1990-94 period. The greatest increase in visitor numbers was experienced by Cataract Gorge: 178,931 people visited in 1994, an increase of 21,732 on the previous year.

Visiting historic sites is the most popular activity undertaken by visitors to Tasmania, followed by visits to museums and art galleries. Visiting casinos is still a major activity, but due to the increasing number of casinos on the mainland numbers appear to have plateaued.

Since 1990 marginal increases in the level of close-to-nature outdoor activities have occurred. Scenic flights increased in popularity with numbers in 1994 up 19.0% on 1993 and more than double those of 1990. Trout angling, canoeing, boating and sailing, and caving and visiting show caves all showed growth with visitor numbers increasing in 1994 by an average of 5.3% on 1993.

### Visitor spending and length of stay

During 1994 visitors spent nearly \$420 million in Tasmania, an increase of 15.2% (\$55.5 million) on 1993. Approximately 37% of this amount was spent on accommodation and 20% on transport. Spending on transport and accommodation both experienced

### TOTAL ARRIVALS TO TASMANIA ('000)

Year	Passenger arrivals (a)	Adult visitors (b)
1988	681.5	365.3
1990	684.3	366.6
1991	762.6	404.7
1992	771.5	398.1
1993	814.8	420.2
1994	878.3	456.4

(a) Includes children and those who don't stay one night.

(b) Visitors staying at least one night.

Source: ABS catalogue no. 8635.6; Department of Tourism, Sport and Recreation- Tasmanian Visitor Survey

**ARRIVALS IN TASMANIA**

Year	By air		By sea	Total
	Interstate	New Zealand		
1986	524 342	10 136	95 139	629 617
1987	526 517	9 446	88 343	624 306
1988	571 344	8 625	101 572	681 541
1989	449 481	8 489	118 646	576 616
1990	555 631	8 629	120 004	684 264
1991	625 366	5 897	131 375	762 638
1992	652 092	4 428	114 969	771 489
1993	694 244	5 144	115 381	814 769
1994	745 500	4 166	128 644	878 310

Source: Department Tourism, Sport and Recreation Tasmanian Visitor Survey

**ORIGIN OF VISITORS TO TASMANIA ('000)**

State/country of origin	1990	1993	1994
New South Wales	78.8	110.8	102.1
Victoria	154.7	160.7	176.7
Queensland	28.7	37.2	42.5
South Australia	22.0	24.6	32.8
Western Australia	17.6	17.5	20.2
Northern Territory	3.6	2.4	2.1
Australian Capital Territory	12.1	16.8	14.5
<b>Total Australia</b>	<b>317.5</b>	<b>370.0</b>	<b>390.9</b>
Europe	18.2	21.8	27.8
North America	11.8	14.4	17.2
New Zealand	7.7	6.7	7.9
Japan	2.8	2.9	3.8
South East Asia	3.2	2.7	5.4
Other overseas	2.9	2.2	3.4
<b>All adult visitors</b>	<b>363.9</b>	<b>420.7</b>	<b>456.4</b>

Source: Department Tourism, Sport and Recreation Tasmanian Visitor Survey

**PURPOSE OF TASMANIAN VISIT**

Reason	1990	1993	1994
Touring and sightseeing	153.3	189.4	222.0
Visit friends or relatives	102.6	114.8	112.4
Convention, conference and seminar	24.7	28.9	27.3
Business or employment	59.1	52.9	63.9
Sporting event	13.3	10.3	11.2
Special event or festival (a)	n.a.	4.4	6.7
Other	13.6	19.5	13.0
<b>Total</b>	<b>366.6</b>	<b>420.2</b>	<b>456.4</b>

(a) Included in Tasmanian Visitor Survey in 1993.

Source: Department of Tourism, Sport and Recreation - Tasmanian Visitor Survey

<b>PLACES VISITED IN TASMANIA ('000)</b>			
Places	1990	1993	1994
Port Arthur	155 450	183 442	197 424
Launceston Cataract Gorge	121 894	157 199	178 931
Sullivans Cove (a)	n.a.	161 501	159 612
Mt Wellington	106 048	132 141	140 537
Gordon River	n.a.	95 036	102 256
Queenstown	112 211	119 004	138 841

(a) Included in Tasmanian Visitor Survey in 1993.

Source: Department of Tourism, Sport and Recreation—Tasmanian Visitor Survey

<b>HOLIDAY ACTIVITIES UNDERTAKEN IN TASMANIA ('000)</b>			
Activity	1990	1993	1994
Visiting casinos	158.2	130.3	137.4
Cruises (a)	109.5	111.3	122.9
Visiting historic sites	225.7	260.0	286.6
Trout angling	13.5	13.9	14.7
Canoeing, boating and sailing	14.3	26.8	28.7
Visiting museums and art galleries	146.3	150.5	168.8
Caving and visiting show caves	55.7	53.9	57.1
Scenic flights	8.1	15.8	18.8
Visiting wineries (b)	n.a.	49.3	54.3

(a) Includes Gordon River cruise.

(b) Included in Tasmanian Visitor Survey in 1991.

Source: Department of Tourism, Sport and Recreation—Tasmanian Visitor Survey

<b>ADULT VISITORS, SPENDING AND LENGTH OF STAY</b>			
	1990	1993	1994
Spending (\$'000)			
Accommodation	122 562	131 809	155 854
Transport	74 646	72 886	85 773
Other	174 080	159 714	178 336
<b>Total</b>	<b>371 288</b>	<b>364 409</b>	<b>419 963</b>
Average daily spending (\$)	92.30	92.90	106.20
Total no. of nights stayed ('000)	4 022	3 921	3 956

Source: Department Tourism, Sport and Recreation—Tasmanian Visitor Survey

substantial growth in 1994, increasing by approximately 18% on 1993. Average daily spending by visitors increased by \$13.30, up 14.3% on 1993 and 15.1% on 1990.

During 1994 the total number of nights visitors stayed had fallen by 66,000 since 1990, a marginal fall of 1.6%. This occurred despite a significant increase in visitor numbers of 89,810 since 1990.

### **Intrastate travel**

Intrastate travel plays an important part in the Tasmanian tourism industry. During 1993, Tasmanians took 3,040,000 trips around the State a 25.3% increase on 1992. Total nights spent away from home increased 25.5%, to 7,525,000, making the average length of each trip approximately 2.5 days. Spending within the State on travel by Tasmanians in 1993

totalled \$321 million, an increase of 24.4% on 1992. The average amount spent on each trip was \$105.

#### Accommodation

Since 1990 the number of motel rooms has grown by 12.4%, while the number of hotel rooms with facilities has increased by only 4.7%. However, both have had reduced growth in the past few years. Holiday units numbered 815 in 1994, up 5.4% on 1993 but still down 4.3% on 1990. Caravan park site and cabin accommodation is the only accommodation type that experienced sustained growth, around 8% from 1992 to 1994.

The March quarter is the peak occupancy period for hotels, motels etc., and January and March tend to be the peak months. The annual room occupancy rate for hotels and motels has increased from 50.7% in 1993 to 54.0% in 1994.

#### Contribution of Tourism to the Tasmanian economy

A recent report published by the Centre for Regional Economic Analysis (CREA), *The Contribution of Tourism to the Tasmanian Economy in 1992*, estimates 17,290 jobs resulted from tourist activities in Tasmania in 1992. Interstate travellers accounted for 57.4% and intra-state travellers for 34.8% of these jobs.

In 1991-92 the number of businesses in the motor vehicle hire industry had increased marginally over the 1986-87 level with 5.9% growth. However, takings from rentals increased 128.2% over the same period, while vehicle rental days increased by only 10.2%.

The hospitality industry in Tasmania during 1991-92 employed 8,114 people, 37.2% of these in the cafe and restaurants area. As expected, cafe and restaurants in 1991-92 accounted for the largest number of businesses in the industry; however, pubs, bars and taverns had the largest selected income, 40% of the total selected income for the industry.

#### INTRASTATE TRAVEL

Year	No. of trips ('000)	No. of nights ('000)	Spending (\$m)
1990	2 569	6 741	312
1991	2 771	7 406	324
1992	2 427	5 998	258
1993	3 040	7 525	321

Source: Department of Tourism, Sport and Recreation—Intrastate Travel Survey

#### ACCOMMODATION CAPACITY, TASMANIA

Accommodation establishment	At December	
	1993	1994
Hotel room with private facilities	3 510	3 526
Motel rooms	1 832	1 828
Holiday units	774	816
Caravan park sites, cabins	6 425	6 953

Source: ABS catalogue no. 8635.6

#### ACCOMMODATION OCCUPANCY RATES, TASMANIA (%)

Year	Hotel and motel rooms	Holiday units	Caravan park sites
1986	52.6	56.3	22.1
1987	50.0	52.9	20.6
1988	46.5	51.9	20.2
1989	45.5	52.8	21.1
1990	48.5	56.8	22.1
1991	48.9	54.2	20.6
1992	51.2	50.1	(a) 25.1
1993	50.7	53.4	30.7
1994	54.0	54.8	30.1

(a) From September quarter 1992, the treatment for permanently reserved caravan parks has been changed. Total site occupancy rates for caravan parks from September quarter 1992 are not comparable with those of previous years.

Source: ABS catalogue no. 8635.6

#### MOTOR VEHICLE HIRE INDUSTRY

	1986-87	1991-92
No. of businesses	17	18
Employment	201	316
Wages and salaries (\$m)	2.7	6.3
Vehicle rental days	431	475
Takings from rentals (\$m)	14.9	34.1
Takings per rental day (\$m)	34.6	71.8

Source: ABS catalogue no. 8652.0

**TASMANIAN HOSPITALITY INDUSTRY, 1991-92**

	<i>Selected income (a) (\$m)</i>	<i>Wages and salaries (\$m)</i>	<i>Employment (total)</i>	<i>Businesses (no.)</i>
Accommodation	89.8	26.5	1 946	176
Pubs, bars, taverns	152.8	26.7	2 300	183
Cafes, restaurants	94.0	25.3	3 015	302
Licensed clubs	45.0	10.6	853	164
<b>Total</b>	<b>381.6</b>	<b>89.1</b>	<b>8 114</b>	<b>825</b>

(a) Selected income for all industries is gross income minus dividends received, royalties and interest income. For the accommodation industry selected income also excludes other income.

Source: ABS catalogue no. 8674.0

**TASMANIA'S HERITAGE**

The Sydney-Hobart Yacht Race has long given Tasmania's profile a boost, attracting yachts from throughout Australia and New Zealand as one of the three internationally-recognised blue water ocean racing classics.

The race, which celebrated its 50th anniversary in 1994, highlights a seafaring and sailing heritage that is ingrained in the Tasmanian lifestyle.

For the 1,000 men and women who sail out through Sydney Heads each Boxing Day and head south, there is no greater sailing adventure than the Sydney-Hobart Yacht Race. Months of training, hours of ship-board preparation and friendly inter-club and inter-country rivalries are exposed on the sometimes tortuous Tasman Sea during the 630 nautical mile journey south.

There's one goal in mind—the comforts of the island's capital, to be safely inside Hobart's Constitution Dock for a traditional scallop pie, New Year's Eve and the city's enticing week-long Taste of Tasmania Festival. The festival is a celebration of Tasmania's maritime heritage and new traditions in fine food and wine with the country's largest open air restaurant just 100 metres from Constitution Dock.

The best of Tasmania is on offer from 27 December to 2 January—a time not to be missed. Like no other event, the Sydney-Hobart Yacht Race links Sydney and Hobart, two cities with a rich maritime heritage, begun during the early years of settlement and convict transportation to Van Diemen's Land.

This heritage can be better understood by taking time to wander through some of the island's coastal villages; places like Battery Point which is home to the Maritime Museum. There are also special displays in the Tasmanian and Queen Victoria museums in Hobart and Launceston and at the Low Head Pilot Station, the oldest continually operating pilot station in Australia.

The Three Peaks Race is an annual event starting at Beauty Point near Launceston on Good Friday. It involves fleet calls to Flinders Island, Freycinet Peninsula on the East Coast and Hobart, with runners required to scale three mountain peaks en route.

Tasmania's calendar of special events extends over the whole year, including sailing events, hop and tulip festivals, Targa Tasmania, and jazz in the vineyards.

Skyrace Tasmania is a relatively new event to the Tasmanian calendar, the inaugural event being held in 1994. It is a pylon racing event for modern and classic aircraft alike held at Valley Field aerodrome in the State's north with the Great Western Tiers as a backdrop. It involves four days of elimination racing as well as aerobatic and ground-based displays.

## Tasmanian Tourism Awards

The 1995 Tasmanian Tourism Awards, organised by the Department of Tourism, Sport and Recreation in association with the Tourism Council of Australia, were announced in June 1995. Tourism operators submitted 79 entries in a wide range of categories.

Strahan, which attracted 119,000 adult visitors in 1994, won three awards: Tasmania's premier tourism town; the best tourist development project, won by Strahan Village; and best specialist accommodation won by Franklin Manor. Historically, Strahan was virtually only an arrival and departure point for Gordon River cruises and a fishing fleet, with few facilities for the local community and tourists. In 1990, the Strahan Tourism Association and the then Strahan Council embarked on a five-year plan which included attracting tourist operators and developers; creating an awareness of Strahan and its environs State-wide, interstate and internationally; creating employment; and increasing accommodation facilities, standards and service. Strahan attracted more than \$2 million in investment from 1990 until April 1995 and the Strahan Wharf Centre experienced a 60% increase in revenue and a 23% increase in capital growth. Developments included 14 luxury units at the Strahan Village, part of 100 tourist beds added during the period.

The Federal Hotels Group won five awards: the award for industry training; awards for best meetings industry, tourism restaurant and resort (Country Club Casino);

and tourism marketing and promotion (Wrest Point Hotel Casino). Other award winners were:

**MAJOR TOURIST ATTRACTIONS:**

Penny Royal World.

**SIGNIFICANT LOCAL ATTRACTIONS:**

Hartzview Vineyard and Wine Centre.

**MAJOR FESTIVALS AND SPECIAL EVENTS:**

Australian Wooden Boat Festival.

**SIGNIFICANT LOCAL FESTIVALS AND SPECIAL EVENTS:**

Evandale Village Fair.

**ENVIRONMENTAL TOURISM:**

Freycinet Lodge.

**TOURISM RETAILING:**

Glen Clyde House.

**TOUR AND TRANSPORT OPERATORS— REGIONAL:**

Par Avion Wilderness Tours.

**TOURISM ASSOCIATIONS:**

Wilderness Gateway.

**MEDIA—ELECTRONIC:**

WIN Television Radar Promotions Australia.

**MEDIA—PRINT:**

Elphin Publishers.

**INDUSTRY EDUCATION:**

Drysdale Institute of TAFE.

**BUDGET ACCOMMODATION:**

Capricorn One Mohair Farm.

**CAMPING AND CARAVAN PARKS:**

Snug Beach Caravan Park.

**MOTORING ACCOMMODATION:**

Port Arthur Holiday World.

**SUPERIOR ACCOMMODATION:**

Novotel Launceston.

Targa Tasmania is an intensive five-day, 2,000 km rally around the island for more than 240 classic, modern and 'thoroughbred' cars. Tasmania's highways and mountain and country roads are closed to all but the competitors during the special Targa stages, allowing vehicles to be driven as they were designed to be driven.

For followers of track athletics, the National Relays at Hobart's Domain track have attracted some of the top athletes in the Pacific region, (Australia's best runners together with international teams competing by invitation) for the January twilight event.

Multi-discipline events are taking their hold—the Cradle to Coast race each March involves teams of competitors running, paddling and cycling from Cradle Mountain through Tasmania's World Heritage Area to Coles Bay on the East Coast.

During late winter a similar event, the Winter Challenge, with the addition of a snow-skiing leg starts from Mt Field National Park with a finish in Hobart.

Of course, there's more—folk music and garden festivals, arts and craft, food and wine, tulips and trout.

Tasmania was the source of New Zealand's original trout population and is a popular destination for other Australian and international fishers.

The Tasmanian Trout Fishing Championships held each November attract some of the country's best anglers to the lakes and streams of Tasmania's highlands.

## FURTHER READING

Other statistical tables relating to this chapter are located in the Historical Series at the back of this book.

### ABS PUBLICATIONS

*Hospitality Industries, Australia* (8674.0)

*Motor Vehicle Hire Industry, Australia* (8652.0)

*Tourist Accommodation, Tasmania* (8635.6)

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### ACKNOWLEDGEMENT

*The Advocate*

# 15 | Agriculture



Post-mortem examinations help to maintain the health and quality of Tasmania's livestock production.

*Department of Primary Industry and Fisheries*

ALTHOUGH DROUGHT CONDITIONS in 1993–94 were less severe in Tasmania than on the mainland, in the Midlands and the East Coast drought was spread over a wide area; the North-East and North-West coasts were affected to a lesser extent. The agricultural industry was a big contributor to the Tasmanian economy: vegetable production increased, while dairying, wool and beef cattle remained important components. High-level Government and other marketing exercises promoted Tasmanian exports into the Asian region.

## FINANCES OF FARM BUSINESSES

Data collected in the Agricultural Finance Survey (AFS) is used to produce information for agriculture that is comparable with financial information for other sectors of economic activity. The information can be used for financial analysis of agriculture for a given year or over a series of years.

## Turnover, cash operating surplus and profit margins

### *Turnover*

Turnover for Tasmanian farm businesses for 1992-93 was \$525.8 million. This was an increase of 9.2% on the previous year's figure. Tasmanian turnover was 2.6% of the total Australian turnover for all farm businesses.

Sales of crops rose by 20% from \$161.5 million in 1991-92 to 193.8 million in 1992-93. Sales of livestock rose by 12.1% from \$111.6 million in 1991-92 to \$125.1 million in 1992-93. Sales of livestock products rose 3.5% in the same period.

On average, each farm business had a turnover of \$167,600 for 1992-93. This was 11% higher than the previous year (\$150,800). For Australia, average turnover per farm business increased by 11.5% between 1991-92 and 1992-93.

In 1992-93, about 370 farm businesses (11.8%) had a turnover of \$300,000 or more. These farm businesses generated 42.3% of the total turnover for Tasmania. Just over 1,500 farm businesses (48.0%) had a turnover of less than \$100,000. These farm businesses contributed only 4.1% of the total turnover.

The median turnover (i.e. half of the farm businesses made less than the figure and half made more) was \$105,900, up 17.9% on last year's figure of \$89,800. Five years earlier in 1987-88 the median turnover was \$80,300.

### *Cash operating surplus*

The average cash operating surplus for Tasmanian farm businesses rose from \$21,700 in 1991-92 to \$24,600 in 1992-93 (an increase of 13.4%). Average cash operating surplus for Australia increased from \$28,200 to \$38,500 in 1992-93. This was a 36% increase and was due to large increases in the grain, dairy cattle and meat cattle industries.

Eight hundred or just over a quarter of Tasmanian farm businesses made cash operating losses in 1992-93. The average loss was \$26,600 each. At the other end of the scale, 5.2% made over \$100,000. This group made 38.4% of the total cash operating surplus for the State, with an average of \$182,700 each.

Median cash operating surplus for Tasmanian farm businesses rose 19.4% to \$16,000 for 1992-93. Five years ago, in 1987-88, the median cash operating surplus for Tasmanian was \$20,800.

### *Profit margins*

The profit margin of Tasmanian farm businesses rose slightly from 14.4% in 1991-92 to 14.7%, for 1992-93. Profit margins have still not recovered to the margins achieved between 1986-87 and 1989-90. The profit margin recorded in 1989-90 was 24.8%.

*TURNOVER is the sum of all proceeds received by farm businesses in the year, for example, proceeds from sales of crops, livestock, livestock products and miscellaneous income items;*

*CASH OPERATING SURPLUS is obtained by deducting expenses from TURNOVER. These expenses include payments for fertilisers, seed, livestock, electricity, fuel, rates and taxes (other than income and company tax), wages and salaries, interest payments and rent;*

*PROFIT MARGIN is the ratio of CASH OPERATING SURPLUS to TURNOVER, expressed as a percentage. In effect it represents the proportion of each dollar of turnover, which converts into cash operating surplus.*

*Farm debt and interest payments*

In aggregate, Tasmanian farm businesses owed 0.3% less at the end of June 1993 than the year before. Total debt was \$472.2 million. The average gross indebtedness of each was \$150,500. This was \$2,200 higher than at the end of June 1992. The increased average was the result of the decline in the number of farm businesses.

For Australia, aggregate gross indebtedness rose by 3.8% between June 1992 and June 1993. The national average was \$145,000.

Just over 560 Tasmanian farm businesses (17.8%) had no debt at the end of June 1993. Some 730 farm businesses (23.3%) owed \$200,000 or more. This group owed 75.8% of the debt. The median gross indebtedness (half owed more and half owed less) in 1992-93 was \$48,300.

The *debt to asset ratio* of Tasmanian farm businesses was 1:6.1 for 1992-93. (This means that for every dollar of debt there was \$6.10 of asset backing.) Five years ago, in 1987-88, this ratio was 1:9.6. The Australian ratio was 1:7.2 for 1992-93.

The *turnover to debt ratio* (average gross indebtedness divided by turnover) for Tasmanian farm businesses was 1:0.90 for 1992-93. (This means that if all debt had been redeemed in 1992-93 then it would have accounted for 90% of the farm turnover made.) For 1991-92 this ratio was 1:0.91. For Australia this ratio was 1:0.75 in 1991-92 and 1:0.78 in 1992-93.

For Tasmanian farm businesses the *return on assets* was 2.9% in 1992-93 (cash operating surplus divided by an average of farm business asset value at 30 June for the current and previous years). This was up from 2.7% the previous year. Five years earlier, in 1987-88, the rate had been 3.9%. The return on assets for Australia was 3.7% in 1992-93 and 5.1% in 1987-88.

The *return on net worth* (the return on unencumbered farm business assets) follows a similar pattern to the return on assets. For Tasmanian farm businesses this return for 1992-93 was 3.5%, up from the previous year's 3.3%. For Australia, the return on net worth increased from 3.3% to 4.3% between 1991-92 and 1992-93.

## LAND USE

There were 4,518 establishments involved in agricultural activities in Tasmania in 1993-94. These activities occupied more than 1.9 million hectares, about 100,000 hectares more than in 1992-93.

Commercial agricultural establishments occupied almost 29% of Tasmania's land area. About 44% of the area of commercial agricultural establishments was under sown pasture or used for crops (for example cereals or fruit). The balance, around 1,106,948 hectares of semi-cleared land, bush or fallow, was used for rough grazing, forestry or not utilised at all.

An important agricultural activity is livestock grazing: 77% of all agricultural

### AGRICULTURAL LAND USE, TASMANIA (<sup>'000</sup> ha)

Area	1992-93	1993-94
Crops—		
Cereals for—		
Grain	24.0	25.3
Other purposes	9.1	10.9
Legumes	1.0	1.3
Fruit	3.6	3.6
Vegetables	16.9	19.2
Other	18.3	17.4
<b>Total crops</b>	<b>72.9</b>	<b>77.7</b>
Sown pasture	832.8	861.8
Total area of agricultural establishments (a)	1 844.7	1 968.8

(a) Includes area used for rough grazing, forestry or not utilised for any specific purpose.

Source: ABS catalogue no. 7114.6

## Tasmanian Cut Flower Industry

~ Article contributed by the Tasmanian Floricultural Association ~

Commercial quantities of flowers have been grown for many years in Tasmania. Until fairly recently, the emphasis has been on what are now called 'traditional lines' such as roses, carnations and chrysanthemums.

However, the industry has expanded as increasing numbers of people who had grown flowers for gardening pleasure began to realise how well some types of flowers grew in Tasmania. Also, some people who had traditional farming operations and were looking to diversify also saw flower growing as an opportunity to increase their income. The Flower Industry Association of Tasmania provides a forum for commercial flower growers to promote the industry and to meet and discuss matters of mutual concern.

### *Area planted*

A survey conducted by the then Department of Agriculture in 1988 indicated that approximately 35 hectares were planted to flowers. By 1992 this had expanded to approximately 107 hectares, an increase of approximately 300% in 4 years.

### *Flowers produced*

The 1960s and 1970s were dominated by the traditional lines of carnations, roses and chrysanthemums but in the 1980s flowers

from bulbs and gypsophila became more prominent and proteas and Australian natives also started to be produced. By 1988 proteas and Australian natives as a combined group had the greatest percentage of the area planted followed by narcissus, carnations, other bulbs (mainly gladioli, alstroemeria, and zantedeschia) and gypsophila.

Since that time there has been a significant change in the composition of the types of flowers produced for sale in Tasmania. In 1992 more than half the area of flower plantings was in bulbs, corms and rhizomes, followed by proteaceous plants and Australian natives (20%).

### *Value of production*

It is extremely difficult to make estimates of the value of production on an annual basis for the floriculture industry. This is because there is no central market structure in Tasmania, information on sales volumes and prices is difficult and expensive to collect, and there are direct sales in the industry.

The appropriate basis for comparison of the floriculture industry value with other industries is the farm gate price (the wholesale price less freight and commission).

*continued on next page*



*Department of Primary Industry and Fisheries*

Studies have concluded that the wholesale value was about \$2 million in 1984-85 rising to about \$5 million in 1987-88. The wholesale value in 1991-92 has been calculated to have risen to about \$11 million.

Approximately 35% of the wholesale price is directed towards commission and freight (commission, 20% and freight, 15%). Hence, the estimated farm gate value of the floriculture industry in Tasmania for 1991-92 is \$7.44 million, a very substantial growth since 1987-88.

#### *Number of growers*

Prior to 1980 the Tasmanian floriculture industry was relatively small with few growers. In 1984, when the first Department of Agriculture survey was undertaken, it was estimated that there were only 20 growers with more than 200 square metres of flower production. This had risen to 90 in 1987 and 165 in 1988.

While there are no directly comparable figures, it would seem that there has been little change in the number of growers in the past few years: a few have left and these have been replaced by new entrants to the industry.

#### *Market outlets*

In 1988 it was estimated by the Department of Agriculture that approximately 75% of all flowers grown in Tasmania were directed into the Tasmanian market. Now some 70% of growers send some flowers into mainland markets—most often Sydney, Melbourne and Brisbane—although some flowers are directed to other Australian destinations. Only about 10% of commercial growers direct any flowers to export markets. On the other hand, approximately 20% of commercial growers sell only into the

#### **FARM GATE VALUE OF FLORICULTURE, TASMANIA, 1991-92**

Crop	Value (\$ million)
Australian natives	0.10
Carnations	0.60
Chrysanthemums	0.60
Fillers	0.63
Freesias	1.10
Iris	0.73
Liliums	0.54
Narcissus	0.46
Proteaceous plants	0.99
Roses	0.37
Tulips	0.80
Other	0.52
<b>Total</b>	<b>7.44</b>

Tasmanian market.

There isn't a centralised wholesale flower market in Tasmania and the distribution of the growers and size of the local market does not lend itself to this form of marketing.

#### *Trends in the flower industry*

There has been a major upsurge in the production of Tasmanian cut flowers in the past few years. Perennial gypsophila and freesias have become major crops alongside carnations, roses and chrysanthemums, while flower bulb crops are gaining in importance and tulip, lily, nerine and alstroemeria as well as freesia plantings have been established.

Proteaceous plants and Australian natives are presently produced on a small scale; however, there are young plantings that have yet to reach production. Some of these crops include kangaroo paw, Christmas bells, waratah, thryptomene, wax flowers and South African proteas.

#### **FLOWER PLANTINGS, TASMANIA, 1992**

Crop	Area (ha)	% of total
Proteaceous plants and Australian natives	21.1	19.7
Bulbs, corms and rhizomes	54.6	51.4
Dried flowers, foliage	4.9	4.6
Fillers (gypsophila, etc.)	7.4	6.9
Traditional lines	18.2	17.0
<b>Total</b>	<b>106.2</b>	<b>100.00</b>

establishments had cattle, for milk or meat, and 48% grazed sheep. This combination of meat cattle and sheep grazing activities is popular in Tasmania.

In 1993-94 just over 20% of agricultural establishments had dairy cattle which is a considerable fall from 20 years earlier when around 40% of agricultural establishments had cattle for milk.

## CROPS

The principal cropping activity on Tasmanian farms is growing vegetables for human consumption. This is the major cropping activity in terms of both farm area used and value of products.

Most of the vegetable cropping is done along the North-West coastal strip. The area is characterised by deep friable krasnozem soil types and relatively high and reliable rainfall, 900 mm to 1,400 mm per year. The other main vegetable growing area is in the North-East around Scottsdale, where soil and climate conditions are similar to the North-West coastal belt.

Most of the vegetable crops grown in Tasmania are used for processing. Farmers grow crops such as beans, peas and potatoes under contract to processing companies. Some of the crops are exported interstate and some are sold on the local fresh market.

In terms of value and area, potatoes are one of the principal crops grown by Tasmanian farmers. The area planted to potatoes was nearly 7,000 hectares in 1993-94. In the same year the value of the potato crop was \$66.8 million, the highest value of all crops. This was some \$29 million above the value of the apple crop.

Another traditional Tasmanian crop, hops, was grown in numerous small plots throughout the Derwent Valley. However, with the introduction of new high yielding varieties of hops and mechanical harvesting, replacing hand picking, hop growing has undergone substantial change.

Hops are now grown in larger lots more suited to mechanical harvesting. Large areas in the North-East and North-West have been planted to the crop as well. These changes have

### AGRICULTURAL ESTABLISHMENTS ACCORDING TO PRINCIPAL ACTIVITIES, TASMANIA, 1993-94

<i>Agricultural activity</i>	<i>Establishments (No.)</i>	<i>Proportion of all holdings (%)</i>
Establishments growing—		
Cereals for grain—		
Wheat	101	2.2
Barley	518	11.1
Vegetables for human consumption—		
Beans, French and runner for processing	162	3.6
Carrots	61	1.3
Onions	170	3.6
Peas for processing	441	9.5
Potatoes	610	13.1
Any vegetables for human consumption	919	21.1
Orchard fruit—		
Apples	188	4.0
Establishments carrying—		
Milk cattle	936	20.1
Meat cattle	3 339	71.6
Pigs	181	3.9
Sheep	2 234	47.9

Source: ABS catalogue no. 7114.6

### GROSS VALUE OF CROPS, TASMANIA (a) (\$m)

<i>Crops</i>	<i>1992 93</i>	<i>1993-94</i>
Cereals for grain	9.5	9.6
Legumes mainly for grain	0.6	0.5
Crops for hay	0.8	0.8
Orchard fruit	42.6	38.9
Berry and small fruit	1.5	1.8
Grapes	1.6	2.1
Vegetables for human consumption	106.7	118.3
Other crops	48.7	54.8
Pasture harvested	33.3	26.0
<b>Total</b>	<b>245.4</b>	<b>252.9</b>

(a) Excludes crops and pasture harvested for hay, green feed or silage.

Source: ABS catalogue no. 7503.6

maintained Tasmania's position as the main hop-growing State, with almost three-quarters of the total Australian hop production grown in Tasmania.

A characteristic of the vegetable growing industry is the dominance of large producers, a change partly due to the high capital cost of equipment needed in the industry.

### Potatoes

Tasmania produces about 25% of the Australian potato crop of which most is grown under contract to vegetable processors and turned into potato chips. In recent years, the potato crop has been the most valuable single agricultural crop produced by Tasmanian farmers, accounting for 10.7% of the total gross value of all agricultural production.

Most of the potato crop is grown along the North-West coastal strip stretching from the municipality of Latrobe to Circular Head and, as with many other agricultural activities, potato growing is dominated by large producers.

### Apple industry

Tasmania is still referred to by many as the Apple Isle, a reminder of the past importance of apple orcharding to the State's economy and agricultural industry. Tasmania is now the third largest apple producer, behind Victoria and New South Wales, growing around 18% of the Australian apple harvest.

Apple orcharding was once based on overseas exports with about 75% of the crop being sent overseas, nearly all to European countries. Apples are still important to the Tasmanian agricultural industry as they remain one of the two most significant crops in value terms and account for around 7% of the gross value of all agriculture. Almost 40% of the Tasmanian apple crop is exported overseas now, of which about 92% is exported to Asian markets.

The top ten nations Tasmania exported apples to in 1993-94 were, in order, Malaysia, Singapore, the Philippines, Sri Lanka, Indonesia, Germany, Taiwan, Thailand, New Zealand and Vietnam. Efforts are being made to export apples to the Japanese market.

## AREA OF PRINCIPAL CROPS, TASMANIA (ha)

Crops	1992-93	1993-94
Cereals for grain		
Barley	12 300	15 204
Oats	9 223	6 651
Wheat	1 454	1 602
Vegetables for human consumption—		
Beans, French and runner for processing	1 153	1 304
Onions	1 177	1 250
Peas (green) for processing	5 955	7 254
Potatoes	6 116	6 863
<b>Total vegetables (a)</b>	<b>16 885</b>	<b>19 192</b>
Orchard fruit (a)	3 085	2 978
Hops	816	800
Cereal crops for green feed or silage	7 171	8 965

(a) Includes components not specified separately.  
Source: ABS catalogue no. 7114.6

## POTATOES, TASMANIA

Year	Area (hectares)	Production ('000 tonnes)
1989-90	6 852	297
1990-91	5 727	235
1991-92	5 967	250
1992-93	6 116	270
1993-94	6 863	291

Source: ABS catalogue no. 7114.6

## APPLES, TASMANIA

Year	Number of trees ('000)	Production ('000 tonnes)
1989-90	1 340	57.3
1990-91	1 348	45.3
1991-92	1 452	50.4
1992-93	933	56.2
1993-94	963	55.0

Source: ABS catalogue no. 7114.6

### Wine grapes

Tasmania has become a wine producer of world standing and, although the wine industry is small, it has developed an enviable reputation for producing premium quality wines. This reputation is protected by the Tasmanian Appellation of Origin Scheme, a wine certification system which legislates to prevent wine producers calling a wine Tasmanian unless the wine has been produced from grapes grown in the State.

Grapes for wine were worth just over \$2 million in 1993-94, with 56% of grapes produced for red wine, and the remaining 44% for white wine.

#### AREA OF VINEYARDS AND GRAPE PRODUCTION

Variety	1992-93	1993-94
Red grapes—		
Bearing (ha)	83	145
Non-bearing (ha)	68	45
<b>Total (ha)</b>	<b>151</b>	<b>190</b>
Production (t)	549	626
White grapes—		
Bearing (ha)	94	115
Non-bearing (ha)	44	57
<b>Total (ha)</b>	<b>138</b>	<b>172</b>
Production (t)	539	499

Source: ABS catalogue no. 7114.6

### LIVESTOCK AND LIVESTOCK PRODUCTS

Sales of livestock and livestock products account for around 60% of the gross value of Tasmanian agriculture.

#### Sheep

Two seasons ago, sheep and wool were the biggest single contributor to the value of agricultural production in Tasmania, but in 1993-94 sheep were third, behind dairying and beef cattle. The value of sheep slaughterings has been steady, although not as high as levels reached in the late 1980s. The big decline in the sheep and wool industry was due to decreased returns from wool, which have more than halved since the early 1990s.

#### Wool

Since the collapse of the Reserve Price Scheme in 1990, returns from wool have declined substantially. The value of Tasmania's wool clip has been more than halved from \$162 million in 1989-90 to just over \$74 million in 1993-94. In 1990-91 there were 4.8 million sheep in Tasmania. The numbers declined in 1992-93 to 4.2 million, and remains at 4.3 million in 1993-94.

#### SHEEP NUMBERS AND WOOL PRODUCTION, TASMANIA

Year	Sheep numbers ('000) (a)	Shorn wool production (tonnes)
1989-90	5 336.8	21 408
1990-91	4 803.9	20 393
1991-92	4 294.8	17 579
1992-93	4 263.6	17 590
1993-94	4 323.9	17 613

(a) At 31 March.

Source: ABS catalogue no. 7114.6

#### TOTAL WOOL PRODUCTION AND VALUE, TASMANIA

Year	Total wool (a) (tonnes)	Value (a) (\$m)
1988-89	22 315	154.7
1989-90	27 065	163.4
1990-91	23 270	116.8
1991-92	19 932	78.7
1992-93	19 268	62.7

(a) Based on data collected from brokers and dealers.

Source: ABS catalogue no. 7114.6

*Sheep and lambs slaughtered*

Sheep and lambs slaughtered for meat contributed almost \$14 million to the value of agricultural production in 1993-94. In the past two years 1,893,800 sheep and lambs have been slaughtered, which provided 33,444 tonnes of meat.

A major part of the meat produced is exported overseas. In 1993-94 almost 270,000 tonnes of sheep meat products were exported at a value of \$1.2 million, a figure below the levels for the late 1980s and early 1990s, when \$2-3.7 million worth of sheep meat products were exported overseas. The USA, Japan and the United Kingdom are important export markets.

**Cattle***Meat production*

The grazing of cattle for meat is frequently a sideline to other agricultural activities. While about 70% of agricultural establishments carry some cattle for meat production, almost 50% of establishments with meat cattle carry about only 10% of the total meat cattle herd. Agricultural establishments with more than 500 per head of meat cattle carry about 40% of all meat cattle.

*Dairy production*

Dairy products contribute about 20% of the total value of agricultural production. Over the past thirty years the dairy industry has undergone major change: the number of milk cattle has fallen by over 50% while the number of establishments involved in the dairy industry has fallen by over 80%. A drop in exports to the United Kingdom was the initial catalyst for this change, followed by pressure from increasing production costs, relative to returns, and the need for large-scale production for farms to remain viable.

**Other livestock**

Pig farming have also become increasingly specialised and larger. Other livestock farming activities include poultry and, on a few establishments, goats, deer, emus and ostriches.

**SHEEP AND LAMBS SLAUGHTERED, TASMANIA ('000)**

Year ended 30 June	Sheep	Lambs
1990	532.3	588.8
1991	448.3	555.9
1992	446.7	489.8
1993	473.4	456.5
1994	526.1	437.8

**CATTLE AND CALVES SLAUGHTERED, TASMANIA ('000)**

Year ended 30 June	Cattle	Calves
1990	191.7	34.9
1991	191.3	30.6
1992	198.3	32.3
1993	189.4	32.7
1994	187.0	23.2

Source: ABS catalogue nos. 7114.6 and 7215.0

**CATTLE NUMBERS, TASMANIA ('000)**

At 31 March	Cattle for meat	Cattle for milk
1990	432.8	135.8
1991	444.4	139.9
1992	446.7	146.0
1993	445.2	159.5
1994	507.3	171.6

Source: ABS catalogue no. 7114.6

**PIGS, TASMANIA ('000)**

Year	Number (a)	Slaughtered (b)
1989-90	42.2	86.7
1990-91	37.6	79.9
1991-92	40.0	86.3
1992-93	43.9	92.5
1993-94	45.5	95.8

(a) Number reported on establishments in scope of the agricultural census.

(b) All pigs slaughtered at abattoirs.

Source: ABS catalogue nos. 7114.6 and 7215.0

## Change in collection methods

From the 1993-94 season, figures from the Agricultural Census were collected from all farming establishments whose Estimated Value of Agricultural Operations (EVAO) was greater than \$5,000 per year. In recent years, figures had only been collected from larger farm businesses whose EVAO was above \$22,500.

These changes mean that information will be collected from a greater number of smaller farm businesses. However, because

they are small operations, their contribution to overall figures will not be large. Some changes to meat cattle figures will be due in part to this change in collection method. Changes to other sectors of the agricultural industry are not significant.

These changes in collection methods only apply to land use, crops, and livestock numbers in this chapter. Information about finances and livestock values were unaffected by the changes.

## FURTHER READING

Other statistical tables relating to this chapter are located in the Historical Series at the back of this book.

### ABS PUBLICATIONS

- Agricultural Industries, Financial Statistics, Australia* (7507.0)
- Agricultural Industries, Financial Statistics, Australia, Preliminary* (7506.0)
- Agriculture, Tasmania* (7114.6)
- Livestock Products, Australia* (7215.0)
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- Value of Agricultural Commodities, Australia* (7503.0)

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### ACKNOWLEDGEMENTS

- Tasmanian Floricultural Association
- Department of Primary Industry and Fisheries

# 16 | Mining



The environmental manager of Copper Mines of Tasmania's Mount Lyell mine inspecting progress on the pilot tailings dam. The company plans to mine mainly copper, plus gold and silver.

*The Mercury*

~ Chapter 16 was contributed by Tasmania—Development and Resources ~

THE 1993–94 YEAR SAW EVIDENCE of a return in commitment by mining companies to capital investment in mines and mineral processing plants, following the years of restructuring and job shedding.

Production of metallic minerals increased from \$348 million to \$350 million. Production of non-metallics and fuel minerals increased by \$6 million and metallurgical production from imported ores increased by \$22 million to \$639 million.

Access development and shaft boring operations commenced at Henty, the first capital commitment to a new stand-alone gold mine in Tasmania this century.

The successful restructuring of the Beaconsfield Gold Project Joint Venture preceded a stream of encouraging reef intersections and a re-commencement of dewatering of the Hart Shaft. Supporting this gold-based activity, encouraging drilling results at the Renison

Tin mine and the Rosebery base metals operation encouraged their owners to commit funds to mine deepening and modern infrastructure. Disappointment in the community following Renison Goldfields Consolidated Limited's confirmation of its decision to close the Mount Lyell mine after 101 years of continued operation was, in part, tempered by the commitment of Gold Mines of Australia Ltd to secure a working future for this significant resource.

In the mineral processing area, the decision of Tioxide Australia Pty Ltd to commit to the long-term future of its Heybridge pigment plant through the adoption of a high titanium slag feedstock not only saved this significant employment base, but provided an opportunity for future growth in Tasmania's pigment production. The year also witnessed continuing capital commitments and on-going restructuring at the Pasminco Metals-EZ smelter at Risdon, and by BHP Ltd at its TEMCO silico-manganese and ferro-manganese smelter at Bell Bay.

Investments by Comalco Ltd at the Bell Bay aluminium smelter were towards improvement in occupational health and safety and environmental performances.

The value of construction materials rose with crushed stone being worth \$17 million. Dolerite and basalt were the major crushed products.

## MINERAL PRODUCTION

High levels of world stocks overhung metal markets throughout 1993-94. Despite this fact, Tasmanian mines and mineral processors maintained production at above historic levels. Of particular note was the spectacular performance of The Mount Lyell Mining and Railway Company Ltd mine in its last full year of production within the Renison Goldfields Consolidated Ltd (RGC) stable of companies. An all-time record of 29,000 tonnes of saleable copper was produced.

The Goliath Portland Cement Co. Ltd at Railton completed the commissioning of its enlarged plant during the year. Production capacity was above 'nameplate' production level of one million tonnes per annum.

### VALUE AND PRODUCTION OF MINERALS, TASMANIA

	1992-93		1993-94		Change %
	Tonnes	A\$'000	Tonnes	A\$'000	
Gold	1.4	—	1.35	—	-3.6
Silver	95.3	—	140	—	+46.9
Zinc	233 837	—	165 934	—	-29.0
Copper	28 395	—	32 822	—	15.6
Lead	66 459	—	71 752	—	+8.0
Tin	6 760	—	7 415	—	+9.7
Tungsten	142	—	26	—	-546.2
Iron ore pellets	1 458 909	—	1 565 882	—	+7.3
Others	245 083	—	199 922	—	-18.4
Total metallic minerals		348 169	—	350 741	+0.7
Non-metallics and fuel minerals		32 766	—	38 732	+18.2
Construction materials	—	26 897	—	27 088	+0.7
Metallurgical production from imported ores		616 908	—	639 023	+3.6
<b>Value of mining and mineral processing sectors</b>	<b>—</b>	<b>1 024 740</b>	<b>—</b>	<b>1 055 584</b>	<b>+3.0</b>

Source: *Tasmania—Development and Resources*

Run of mine coal production remained reasonably static compared to previous years, despite the increase in demand from the Railton cement factory. Increases in thermal efficiencies at factories using this form of power effectively continued to cap growth in the mining of this product. The local market remained extremely competitive, which was of benefit to the consumers in this State.

Production of tin at the RGC Renison Mine, Renison Bell increased slightly as a result of improved ore grades and discoveries. Gold and silver production remained at historic production levels. These metals, to date, have been by-products of base metal mining in Tasmania. The production of non-metallic minerals and construction material rose slightly.

## MINERAL EXPLORATION AND DEVELOPMENT

The dramatic and sustained fall in mineral exploration expenditure in Tasmania over the past ten years appeared to reverse in 1993-94. Expenditure of \$10.2 million in 1993-94 increased 31% over the previous two years. Tasmania's share of the Australian exploration market remained relatively static at 1.29%.

### MINERAL EXPLORATION AND DEVELOPMENT

Year	Australian expenditure (\$ million)	Tasmanian expenditure (\$ million)	Tasmania as % of Australian expenditure
1982-83	437.9	18.6	4.25
1983-84	428.7	18.0	4.20
1984-85	437.3	17.8	4.07
1985-86	442.0	10.6	2.39
1986-87	556.8	10.9	1.96
1987-88	799.2	10.4	1.30
1988-89	697.6	13.1	1.88
1989-90	607.5	11.8	1.94
1990-91	601.7	9.9	1.65
1991-92	604.0	7.9	1.31
1992-93	631.8	7.8	1.23
1993-94	792.6	10.2	1.29

Source: ABS catalogue no. 8412.0

## OIL AND GAS EXPLORATION

No new offshore permits were granted for oil and gas exploration during the year. Maxus Tasmania Incorporated surrendered permit T/24P for an area off the West Coast of Tasmania.

No exploration wells were drilled but Sagasco Resources Ltd undertook extensive 2D and 3D seismic surveys in permits T/RL1, T/18P and T/25P in the Bass Basin.

Assessment commenced for bids that were received for offshore petroleum areas T93-1 and T93-2 which closed on 6 May 1994. Exploration licences were held onshore by Confor Oil Investments Pty Ltd.

Title	Holder	Blocks	Expires
T/18P	Sagasco Resources Ltd and others	30	22.12.1998
T/25P	Sagasco Resources Ltd and others	43	02.12.1997
T/26P	Ansbachall Pty Ltd	94	08.07.1998
T/RL1	Sagasco Resources Ltd and others	9	07.05.1996

**VALUE OF THE MINING INDUSTRY, TASMANIA**

	1992-93 (\$'000)	1993-94 (\$'000)
Royalties	5 795	3 938
Rents and fees from mineral lands	846	628
Electricity consumption levy	10 499	9 068
Petroleum/gas franchise fees	531	667
Vehicle fees	210	144
Stamp duty	266	243
Payroll tax	14 565	12 489
Land tax	382	371
State debit tax /FID	280	246
Environment licences	661	436
Other	237	126
<b>Total State Government</b>	<b>34 272</b>	<b>28 356</b>
Local government charges	4 216	4 050
<b>Total</b>	<b>38 488</b>	<b>32 406</b>

Source: *Tasmanian Chamber of Mines company surveys and Tasmania—Development and Resources*

**VALUE OF THE MINING INDUSTRY**

As well as the direct contribution to the Tasmanian economy through employment, the mining and mineral processing industries contributed through taxes and charges paid to State and local governments.

In 1993-94 these taxes and charges fell by \$6.1 million or 16%. The main components of the fall were royalties (down \$1,857,000), electricity consumption levy (down \$1,431,000) and payroll tax (down \$2,076,000).

Most metallic mineral production and metallurgical production was exported from Tasmania earning over \$1 billion. The products included zinc metal, tin concentrates, copper concentrates, iron ore concentrates, lead concentrates, aluminium metal, titanium dioxide pigments, ferro manganese and silico manganese. Some other products were doré, silver copper concentrates, magnetite and silica. Gold was contained in some copper concentrates.

Cement production from limestone was also an important export product.

**METAL PRICES AND FUTURE TRENDS**

Base metal prices recovered from medium-term lows reached in October 1993 to trend upwards for most of the remainder of the financial year.

**Factors affecting price movements***Stock levels*

Very high base metal inventories were most prominent during the price recession of 1993-94. Towards the end of that financial year, price levels had risen sharply without a commensurate fall in visible inventory. This had partly been a result of commodity and investment fund buying as a hedge against the negative effects of rising interest rates on the equities markets.

*Investment funds*

A new factor of significance in the market affecting metals prices has been the relatively recent emerging role of investment funds. Through their market power, these funds provided a relatively synchronised upward and downward impetus to short-term movements in prices during the second half of the 1993–94 year.

Their collective action over this period often appeared to stimulate prices to overshoot or undershoot underlying justifiable market levels and to lead to price instability in the marketplace.

*Exchange rates*

There was a general tendency for the Base Metals Price Index (BMPI) in US dollars to be relatively closely tracked by the \$US/\$A exchange rate. The result was that in the early months of the 1993–94 financial year, when international prices fell to their lowest levels for many years, the fall in the \$US/\$A rate reduced to some extent the degree of the impact upon Australian currency equivalents, and that subsequently, when prices began to rise sharply, the Australian currency equivalent of the BMPI Australian dollars rose correspondingly but to a somewhat lesser degree than in US dollars.

**EMPLOYMENT**

Direct employment in the mining and mineral processing sector in 1993–94 continued the general downward trend of the past decade. Employment in May 1994 totalled 3,767, a reduction of 22% from the previous year. Ten years earlier the employment number was around 8,000 persons; employment has thus more than halved over the past decade.

Although mine closures and a trend towards use of part-time personnel have contributed to this decline, it has been driven more by strong productivity related improvements in both mining and processing operations and reflected in manpower retrenchments.

Examples of such productivity improvements were:

- Rationalisation of the TEMCO (Tasmanian Electro Metallurgical Company Pty Ltd) workforce at Bell Bay (reduced to about 350 employees compared with 460 two years earlier) and various modernisation and environmental improvement projects raised the efficiency and productivity of operations, placing it among the lowest cost manganese alloy producers in the world.
- At Pasminco Australia Ltd Rosebery Mine the introduction of multi-skilling, a salary-based remuneration system and a schedule based on seven-days-a-week continuous activity, together with technological improvements, saw a sharp rise in productivity at the mine. The workforce was cut from 470 five years ago to the present number of around 270.
- Productivity levels at Pasminco Metals–EZ Hobart zinc smelter trebled over the past five years. Substantial technological modernisation was undertaken, and together with a reduction in the plant workforce from 1,200 two years ago to around 700 at present, the plant made considerable gains in moving down the international cost curve.
- At RGC Renison Mine at Renison Bell, productivity from one of the world's largest underground tin mines more than quadrupled over the decade. The mine's total number of employees was roughly halved from a decade ago, currently standing at around 260. Unit costs of production have been cut substantially.

## INVESTMENT

Capital investment by the mining and mineral processing sector in 1993–94 was well below that of 1992–93, with little new development having taken place. This reflects both the state of the economy and the paucity of mine discovery.

Total investment amounted to \$77 million compared with \$134 million in 1992–93, when both the expansion of the Goliath Portland Cement Co. Ltd cement plant at Railton and the conversion of the furnace at TEMCO boosted outlays.

In 1993–94 main capital expenditure included Goliath Cement (\$32.7 million), Comalco (\$13.5 million), the Henty Gold Project (\$11 million), and TEMCO (\$5.5 million).

## REVIEW OF MINERAL SECTOR OPERATIONS 1993–94

### Aberfoyle Resources Ltd, Hellyer Division, Hellyer Mine

Ore mined from the Hellyer Mine totalled 1.31 million tonnes at 13.5% zinc, 6.7% lead, and 173 g/t silver. Production was from sub-level open stopes and from pillar recovery. The concentrator throughput for the year was 1.13 million tonnes. Concentrate production totalled:

- zinc concentrate—232,922 t @ 50.2% zinc, 3.3% lead;
- bulk concentrate—57,518 t @ 35.1% zinc, 10.9% lead, 190 g/t silver;
- silver/copper concentrate—10,808 t @ 4,437 g/t silver, 11.0% copper; and
- lead concentrate—62,327 t @ 57.1% lead, 7.2% zinc, 600 g/t silver.

No exploration drilling was conducted on the mine lease during the year. Infill drilling of the south end of the ore body was carried out from both surface and underground locations. A total of 1,930 metres was drilled in sixteen holes. At 30 June 1994, ore reserves at the Hellyer Mine were 8.4 million tonnes at 0.3% copper, 5.9% lead, 12.0% zinc, 140 g/t silver and 2.1 g/t gold.

At 30 June 1994 the workforce totalled 287. Nine production days were lost underground due to industrial disputes.

Capital expenditure for the year totalled \$4.63 million. An amount of \$2.76 million was spent on underground development, \$0.87 million on a pebble crushing mill, and \$1 million on other capital works.

### Pasminco Australia Ltd, Rosebery Mine

In March 1994, Rosebery celebrated 100 years of mining in the district. Low ore and high production grade concentrate recovery were realised for the year. Metal prices remained depressed. Employment in June totalled 272 people. A good safety performance was recorded. Hearing conservation, lead in blood, employee health assessment and upgraded dust monitoring programs were developed during the year. A site industrial agreement was negotiated and submitted to the State Industrial Commission.

Ore production from underground was 536,643 tonnes averaging 9.7% zinc. The main producing areas were J and H lenses with some remnant mining in E and F lenses. Production from B lens above 15 level was terminated due to low grades and ore pinching out.

Development work totalled 2,456 metres, primarily in the Main Decline, 20 and 21 levels of J lens, and 19 level B Haulage.

A total of 46,650 metres of diamond drilling, both underground and from surface, was carried out to increase probable reserves to proven category and to increase inferred

resources, particularly in K lens. Elsewhere on the lease, 1,320 metres were drilled in seven holes, surface samples were assayed for gold, silver and base metals, and down-hole electro-magnetic surveys were done in two holes.

Ore reserves at 30 June 1994 were:

	Million tonnes	Lead (%)	Zinc (%)	Copper (%)	Silver (g/t)	Gold (g/t)
Proven ore	2.1	3.6	10.4	0.42	127	2.4
Probable ore	1.9	3.6	12.0	0.42	127	2.0
<b>Total</b>	<b>4.0</b>	<b>3.6</b>	<b>11.2</b>	<b>0.42</b>	<b>127</b>	<b>2.2</b>

The processing plant treated 539,066 tonnes of ore including 6,940 tonnes imported from the South Comet mine. Head grade was 9.8% zinc, 3.17% lead, 0.38% copper, 97.39 g/t silver, and 1.85 g/t gold. Production for the year was:

- zinc concentrate—83,567 t at 55.01% zinc;
- lead concentrate—7,709 t at 65.71% lead, 1,156 g/t silver;
- bulk concentrate—14,235 t at 53.46% lead, 1,229 g/t silver; and
- copper concentrate—4,409 t at 24.44% copper, 6.74% lead, 2,778 g/t silver, 64.33 g/t gold.

In addition, 294.025 kg of doré containing 27% silver and 66% gold was produced in the gold plant.

Plant improvements included the installation of a sound-proof crusher control cubicle, completion of reagent lines in stainless steel, and the commencement of new reagent warehouse facilities. Process improvements included zinc recovery, zinc and lead concentrate grade, installation of a full automatic Knelson concentrator for gold recovery, and redesign of the gold doré plant.

The No. 2 tailings dam wall was extended and reinforced, the No. 5 dam wall was completed, and the Bobadil dam wall was extended and raised by 1.5 metres. Dams were surveyed to ANCOID criteria. Drainage control and rehabilitation work was progressed on despoiled areas around the mine and mill, and extensive drainage control and rehabilitation work commenced in the former Rosebery open cut.

### South Comet Mine

Payable ore resources were depleted early in the year and the rehabilitation of disturbed areas and protection of precipitous slopes were almost completed at year end. A total of 6,940 tonnes of ore was delivered to the Pasmenco concentrator for treatment.

### The Mount Lyell Mining and Railway Co. Ltd, Mount Lyell Mine, Queenstown

The mine closed in mid-December 1994 after over 101 years of continuous mining. In its final full year of operation the mine achieved a record production of 29,000 tonnes of saleable copper and its best ever safety performance.

Ore mined totalled 1,695,464 tonnes at a grade of 1.91% copper; 95,411 tonnes were extracted from 50 Series with the remainder from 60 Series production and development areas. All but 3,927 tonnes were hoisted via the Prince Lyell Shaft. Prince Lyell pillars 67, 63 and 62 were blasted during the year. Production from the final 60 Series stoping block commenced.

A total of 1,387 metres of development and 290 metres of raise boring were completed. All development was carried out by contractors.

Ore treated totalled 1,700,054 tonnes which produced 112,924 tonnes of copper concentrate and 84,786 tonnes of pyrite concentrate. Copper concentrate contained 30,416 tonnes of copper, 635 kg of gold and 4,446 kg of silver. The high ore grade necessitated a 10% reduction in mill feed rate and corresponding increase in plant utilisation to achieve a fine grind and increased retention time. Copper recovery was excellent at 93.7%.

Capital expenditure totalled \$964,000. The greater part of this related to underground development and installations, including a loading station and pumping.

Proven ore reserves at 30 June 1994 totalled 811,000 tonnes at 1.75% copper, 0.57 g/t gold and 3.4 g/t silver.

Permanent employee numbers were reduced from 369 to 229 during the year. An additional 80 contractors were employed throughout the year. Eleven lost-time injuries were incurred compared with 36 in the previous year. This reduced the LTI frequency rate to 15.1.

The Tasmanian Government announced on 28 June 1994 that it had reached agreement with Gold Mines of Australia Ltd to take over the Mount Lyell leases on their relinquishment in 1995.

### **Savage River Mines, Savage River**

A study was undertaken to investigate the feasibility of an underground mining operation to follow on from the open-cut operations. A further study was undertaken to establish iron ore reserves which, because of the continuing steady market for the product, have extended the operation of the mine to the end of 1996 or early 1997.

Increased sales to both the Australian and Asian markets have required an increase in production to 1,500,000 tonnes of concentrate per annum.

The waste stripping program in the Northern Deposit open cut continued throughout the year, with only small tonnages of waste remaining at the southern end. There was little production from South Lens. Production for the year was:

All material mined	8 271 647 tonnes
Rock to waste	4 771 680 tonnes
Crude ore	3 499 967 tonnes
Concentrate produced	1 631 488 tonnes
Concentrate pumped	1 634 136 tonnes
Pellets produced	1 565 882 tonnes
Pellets shipped	1 460 562 tonnes
Concentrate and chip sales	97 598 tonnes

The slopes on the Central Deposit open cut were relatively stable, with only minor failures occurring due to ore extraction. A major wedge failure occurred in the north wall of the Northern Deposit open cut but did not pose a threat to operations.

As part of a feasibility study in connection with a possible underground operation, a diamond drilling program of 2,951 metres was completed on the Northern Deposit.

Capital expenditure related to waste stripping, pit stabilisation, vehicle replacement and the feasibility study. Work continued on plant corrosion control, pipeline and offshore maintenance, and mine site rehabilitation.

Employment was reduced from 289 to 229 by a voluntary redundancy program.

### **Tasmania Mines Ltd, Kara Mine, Hampshire**

Ore mined for the year was:

- Kara No 1—159,595 tonnes; and

- Kara No 2—82,301 tonnes.

Concentrate production was 132,433 tonnes of magnetite and 27 tonnes of scheelite. Sales of magnetite concentrate totalled \$4,239,662, while sales of scheelite totalled \$81,552. Sales of high grade magnetite ex Kara No 2 to TEMCO totalled 23,857 tonnes. An amount of \$160,800 was expended on work associated with a new coal washery circuit and \$14,751 was spent on work associated with tailings dams. The average number of employees for the year was 24. There were no lost time accidents for the period.

#### **RGC Renison Limited, Renison Mine, Renison Bell**

Continued low tin prices marred the achievements during the year. The Renison Goldfields Consolidated Board gave approval for the construction of an ore crushing and hoisting system including a shaft to 600 metres.

Employment totalled 235 people, a decrease of 22 over the previous year.

Ore production from underground was 619,880 tonnes at 1.54% tin.

Development completed during the year totalled 1,356 metres. An additional 258 metres of development was carried out by contractors for the extension of the southern 1,650 hanging wall crosscut which was used as a drilling horizon. One hundred and fifty-four metres of rising was done for ongoing ventilation connections, including starting the raise boring of the 7B Exhaust Rise.

The processing plant treated 623,770 tonnes to produce 7,525 tonnes of concentrate at a grade of 55.1% tin.

Areas above water level in 'B' tailings dam have been covered with tin flotation tailings to provide a barrier against oxidation of tailings and as a plant growing medium. Two hectares of 'A' dam, which was covered with flotation tailings in 1992-93, were sown to pasture with encouraging results.

Diamond drilling totalled 29,421 metres. This included ore reserve definition and Rendeep exploration below the 600 metre level in the north of the mine. Ore reserves at 1 January were:

- proved ore—2.8 million tonnes at 1.51% tin; and
- probable ore—4.4 million tonnes at 1.34% tin.

The Rendeep resource was not published.

#### **Anchor Tin Mine, Blue Tier**

Mancala Pty Ltd entered an Option agreement which provided access to inspect and review all information and records regarding mining lease 55M/89 and the associated exploration licence 5/88 at Royal George near Avoca.

A review of the existing plant and equipment, previous operating records, and the remaining resource formed the basis of a full feasibility study that investigated the viability of continued operation. The work included:

- 173 metres of underground diamond drilling;
- 151 metres of surface augering in the tailings dams;
- metallurgical review of the concentrator; and
- engineering review of the crusher plant.

The Royal George geological information also had an initial review but took a lower priority relative to the Anchor project.

Subsequent presentations to Tasmania—Development and Resources and the Hydro-Electric Commission confirmed project funding and operating parameters which made the commencement of mining and milling operations favourable.

#### **The Cornwall Coal Company No Liability, Duncan and Blackwood collieries, Fingal Valley**

Coal sales for the year were 307,837 tonnes. Total coal production was 480,404 tonnes, with a washery throughput of 478,756 tonnes yielding 301,080 tonnes of saleable coal (62.89% recovery).

Direct employment fell to 84, allowing for the closure of the Duncan colliery and the anticipated loss of the Australian Newsprint Mills' contract. Cartage contractors employed nine people and seven were employed intermittently to work the Huntsman open cut. The company achieved a year without any lost-time accidents.

Negotiations were successfully completed with The Shell Company of Australia Limited which resulted in Cornwall Coal Company NL acquiring the Shell lease over Mt Nicholas and retention licences in the Harefield, Dalmayne and Douglas River area.

#### *Duncan colliery*

Production was 249,759 tonnes from 1,200 metres of pillar retreat. Mining conditions were not favourable with faults, igneous intrusions and a mudstone roof restricting sections of pillar recovery.

#### *Blackwood colliery*

Production was 191,608 tonnes. Development extended workings by approximately 1,650 metres, although 500 metres of development along the western lease boundary to the northern boundary was in difficult mining conditions caused by faults, a mudstone roof and rib failure. The area was unsafe for pillar recovery and was abandoned. Further development was undertaken closer to the original entry headings, extending these by 500 metres. When the Shell lease became available the area was abandoned for the time being.

The current workings developed 650 metres north-west into the former Shell lease. Roof conditions have been variable. Rib bolting was essential because the overlying cover has varied between 300 to 400 metres in depth.

#### *Open cuts*

The Blackwood open cut produced 23,799 tonnes. The Huntsman open cut, formerly operated by the Tasmania Coal Company on the Shell lease, was operated by Cornwall Coal which produced 15,238 tonnes.

#### **Merrywood Coal Company Pty Ltd, Merrywood Colliery, Royal George**

Coal sales for the year were 64,115 tonnes, with raw coal production totalling 85,500 tonnes. Overburden removal was 609,000 cubic metres.

Thirteen people were employed at the mine and three full-time and one part-time employee serviced the operation from a workshop at Longford. The contract trucking operator employed another six people full time. A safety instruction program was commenced in the year employing an independent consultant.

Selective mining improved raw coal recovery to 83%, which included a very dirty top ply. Second quality coal was stockpiled for future washing. Investigations during the year proved the viability of upgrading the treatment plant and washing raw coal to increase coal recovery. A 75-tonne excavator was commissioned in June.

Exploration continued at Mt Puzzler, Royal George and Mt Rex. Drilling at Mt Puzzler and Mt Rex was likely to reveal viable but limited open-cut resources.

*Kimbolton Coal Joint Venture, Langlob*

Initial bulk sampling and drilling were carried out over several years. A five-hole drilling program was completed in June and a more substantial bulk sampling program was started with 2,500 tonnes stockpiled for washing at Merrywood for shipment to Australian Newsprint Mills.

**Comalco Aluminium (Bell Bay) Limited**

A total of 113,761 tonnes of aluminium was processed. Raw materials used were alumina, coke, furnace oil, pitch, aluminium fluoride and cryolite.

Employment at 30 June 1994 totalled 655 people, a reduction of 208 people for the year as production was reduced by 25% due to an oversupply of aluminium world-wide. Parts of No. 2 and No. 3 potlines were shut down.

Capital expenditure for the year was \$13.5 million with the greater part spent on improvements in the areas of safety and the environment. Major projects included:

- coarse butt cleaning—\$4.3 million;
- crust breakers—\$2.2 million;
- cell hooding—\$2.1 million;
- potline automation—\$0.7 million; and
- fume tower upgrades—\$0.5 million.

The average number of employees for the year was 774. Lost-time accidents totalled 121, with 1,755 lost-time shifts recorded.

**Index Mineral Processors, Heybridge**

Index Mineral Processors operated with four people for the year, producing high quality silica, mainly for overseas markets. Bagging of fine silica dust commenced and a market for this product was sought. There was no capital expenditure during the year and there were no lost-time accidents.

**Tioxide Australia Pty Ltd, Heybridge**

Titanium dioxide pigments were produced from ilmenite imported from Western Australia and high titanium slag from Canada. Employment at 30 June totalled 280 people. The average number of employees for the year was 255. Three lost-time accidents and 15 lost-time shifts were recorded.

The capital expenditure for the year was \$1.37 million which was mainly associated with converting the plant to utilise low iron feedstock to meet environmental requirements. A three-part strategy for achieving full compliance with both current and anticipated environmental legislation was developed during the year and involved:

- changing to low iron feedstock;
- design and fitting of a diffuser to the effluent pipeline; and
- developing markets for TIOLEACH (weak acid).

The first 20,000 tonne shipment of titanium slag from Canada arrived at Burnie in late May 1994 and the plant was converted to this feedstock on 17 June 1994.

Tioxide adopted the International Safety Rating System as the standard for site safety.

### **Mole Creek Limestone Pty Ltd, Mole Creek**

Overburden and quarry waste removal totalled 413,726 tonnes. Crushed limestone and quicklime tonnages produced were less than 1992-93, whereas hydrated lime production increased slightly.

There were 23 permanent employees and four part-time casuals at 30 June. The average number of employees for the year was 24. There were three lost-time accidents and 77 lost-time shifts.

Capital expenditure for the year totalled \$622,000. Major improvements were made to the quarry mobile plant fleet, with the addition of a new Caterpillar 330ME excavator and a new Terex 3305B dump-truck.

Additional grinding plant was installed at the crusher, with the addition of a Hazemag SAP-2 impactor. A micro-Pulsaire dust collector was also installed at the crushing plant to improve environmental conditions.

### **TEMCO (Tasmanian Electro Metallurgical Company Pty Ltd), Bell Bay**

Alloy production for the year amounted to 105,066 tonnes of ferro-manganese and 88,731 tonnes of silico-manganese. Of this output, 76% was exported to the Middle East, South East Asia and the United States of America.

At 30 June employment totalled 360, including 40 contractors. The average number of employees for the year was 356. Ten lost-time accidents and 251 lost-time shifts were recorded.

Capital expenditure for the year was \$5.514 million, of which \$1.5 million was directly related to occupational health and safety and environmental improvement.

- \$238,000 was spent on employee health. The major project was the establishment of an Employee Fitness and Rehabilitation Centre. In line with BHP/TEMCO's commitment to employee welfare, this facility has state-of-the-art equipment, and is supported by trained fitness advisers, an occupational health nurse and a medical officer. It was available for the use of all employees and their families, and was an integral part of the accident reduction strategy.
- \$704,000 was spent on many safety-related projects. Major projects included the procurement of pan conveyors to replace rubber conveyors in the sinter plant. This initiative was designed to overcome the fire risk to plant and equipment in the crushing module of the sinter plant.
- \$336,000 was spent on improving slag handling at F1, 2 and 3. A slag transporter moved molten slag from the furnace building to a new dump station. This reduced the manual tasks of furnace operators as well as improving hygiene aspects.
- \$112,000 was spent on upgrading fire detection and protection systems.
- \$601,000 was spent on minimising the impact of plant water emissions on the environment. The environmental improvement project was the design and construction of a wetlands system to treat plant run-off water. This project was the final phase of a five-year Environmental Improvement Program costing \$6 million. With the commissioning of the Wetlands in May 1994, TEMCO fully complied with licence conditions.

### **Pasminco Metals-EZ, Hobart**

Zinc concentrates roasted from Tasmanian and imported ores during the year totalled 404,939 tonnes, from which 193,763 tonnes of marketable zinc was recovered. In addition

354 tonnes of cadmium, 2,542 tonnes of copper sulphate, 23,386 tonnes of lead residue and 361,959 tonnes of sulphuric acid were produced. Production of single superphosphate, using phosphate rock and sulphuric acid, totalled 75,000 tonnes.

Employment at 30 June totalled 704 people, a reduction by 421 which was achieved by restructuring. The average number of employees for the year was 847. There were 27 lost-time accidents resulting in 1,372 lost-time shifts. Capital expenditure for the year totalled \$3.738 million and was spent on:

- Completion of No. 5 Gas purification plant for \$1 million. The new plant offered superior environmental and production performance compared to the four older plants it replaced.
- Designs for a second fixed stripping machine for the cell room for \$800,000.
- An initial expenditure of \$400,000 to replace eight of the cell room rectifiers with four new larger units.
- Two new loaders, valued at \$313,000 for the Fertiliser Department.
- Upgrading the PLC System on No. 1 wharf crane for \$141,000.
- A facility to allow ammonia supplies to be stored in aqueous form at a cost of \$257,000.
- Site drainage improvements, costing \$275,000, to improve the environmental performance of the plant.
- A system to transfer manganese from the cell room to leaching was carried out for \$126,000 and eliminated the need to stockpile manganese mud.
- A sump tank costing \$176,000 within the fertiliser plant to hold liquors and improve the environmental performance of the plant.
- Vehicles to a value of \$130,000.
- Fire protection systems costing \$120,000.

#### **Goliath Portland Cement Co. Ltd, Railton**

Overburden removal for the year was 44,000 cubic metres from the old quarry and 807,000 cubic metres from the new quarry. Production for the year was:

Limestone	1 100 000 tonnes
Clay	44 000 tonnes
Clinker	743 000 tonnes
Cement	773 000 tonnes

There were 227 people employed at 30 June 1994. The average number of employees for the year was 218. Six lost-time accident and 105 lost-time shifts were incurred.

Capital expenditure for the year totalled \$16.7 million for the new plant upgrade and \$16.0 million for the new ship *Goliath*. Expenditure on minor projects totalled \$0.7 million.

#### **K & D Bricks and Pavers, Hobart**

Production of fired clay bricks and pavers for the year June 1993 to May 1994 was 13.65 million units. Capital expenditure over the same period was \$850,000. This was made up of:

- installation of green sawdust dryer;
- installation of a new mixer and clay grinding plant; and
- new brick display area.

K & D Bricks and Pavers enjoyed a greatly improved safety record over the past nine months of the year, believed to be due to an incentive scheme which commenced in November 1993. A new safety committee completed a two-day training course. K & D endeavoured to improve the working environment for employees in the interests of safety. Work continued on the rehabilitation of the Oyster Cove property and the quarry at Forcett.

#### **Clifton Brick Tasmania Pty Ltd, Longford**

Material quarried totalled 40,360 cubic metres and material processed totalled 41,600 cubic metres. The average number of employees for the year was 46.6. There were six separate incidents involving four employees, for which total time lost was 72 days. A safety improvement program, started in 1992, was finalised.

#### **Australian Paper Ltd, Tonganah**

Production came from the No. 4, 4s and 8 pits. Sales, at 35,369 tonnes, were the highest ever recorded.

All material mined	347 976 tonnes
Raw clay mined	236 405 tonnes
Waste/overburden mined	111 571 tonnes
Concentrate produced	35 442 tonnes

Mine development waste was transported as backfill to the old No. 3 mine, which was in an advanced stage of rehabilitation. The waste silica dam was divided in two, and excavation of the front half provided further storage and a source of fill for rehabilitation. Capital expenditure was only \$22,000, as no major works were carried out.

#### **Boral Resources (Tasmania) Ltd**

The company produced 804,425 tonnes of material from its Tasmanian operations at thirteen locations. Capital expenditure on improvements and alterations totalled \$1,092,000.

#### **Beams Brothers Pty Ltd, Flowery Gully**

Production was 42,413 tonnes of Aglime, 34,860 tonnes of crushed stone, and 11,152 tonnes of ironstone.

Capital expenditure totalled \$180,000, with \$120,000 spent on a mobile crushing and screening plant and \$60,000 in establishing the dolomite quarry at Cressy. Major improvements included a new hammer mill, which was commissioned at the end of June.

#### **Brambles Australia Ltd Quarries**

Production from eleven quarries totalled:

Base/sub-base	315 000 tonnes
Ballast	33 000 tonnes
Aggregates	220 000 tonnes
Miscellaneous	32 000 tonnes
<b>Total</b>	<b>600 000 tonnes</b>

Tree planting continued at Ridgley and Western Junction, and a major rehabilitation project was completed at the Sisters Creek pit. Rock breakers were installed above the bins at Ridgley and Talisker.

### Hobart Blue Metal Industries Pty Ltd, Leslie Vale

Production from all crushing plants was:

Crushed rock	539 000 tonnes
Gravel	12 000 tonnes
Sand	3 500 tonnes

Twenty-two people were employed. Continual minor plant upgrading progressed. A sand washing and classification plant was commissioned at Huonville.

### The Readymix Group, Mornington

Total production of crushed stone and gravel was 204,081 tonnes. Ten people were directly employed at the quarry with drilling carried out by contractors.

### Cominex, Corinna

Silica flour production was 7,000 tonnes from the Corinna leases. The material was refined at Heybridge, with sales of 6,600 tonnes. Road gravel production totalled 3,900 tonnes of which 3,000 tonnes were sold and the balance held in stockpile.

### Tasmanian Gold Industry

Declared gold production for the year was principally from two sources:

- Pasmauco Australia Ltd Rosebery Mine; 194 kg in doré, 283 kg in copper concentrate; and
- RGC Mount Lyell Mining and Railway Co Mine; 635 kg in copper concentrate.

### Henty Gold Project

Development of the Henty Gold mine proceeded on schedule.

Eltin Mining was selected as the prime contractor for underground development. During the year the exploration decline was dewatered and all development for access and ventilation of the underground shaft collar was completed. The shaft brace area, sky shaft and winder chamber were excavated and civil construction work completed. Sky-shaft steelwork was installed in preparation for shaft drilling.

A 575 metre deep pilot hole was drilled from the surface to guide the shaft reaming heads. The drilling contractor, Zeni Drilling, was on site at the end of the year.

The mine access road was upgraded, administration offices constructed and main ventilation fan installed. The mine water treatment system, comprising pipeline, settling ponds, flocculation plant and wetland filter, was completed. Total expenditure on the project for the year was \$10,985,000.

Zone 96 Probable Ore Reserve was stated as 506,000 tonnes at 26.9 g/t gold.

The average number of employees on site for the year was 35. Over the year more than 200 personnel were inducted to work for the various contractors. One lost-time injury was incurred resulting in a LTI frequency rate of 14.5.

### North East Tasmania

#### *Beaconsfield Gold Joint Venture*

During 1993-94 a five-hole diamond-drilling program was completed from the surface to test the reef to 200 metres below the old workings. All holes intersected the reef and assays averaged above 20 grams/tonne. The results of this program were sufficiently encouraging for the Joint Venture partners, Beaconsfield Gold Mines NL and Allstate Exploration NL, to approve commitment of \$2.1 million to a further phase of exploration. By the end of the year, dewatering had progressed to approximately 150 metres.

*Tas Tiger Mines Pty Ltd (Alberton area)*

During the year, Mancala Pty Ltd entered an Option to Purchase agreement with Tas Tiger Mines Pty Ltd regarding three tenements. Upon completion of an agreed exploration program, Mancala proceeded to exercise its option over the leases at 27 June 1994. Tas Tiger Mines Pty Ltd acknowledged the transfer.

The scope of exploration work included the re-establishment of mine accesses for inspection, geological mapping and diamond drilling (IT46), with all work carried out in these leases centred around the Ringarooma United, Long Struggle, and Mount Victoria mines.

Drilling was:

Ringarooma United mine	255.0 metres
Long Struggle mine	530.8 metres
Mt Victoria mine	228.8 metres
<b>Total</b>	<b>1 014.6 metres</b>

All drilling was carried out from underground under difficult conditions due to the limited work space available. Holes were designed to test the extension of known reefs and appeared to show reasonable continuity along strike and down dip. Assay results were encouraging although not conclusive.

## FURTHER READING

Other statistical tables relating to this chapter are located in the Historical Series at the back of this book.

### ABS PUBLICATIONS

*Actual and Expected Private Mineral Exploration, Australia* (8412.0)

*Mining, Australia, Preliminary* (8401.0)

*Mining Industry, Australia* (8402.0)

*Mining Production, Australia* (8405.0)

### OTHER PUBLICATIONS

Mineral Resources Tasmania, *Annual Review 1993-94*.

### ACKNOWLEDGEMENT

Tasmania—Development and Resources

# 17 | Marine and coastal fishing



*The Mercury*

The traditional method of growing oysters is to house them in mesh bags in inter-tidal leases.

AS TASMANIA'S FISHERIES are vitally important to the economic, and social, well-being of the State, the industry and Government is developing fishery management plans to ensure that commercial and recreational fisheries will be sustained for ourselves and future generations.

Tasmania's commercial fishing industry has diversified in recent years as traditional fish species have become scarce and more expensive. Aquaculture is now a major component of Tasmania's fishing industry because of its profitability.

The estimated value of fish landed in Tasmania for the 1993-94 season from local and Commonwealth wild fisheries was \$122.1 million, a 23.2% increase on the 1992-93 figure. For the same period the value of aquaculture increased by nearly 14% from \$65.7 million in 1992-93 to \$74.8 million.

There was an average of 1,500 people employed in the fishing industry in the twelve months to June 1995. Employment in aquaculture in the 1990s (up until the beginning of

1995) has been around 600. The most economically valuable marine harvest in 1993-94 was abalone, worth more than \$73 million.

The most valuable aquaculture harvest in 1993-94 was salmon, worth \$58 million.

### Concerns in the fishing industry

As costs for fishing such as licences and levies continue to rise, pressure is placed on fishers to obtain the most from their resources.

Under-capitalised fishers who wish to update their equipment are finding it increasingly difficult to find finance to do so, while over-capitalised fishers have boats and equipment to maintain as returns on many species decline.

However, proposals to encourage some industry members to leave sea fishing for less volatile industries, such as aquaculture, are expensive and have met with little success.

Fishing by non-resident fishers in Tasmanian waters has had an adverse effect on fish populations, resulting in calls from local fishermen to tighten catch limits. One possibility is a return to hook fishing in order to protect threatened species.

The industry is also aware that a lack of biological knowledge concerning some species is restricting its ability to fully utilise not only existing commercial resources, but also those potentially valuable and populous but as yet commercially undeveloped species.

### GROSS VALUE OF TASMANIAN MARINE AND COASTAL FISHERIES PRODUCTION

	1992-93 (\$ million)	1993-94 (\$ million)	% change
Rock lobster	41.3	41.3	0.0
Abalone	50.1	73.1	45.9
Other fish	7.7	7.7	0.0
<b>Total wild fisheries</b>	<b>99.1</b>	<b>122.1</b>	<b>23.2</b>
Salmon	49.0	58.0	18.4
Trout	5.6	5.7	2.0
Oysters	11.1	11.1	0.0
<b>Total aquaculture</b>	<b>65.7</b>	<b>74.8</b>	<b>13.9</b>
<b>Total fisheries</b>	<b>164.8</b>	<b>196.9</b>	<b>19.5</b>

Source: ABARE, *Australian Fisheries Statistics 1994*

### SEAFOOD EXPORTS, 1993-94

	Tasmania		Australia	
	Quantity (tonnes)	Value (\$'000)	Quantity (tonnes)	Value (\$'000)
Fish (a)				
Live	n.a.	163	n.a.	5 504
Fresh, chilled or frozen				
Whole	1 947	25 527	7 957	59 861
Fillets	1 776	23 049	3 669	36 791
Other	93	2 526	2 862	30 599
<b>Total fish</b>	<b>3 816</b>	<b>51 265</b>	<b>14 488</b>	<b>132 755</b>
Crustaceans and molluscs—				
Canned	—	—	57	720
Rock Lobster	272	10 726	13 481	467 549
Prawns	—	—	9 130	196 919
Abalone	907	73 241	2 556	187 447
Scallops	41	671	4 739	82 113
Oysters	20	157	47	576
Other	15	714	3 637	37 866
<b>Total shellfish</b>	<b>1 255</b>	<b>85 509</b>	<b>33 647</b>	<b>973 190</b>

(a) Tuna transhipped at sea or captured under joint venture or bilateral agreements are not included.  
Source: ABARE, *Australian Fisheries Statistics 1994*

**FISHERIES UNIT VALUE, TASMANIA, 1993-94**

Species	Weight (tonnes)	Value (\$'000)	(\$/kg)
Australian Salmon	703	389	0.55
Atlantic Salmon	4 200	58 800	14.00
Flathead	124	188	1.50
Flounder	27	126	4.68
Garfish	85	281	3.30
Grenadier	6	5	0.91
Ling	105	158	1.50
Mackerel (excluding Jack Mackerel)	9	133	14.80
Morwong	290	1 157	3.99
Ocean Trout	2 680	30 820	11.50
Orange Roughy	n.a.	n.a.	n.a.
Snoek (Barracouta)	60	34	0.57
Trevalla	363	1 831	5.05
Trevally	14	16	1.10
Trumpeter	121	416	3.45
Tuna	36	104	2.87
Warehou	473	761	1.61
Rock Lobster	1 907	41 287	21.65
Other crustacea	277	685	n.a.
Abalone	1 843	73 100	39.70
Mussels	300	1 050	3.50
Oysters	2 430	11 000	4.50

Source: Statistical Services, Marine Resources Division, Department of Primary Industry and Fisheries

**MOLLUSCS****Abalone**

Of the seven species of abalone found on the southern coast of Australia, three are harvested commercially: the Greenlip Abalone (*Haliotis laevis*), the Blacklip Abalone (*Haliotis ruber*), and Roe's Abalone (*Haliotis roei*). Blacklip Abalone constitutes the bulk of the Tasmanian catch.

Abalone maintained its position as the single most significant contributor to the total Tasmanian sea fisheries catch in 1993-94. It is taken by commercial divers from Tasmania's coastal reefs in depths of up to 25 metres. The industry is regulated by minimum size limits, restricted licensing, Total Allowable Catch (TAC), Individual Transferable Catch Quota (ITCQ) and area restrictions.

Since 1992 the TAC of abalone has been 2,100 tonnes consisting of 3,500 units each of 600 kilograms. Commercial abalone divers, of which there are 125, are allowed to harvest any number of units, subject to their availability from unit holders.

In 1994 a new royalty structure was introduced for abalone. At the end of each quarter a calculation is made on the average beach price of abalone. A royalty is then charged on the beach price, which is offset by an amount calculated using an index of fishing costs. In 1993-94, \$3,700,000 was collected in abalone licence fees though the new abalone licence fee only applied for the fourth quarter of the financial year.

A three-year study into abalone numbers, size and rates of growth in different regions is presently being financed by the Fishing Industry Research and Development Trust Fund with the aim of setting legal size limits according to area.

## The Marine Farming Planning Act

This Act, passed by the Tasmanian Parliament in 1995, regulates marine farms in Tasmanian waters and supersedes various provisions of the *Fisheries Act 1959 (Tas.)*. As a consequence of the marine farm industry's rapid growth in Tasmania in the 1980s the Fisheries Act became irrelevant.

One of the features of the new Act is a mechanism for the establishment of marine farms, and the obligations of proponents to inform the local community with a detailed draft plan.

It is now mandatory to have an assessment of the environmental impact together with proposals to mitigate against any undesirable features of the proposed development.

The draft plan and comments are reviewed by an expert panel who make recommendations to the Fisheries Minister.

The Act also establishes a Board of Advice and Reference to assess the best method of allocation of prospective marine farms, and assess who is the best person to be granted a lease. The objective of this provision of the Act is to ensure that developments that take place are also in the best interest of Tasmania. The Act has provision for bonds, paid by the leaseholder, to ensure that lease sites are properly maintained. There is also a demerit point system similar to that which operates on Tasmania's roads, to increase the powers of enforcement of the provisions of the Act.

Tasmanian Fishing Industry Council, *Fishing Today*, Hobart, June/July 1995

### Mussels

Production of mussels increased from about 200 tonnes valued at \$0.6 million in 1992-93 to 300 tonnes valued at approximately \$1 million in 1993-94.

Harvesting of mussels from the sea bed has resulted in a depletion in numbers. This has led to a mariculture industry where mussels are grown on rafts and poles in order to supplement the natural catch. New enterprises have been encouraged to develop their sites in the hope of a greater return and increased tonnage.

Mussels follow oysters as molluscs favoured by aquaculturists as they are sturdy, fast-growing shellfish rich in protein, vitamins and minerals. Cleanliness of export mussels is ensured by depositing them in a solution of sodium hypochlorite, followed by a cleansing in pure water to rid the mussels of noxious chemicals. Meat is either frozen or smoked, then bottled or canned in either oil or brine.

### Scallops

Following the disastrous result of the 1987-88 scallop harvest, the fishery has been closed to commercial fishing, with only a limited recreational season permitted.

Since the closure of the D'Entrecasteaux Channel in 1991 the number of Doughboy Scallops (*Cblamys asperrimus*) and Queen Scallops (*Equicblamys bifrons*) have increased slightly in numbers showing that the annual recreational scallop season has not led to further depletion of stock.

Surveys conducted by the DPIF and CSIRO have indicated a need for supplementary seeding of scallop from commercial sources as natural replenishment of stock is variable.

### Mystery Pilchard death in Tasmanian waters

In March 1995 a series of Pilchard deaths in Tasmanian waters and elsewhere in Australia's southern oceans had no obvious cause.

Research into the cause of death at the Department of Primary Industry and Fisheries marine laboratory based at Taroona and at other marine laboratories in southern Australia was undertaken almost immediately. Only adult Pilchard died, while juvenile Pilchard and other fish appeared to be unaffected.

Some scientists believe that nutrient-rich cooler Antarctic waters with its high concentration of phytoplankton may have been responsible for the suffocation symptoms seen on many of the Pilchards. However, no algal presence appears to be associated with Pilchard kill in Tasmanian waters. Pollution has been discounted as a likely factor.

Tests have shown that there were no risks to humans from the Pilchard kill, and no risks to oysters, mussels and scallops.

## CRUSTACEANS

### Southern Rock Lobster

Commercial Southern Rock Lobster (*Jasus edwardsii*) fishing has been one of the major contributors to the Tasmanian fishing industry in recent years, in spite of the fact that total catch weight is relatively low compared to Tasmania's other commercially fished species.

Catch weight for the 1993-94 season was 1,907 tonnes and was worth more than \$41 million.

Southern Rock Lobster is taken from Tasmania's coastal reef areas using baited pots. Under current regulations pots must have mandatory escape gaps to protect undersized lobsters from capture. Legal minimum lengths differ from 105 millimetres for females to 110 millimetres for males. A closed season operates from 1 May to 31 October for females and 1 September to 31 October for males.

Other measures to safeguard the Tasmanian Rock Lobster industry include an egg protection scheme. Such measures are needed as research has indicated growth rates in the north of the State are such that 50% of rock lobsters reach legal size before they reproduce, hence protective measures are required to ensure the industry remains viable.

Regulations governing the Southern Rock Lobster industry including season closures, limited entry, vessel size and weight, and pot allocation are set out in the *Fisheries Act 1959 (Tas.)* and are frequently reviewed by the Department of Primary Industry and Fisheries. For the 1993-94 season there were about 10,000 pots distributed among about 340 commercially licensed vessels.

## WILD FINFISH

Three oceans (Indian, Pacific and Southern) contribute 80 of the 125 off-shore species and approximately 230 inshore species common in Tasmania's annual fish harvest.

The Tasmanian Fishing Region (TFR) is that area south of latitude 39°12' within 200 nautical miles of the Tasmanian coast. It can be classified into three areas: inshore, near-shore and off-shore. Despite the domination of crustaceans and molluscs to Tasmanian fisheries, the contribution of wild finfish is still substantial.

## Striped Trumpeter

The Striped Trumpeter (*Latris lineata*) is a widespread Tasmanian fish highly prized as a table fish. It is also found in southern Australian waters and around New Zealand. They live mainly on the continental shelf over rocky bottoms to depths of about 300 m.

During the first half of the 1980s annual catches in Tasmania were less than 5 tonnes. In 1990 and 1991 catches were over 70 tonnes.

Striped Trumpeter is taken by a number of fishing methods, principally hook fishing, which typically accounted for 70% of the catch in the 1990s. Gillnets represented a further 20% of the catch. Recreational anglers also take Striped Trumpeter but the extent of their catch is not known.

While Striped Trumpeter is taken from around Tasmania, about 80% is taken from

shelf grounds on the East Coast and Flinders Island. Smaller catches are taken from the north-west, west and south-west. The reason for this is not clear, but these varying catches may be an indication of trumpeter numbers or reflect the concentration of fishing activity around the State.

Most catches occur in summer and autumn. Most fish caught are between 50 and 70 cm, well over the legal limit of 33 cm. Occasionally individuals are caught over 80 cm in length and have been measured at up to 120 cm in length and 25 kg in weight.

Current stock levels in Tasmanian waters are not known though there are concerns that localised depletions are occurring. More information is needed on the Striped Trumpeter especially its movements, reproductive biology, growth and mortality.

Source: Jeremy Lyle, 'Species status report: Striped Trumpeter', *Fishing Today*, Hobart, April/May 1995

## Inshore fisheries

### *Estuarine*

The environment in estuarine waters is unfavourable to most ocean species as the freshwater from rivers dilutes the salt water. Only about a dozen fish species inhabit estuarine waters, most of which are not sought commercially.

### *Coastal*

The most valued inshore species taken from Tasmanian waters are the Australian salmon. Of the two common species of Australian salmon, the Eastern Australian Salmon is the only species important to Tasmanian fishers.

The salmon form large schools off the coast of New South Wales and pass Tasmanian shores as part of their migration to Western Australia.

The quantity of Australian salmon landed in Tasmania in 1993-94 was 703 tonnes. The value of this catch was estimated at nearly \$0.4 million. Catches of Garfish, another important inshore species were 85 tonnes valued at nearly \$0.3 million in 1993-94.

## Near-shore demersal fisheries

These fisheries produce a significant portion of Tasmania's total catch from the TFR. Important near-shore species include Jack Mackerel and shark. Other fish species common to near-shore waters include dory, trumpeter, flathead, snoek and tuna.

Although the dark oily flesh of the Jack Mackerel is not appreciated here, large quantities are canned, smoked, pickled or processed into pet food.

Shark, among the most widely distributed of all fish species, inhabit waters up 2,000 metres deep, shallow coastal waters and sometimes venture deep inland into freshwater systems. In size they range from less than a metre to 15 metres for the largest fish of all, the Whale Shark. Species common in Tasmanian waters include the Blue Pointer, White Pointer, School Shark and Gummy Shark.

While catches of shark and skate do not compare with those of Jack Mackerel, they have become a far more financially viable source of income than their near-shore counterparts. Due to large catches of shark and skate in recent years the industry is in danger of over exploitation. Several protective measures have been put into place to try and reverse the trend. Such measures have included classifying some waters as shark nurseries.

### **Off-shore fisheries**

The most important species taken from Tasmania's off-shore waters include Orange Roughy. A moderately large fish weighing over three kilograms, Orange Roughy were first discovered by the research vessel *Challenger* off Tasmania's West Coast in the early 1980s.

Trawling for Orange Roughy can be difficult as the fish inhabit rough sea beds and many fish may be missed in a pass of the net. A serious problem with trawling is the discovery that schools of roughy do not disperse after spawning. Consequently, many juvenile fish are taken and this leads to over-fishing.

Recent closures and reductions in the Total Allowable Catch have been introduced to offer some protection for the species. Minor off-shore species caught in Tasmanian waters include grenadier, flounder and dory.

## **AQUACULTURE**

Aquaculture is the process where fish and occasionally shell fish production is controlled from hatching, upbringing and harvesting, to packaging and marketing. In Tasmania the industry is one of growing significance. As stocks of wild finfish diminish, the need for a sustainable, self-managed resource increases as fishers try to assure themselves a secure future.

The industry is relatively new to Tasmania. It was first introduced in 1984 when the Department of Sea Fisheries took delivery of 100,000 Atlantic Salmon ova, which were hatched and reared at their Tarooma research laboratory. Since that time aquaculture has become a thriving business contributing considerably to Tasmania's total catch weight and value. The two most valuable aquaculture species are Atlantic Salmon and Pacific Oysters. Rainbow Trout and mussels are also farmed successfully.

### **Atlantic Salmon**

The value of the Tasmanian Atlantic Salmon industry in 1993-94 was \$48 million from a yield of 4,000 tonnes. Most of Tasmania's Atlantic Salmon is exported to mainland Australia. Japan is also a substantial market because of Tasmania's reputation for quality food and unpolluted waters.

The process begins at a salmon hatchery at Wayatinah in the State's central highlands. Fertilised eggs are incubated and hatched as sac fry. Once developed to a weight of four grams, the fry are transferred to outdoor tanks until they reach the smolt stage. At this point smolt weighing approximately 65 grams are transferred from freshwater and allowed to acclimatise slowly to the salt-water environment. Fish are graded according to size, with fish of the same size penned together so that smaller fish do not have to compete with

larger fish for food. Attention is given to the feeding program to ensure that fish receive the correct daily intake. Any change in eating behaviour is noted as it may be an early sign of a problem.

In order to keep the fish population healthy, daily oxygen, temperature and salination checks are performed; predator nets maintained; pen nets changed (to reduce algal growth) and dead fish removed.

When mature fish reach a whole weight of 3.5 kilograms the harvesting process begins. Fish are taken from their pens (in a canvas dipnet in order to prevent bruising), anaesthetised with carbon dioxide, killed and bled. A correct bleeding procedure is important to improve the appearance of the flesh of the fish and increase shelf life. Once packaged, fish can be air freighted to fish retailers across Australia. The whole process, from harvest to delivery, takes as little as 24 hours and ensures fresh delivery.

#### *Disease risk with salmon imported from Canada*

The General Agreement on Tariffs and Trade (GATT) has provided for freer international trade. This process not only gives Australian producers better access to export markets, but also gives foreign exporters greater access to our domestic markets. Current negotiations surrounding the importation of Canadian salmon into Australia (as a part of the broader arrangement which includes the exporting of Australian beef to Canada) are of concern to the Tasmanian salmon industry.

Tasmanian salmon producers claim that the importation of Canadian salmon could potentially introduce disease that would be detrimental to the local industry. This issue is currently being considered by the Commonwealth Government.

#### **Oysters**

Oyster farming makes a significant contribution to the total value of all Tasmanian fisheries. The most common oyster cultivated in Tasmania is the Pacific Oyster (*Crassostrea Gigas*) as it grows to a marketable size in half the time of the more expensive Tasmanian Flat Oyster (*Ostrea Angasi*).

The quantity of oysters produced in Tasmania has remained the same since 1991–92 with approximately 2,400 tonnes at a value of just under \$12 million. Tasmania's oysters are exported to mainland Australia and a large Asian market, primarily Hong Kong, Japan and Singapore where they are considered a delicacy.

The process of oyster production begins at a seed hatchery where oyster larvae are individually set on minute pieces of shell. After four days the larvae (now called spat) are moved into an upwelling system and fed on microalgae. Oyster spat of similar size are kept together in order to ensure even feeding. When spat reach between 0.7 and 1.0 millimetres in size they are conditioned to an outside water temperature of 10°C to 11°C, as opposed to the nursery level of 23°C to 24°C. At between 3 and 4 millimetres, spat are put into systems to enable controlled growth.

Once seed oysters reach between 6 and 8 millimetres they can be processed in one of two ways. The traditional method of processing oysters is to house them in mesh bags in inter-tidal leases. Oysters have to be brought in on an ebb tide, worked and graded before being reset on the next tide resulting in long hours of labour-intensive work that is determined by tidal movements.

The more recent approach is the long-line technique. This involves stacking seed oysters in plastic trays, and joining eight to ten trays to form modules. The modules are then suspended from long-lines at depths of up to five metres. This process reduces sedimentation and keeps the oysters free from predators such as starfish. Harvesting the oysters involves hauling the long-lines by crane onto a barge. Most importantly, harvest

timing is not restricted by tidal movements and production costs are further reduced by working more normal hours.

Oysters must be handled every six to eight months in order to harden the shell. A hard shell is imperative to keep oysters alive and therefore fresh once they leave the water. While a soft-shelled oyster will last no more than two days when removed from the water, a hard-shelled specimen can survive up to two weeks. After 12 to 14 months oysters are harvested, graded by hand and processed either live or frozen for the export market.

As oysters are filter-feeders they cannot select their food and have to accept whatever comes. This may be faecal matter, oil, noxious chemicals, biotoxins or heavy metals. Because of potential water pollution problems the Department of Primary Industry and Fisheries has implemented the Shellfish Sanitation Program, which involves monitoring all shellfish for microbiological contamination.

It is particularly important after periods of heavy rainfall when oysters are most susceptible to contamination. Any contamination problem detected in the harvest can be traced to its source and the affected lease closed until the problem is rectified.

## RESEARCH AND DEVELOPMENT IN THE FISHING INDUSTRY

Research and development form an integral part of effectively managing Tasmania's fisheries. A lack of research can lead to poor understanding, inadequate management and exploitation of Tasmania's fish resource. Research programs into Orange Roughy, Southern Rock Lobster, scallops and Jack Mackerel have resulted in changes to management policies by the Division of Sea Fisheries in order to halt the depletion of Tasmania's fish stocks.

The South-East Fishery (SEF) is one of the most important fisheries in Tasmania due to its large contribution to total catch weight and value. The SEF is a combination of three separate fisheries: the inshore fishery; the shelf fishery (known as the South East Trawl) and the deep-water fishery.

While 16 of the many species commercially fished have a quota, only five or six are worthy of an individual research program. The traditional focus of research into fishery management has involved single species analysis, but as costs continue to rise this becomes a less viable option.

The CSIRO is in the process of implementing a strategic research program to assess the habitat and ecosystem of the SEF in order to define a management plan to sustain the fishery in the future. The program will be a long-term effort maintained over three to five years, as short-term research does not provide sufficient information for informed decisions.

The program aims to identify interactions among species and examine habitat requirements. This will involve research of stock structure, fish taxonomy and genetics, and food distribution. This will enable the CSIRO to establish the structure of the SEF ecosystem and determine a strategic management plan that will optimise yield and sustainability for the future.

Another research project is the development at St Helens of a hatchery and nursery to study the growing techniques of oysters and scallops. The research involves breeding both oysters and scallops, selection of better strains of algae and even development of a uniform shape for oysters. By developing larvae to full adult size in temperature controlled tanks, selected species can be fed proven strands of algae for year-round production. More importantly, species can be monitored closely. Adverse conditions normally encountered in the wild can either be avoided or easily rectified.

## COMMONWEALTH FISHERIES

### **The South East Trawl**

Orange Roughy constitutes an important part of the South East Trawl catch, with very large harvests taken from off-shore Tasmanian waters. Because of fears of over-fishing, catch size has been reduced to provide some level of protection for the fishery.

Other valuable species harvested from the SET include Morwong, Tiger Flathead, School Whiting, Gemfish and Blue Grenadier.

### **The southern shark fishery**

The shark fishing industry declined in past seasons because of over-exploitation. In 1993-94, 25,750 tonnes of shark at a value of \$7.7 million were taken.

Scientific studies have concluded that only one-seventh of the original Tasmanian shark population exists and that the fishery will be on the verge of biological collapse within seven years.

A program to create shark nurseries around the State has commenced. The program's aim is to protect young sharks in the hope that numbers will steadily increase to the point where they are no longer regarded as an endangered species.

Shark fishers generally agree that fishing levels must diminish but believe that scientific forecasts are too pessimistic.

According to the National Fishing Industry Council, official encouragement of over-fishing in order to earn export income, licence fees and revenue has caused the problems.

A conference organised by the Australian Fisheries Management Association and the Southern Shark Management Advisory Committee on shark-fishery management concluded that tighter controls on the shark fishing industry were needed in order to protect it from future over-exploitation.

Measures used in other fisheries, such as regulating the total quantity of the catch or setting quotas for each boat, are not believed to be appropriate to the shark industry. The favoured recommendation is for protection of pregnant females. This can be achieved by a rolling seasonal closure to protect females as they move along the coast.

## LICENSING

Licensing for marine and coastal fishing in Tasmania is controlled by the Department of Primary Industry and Fisheries which issues licences in order to regulate the industry. Licences issued by the DPIF include the:

- Tasmanian Fisherman's Licence;
- Fishing Boat Licence;
- Commercial Diving Licence;
- Commercial Abalone Diver's Licence;
- Crayfish Pot Licence; and
- Processing Premises Licence.

The Fisherman's Licence is the most common licence and is required by all commercial fishers in order to catch and sell fish from a licensed fishing boat.

In 1993-94 the DPIF received approximately \$8.5 million in fisheries licence fees and approximately \$410,000 in marine farms licences.

## FURTHER READING

### ABS PUBLICATIONS

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### OTHER PUBLICATIONS

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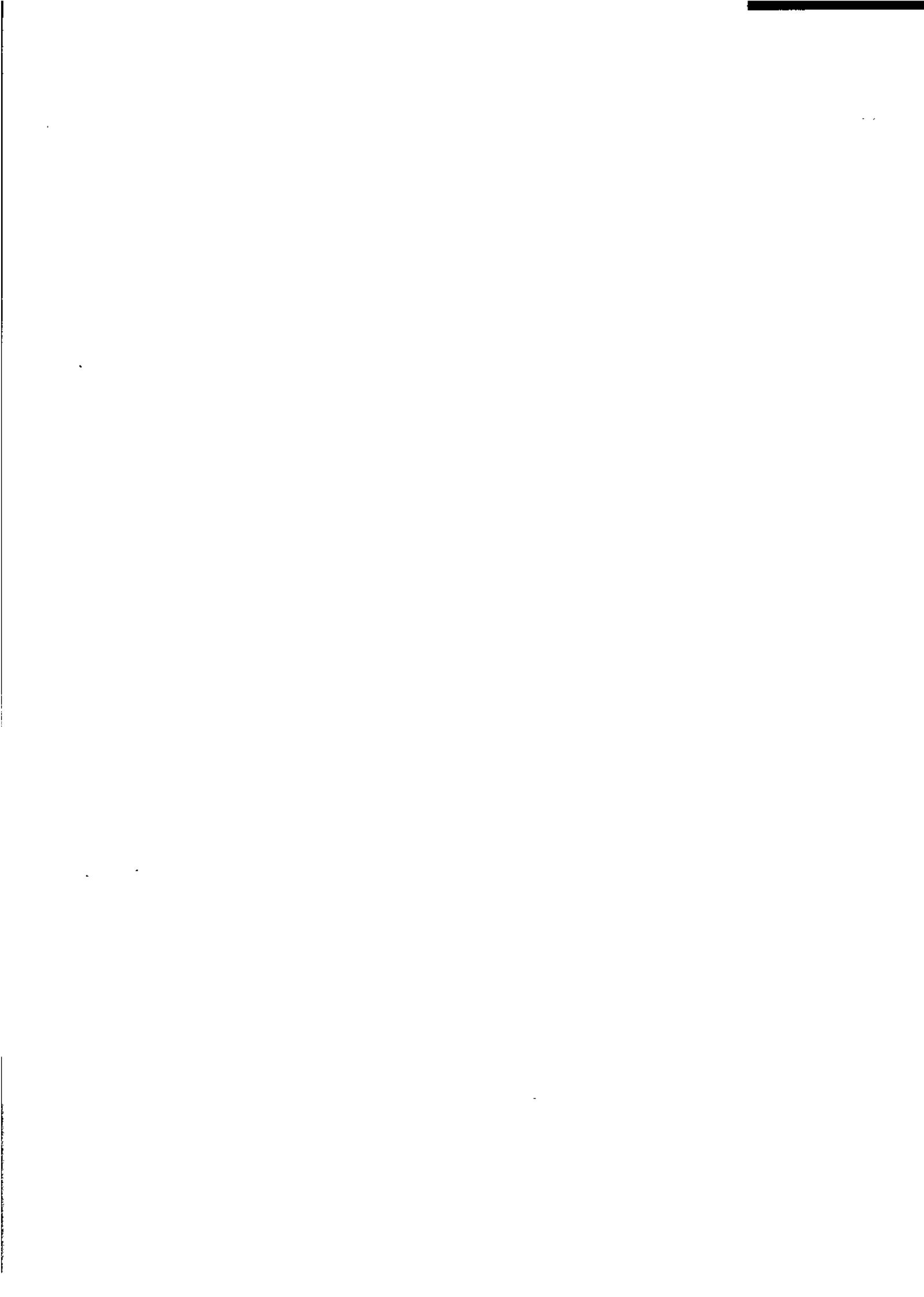
Department of Primary Industry and Fisheries, *Tasmanian Rural and Fishing Industry Profiles*, Hobart 1993.

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### ACKNOWLEDGEMENTS

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# 18 | Forestry



*Tasphoto Services*

Tasmania's forests are the source of a variety of wood products including sawlogs, veneer logs and pulpwood from both hardwood and softwood forests.

TASMANIA HAS A WIDE RANGE of native forest-based industries. These vary from woodcraft to wood fuels, from veneer manufacture and sawmilling to woodchip, pulp, newsprint and fine-paper making. Other important forestry sector industries include leatherwood honey production, tourism and recreational activities based in multiple-use forests.

## PUBLICLY-OWNED FORESTS

The majority of Tasmania's forests (68%) are managed by Forestry Tasmania for (wood production, recreation, conservation and other values), or by the Department of Environment and Land Management, for conservation and recreation. By comparison, 30% of Tasmania's forests are privately owned and managed. They are subject to regulation by the *Forest Practices Act 1985 (Tas.)* when they are logged commercially.

### **Forest type and area**

Several different kinds of native forest, including rain forest and open eucalypt forest, and plantation grow in Tasmania, covering a total of about 3,317,000 hectares, or 49% of the State's area. This compares with 59% forest cover at the time of European settlement. Although a significant proportion of the forests is protected for its conservation values, some forest types, such as rainforest, are better reserved in terms of total area than others, such as wet and dry eucalypt forest.

One quarter of Tasmania's forests are protected in formal conservation reserves, such as National Parks and Forest Reserves, or are located in Recommended Areas for Protection.

About 36% of the forest is in multiple-use forest land, which means it is available for logging except where forests are inaccessible, managed for non-wood values, or because of the requirements of the Forest Practices Code. Private forest is also available for logging under the same conditions as multiple-use forest land, provided it is the land owner's intention to log their forest.

### **Non-wood values**

Forests have intrinsic values, which include consideration of the visual landscape, cultural heritage, wilderness, biodiversity and geodiversity.

These intrinsic values may be protected by placing the forest in a conservation reserve, or they may also be conserved through the employment of non-reserve methods, such as many of the prescriptions in the Forest Practices Code.

#### *Visual landscape*

The principal objective of managing the visual landscape in Tasmania is to moderate the effects of forest harvesting on the scenery. Forestry Tasmania manages landscape as a resource, and landscape analysis for forest harvesting is carried out in sensitive areas. Currently, many visual management issues arise from timber harvesting on public and private land, which suggests that the rights and responsibilities of forest managers and the general community with respect to management of the visual landscape need to be better defined.

#### *Cultural heritage*

While cultural heritage management encompasses both Aboriginal sites and historic sites, there is a legislative requirement for the conservation of Aboriginal sites, but not for historic sites. The current systems for assessing cultural heritage in forests have deficiencies, but Forestry Tasmania has established a monitoring process to assess how well Forest Practices Code requirements are adhered to in relation to cultural resource management.

#### *Biodiversity*

The protection of forest biological values is catered for under the Forest Practices Code, where forests are subject to commercial harvesting. The status of rare, vulnerable and endangered vertebrate animal and vascular plant species is closely monitored for their continued survival.

#### *Geodiversity*

The forests also contain earth resources (rocks, land forms and soils) which have conservation values. Inventory work is being done with the intention of establishing the location of significant sites.

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**CROWN FORESTS, MANAGEMENT, 1993-94**


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Plantations (softwood and hardwood)	
Established (ha)	2 721
Total softwood area at 30 June (ha)	47 847
Total hardwood area at 30 June (ha)	9 654
Crown timber sold—	
Native Forests (m <sup>3</sup> )--	
Sawlogs	365 229
Pulpwood (log equivalent)	1 406 879
Round and hewn timber	5 314
Fuelwood (log equivalent)	58 882
Softwood plantations (m <sup>3</sup> )—	
Sawlogs	295 615
Pulpwood (log equivalent)	358 141
Round and hewn timber	12 173
Revenue	
Royalties (pulpwood and other)	\$20 367 844
Royalties (sawlog)	\$16 239 746
Road charges	\$ 4 086 381
Expenditure—	
Public forestry	\$40 957 401
Private Forestry Division	\$1 608 739
Dividend and tax equivalent—	
Dividend	\$5 144 384
Tax equivalent	\$2,536,733

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Source: Forestry Tasmania

### Wood products

Tasmania's forests are the source of a variety of wood products including sawlogs, veneer logs and pulpwood from both hardwood and softwood forests. Harvesting of the forests for wood products is regulated by the *Forest Practices Act* which has a number of mechanisms to ensure that forest operations are conducted in an environmentally acceptable manner.

Although the amount of wood products harvested from Crown and private native forests has dropped in recent years, the Radiata Pine harvest has increased over the past five years. The bulk of sawlogs will continue to come from mature forests, but regrowth forests will make a gradually increasing contribution to the veneer log harvest. There continues to be a surplus of wood which is best suited to pulp and paper manufacture.

While it is Forestry Tasmania's policy to reforest all land that is harvested for wood products only partial reforestation on private property is required under the terms of the 1986 Memorandum of Understanding between the State and Federal Governments.

The Resource Assessment Commission defines sustainable yield as the maximum yield of commercial timber that can be maintained from a forest under a given management regime. In Tasmania, the sustained yield for eucalypt sawlog and veneer logs from Crown multiple-use forest land has been set at 300,000 cubic metres per annum. Pulpwood made available from the harvest of these logs is currently well in excess of the needs of domestic paper manufacturers and woodchip exporters.

## The Cooperative Research Centre for Temperate Hardwood Forestry

The Centre—one of the first of the national series of Cooperative Research Centres or CRCs—was established in 1991 and is based at the Hobart campus of the University of Tasmania.

Its four objectives are:

- developing improved forest management systems to increase and sustain wood production in hardwood forests in an environmentally sensitive way;
- improving the quality and the quantity of wood from hardwood forests to ensure its market suitability for efficient value-adding processing by Australian industry;
- bringing together separate but complementary expertise of the parties of the Cooperative Research Centre to focus their research and development activities in a coordinated fashion; and
- developing a national centre of excellence for training in temperate hardwood forestry with emphasis on postgraduate research training in tree genetic improvement and resource protection.

In 1993–94, the CRC's income was approximately \$1.7 million. There was also approximately \$3.3 million of 'in-kind' research assistance from Tasmania's private forestry companies, Forestry Tasmania, the CSIRO Division of Forestry, and the University of Tasmania. About 40% (\$1.3 million) of this \$3.3 million was spent on salaries.

The main areas of research in 1993–94 were:

- analysing the performance of the 450 families of the Tasmanian Blue Gum, *Eucalyptus globulus*, across a range of sites in Australia;
- determining seasonal variation in leaf photosynthetic response to temperature and its effect on the prediction of wood yield;
- determining the usefulness of blanket fertilisation at the time of tree planting; and
- monitoring the beetle *Cbrysophtharta bimaculata* and other natural predators of various tree species to provide detailed information on insect dynamics, distribution, and oviposition patterns.

### Other products

*Sphagnum* bogs are rare ecosystems in Tasmania. Forestry Tasmania allows a small annual harvest from one site in State Forest.

*Dicksonia antarctica* is the most common of five tree fern species occurring in Tasmania and is the only one for which harvesting permits are issued. These tree ferns are harvested from Crown forests in accordance with Forestry Tasmania's Tree Fern Management Plan.

Leatherwood honey is harvested from leatherwood-rich forests in the Southern Forests, and on the West and North-West coasts. About one quarter of the leatherwood forests are accessible to commercial beekeeping, with about 85% of this being used.

Tasmanians have a strong tradition of using the forest for recreational purposes, but there is a growing interest in the forests by interstate and overseas tourists, who are largely responsible for the growth in visitor numbers to forest attractions.

Water quality can be affected by the harvesting of forests, road construction, grazing, mining or other use of catchments by humans, especially where it is unregulated.

Many forests grow on land which contains mineral resources. While mining is excluded from forests on a number of land tenures, about 11% of the State's total forest area is covered by mineral exploration licences.

### Threats

A number of natural and man-made agents constitute threats to forest, including wildfire, disease, insect and animal pests, weeds, roads and introduced animals. Except for wildfire, very little quantifiable information is available on the effects of these threats.

### National Estate

The main impact of National Estate listing occurs on Crown and private forests used for wood production, as approval from the Commonwealth Government must be sought before planned logging for woodchip export is permitted. It is estimated that 14% of multiple-use forest land and 4% of private forests are affected by this listing.

### Community information and consultation

Legislation requires both the Parks and Wildlife Service and Forestry Tasmania to seek public input into management plans prepared for Crown lands under their control. Forestry Tasmania and the Parks and Wildlife Service are committed to providing educational information about forests and forestry to the general public.

In addition, the Landcare program has been active in fostering community interest in tree planting, forest protection, bushland management and other forest-related activities.

## PRIVATE FORESTRY

The production of wood fibre for commercial purposes in Tasmania does not occur solely on Crown Land managed by Forestry Tasmania. Tasmanian private forestry is forestry activity on privately-owned land managed for private commercial gain. While it is not as large or economically important as Forestry Tasmania, it is nevertheless a significant sector of the Tasmanian economy.

Until June 1994, private forestry in Tasmania had strong administrative links with the Forestry Commission (now Forestry Tasmania), most recently through the Private Forestry Council. However, under legislation passed in the first half of 1994, responsibility for private forestry passed to Private Forestry Tasmania. This new body will report to Parliament in its own right.

The area of privately owned forests, two-thirds of which contain commercial timber, is estimated to be about 848,000 hectares, compared with about 1,600,000 hectares of State Forest.

Private forests have contributed just under half of the pulp logs, and about 30% of the hardwood and softwood sawlogs harvested in Tasmania in recent years.

The *Forest Practices Act* allowed for the creation of Private Timber Reserves. In 1993-94 there were 53 additional reserves declared with an area of 8,417 hectares. This brought to 283 the total number of declared areas, which covered more than 170,000 hectares.

### PRIVATE FORESTRY AREA PLANTED IN 1993-94 (ha) (a)

	<i>Pinus radiata</i>	<i>Eucalypts</i>	Total
Industrial freehold	674	3 551	4 225
Investment company	—	244	244
Private owners	141	1 318	1 459
<b>Total</b>	<b>815</b>	<b>5 113</b>	<b>5 928</b>

(a) None of the industrial freehold plantings were assisted by grants or subsidies from government. All planting by private owners was assisted.

Source: Forestry Tasmania, Annual Report 1993-94

## FORESTRY PRODUCTION

Before the commencement of woodchipping in 1970–71, the only details collected by the ABS were quantities of logs cut by sawmills and plywood mills, and rough-sawn timber produced (including a sawn timber equivalent of veneer production). These items were initially only classified by 'hardwoods' (mainly eucalypt) and 'softwoods' (mainly Radiata Pine). From 1984, figures on varieties of timber produced were collected in greater detail—eucalypt, other hardwoods (comprising Blackwood, Myrtle, Sassafras and Leatherwood), plantation pines (Radiata Pine) and native pines (Huon Pine and King Billy Pine).

In 1924 there were 176 establishments described as operating sawmills, rising to a peak of 366 in 1952. This number declined progressively as amalgamations occurred and larger and more efficient operations came into being. By 1987 the number had fallen to 136.

### Total log usage

Total log usage (later termed log delivery) was only 389,400 m<sup>3</sup> in 1924, rising to 1,101,300 m<sup>3</sup> in 1969. Upon commencement of full-scale woodchipping operations log usage rose from 1,826,300 m<sup>3</sup> in 1970–71 to a high point of 4,536,100 m<sup>3</sup> in 1979–80, then declined slightly in 1983. A peak of 5,071,200 m<sup>3</sup> was reached in 1988–89 and in 1992–93 usage had declined to 4,233,700 m<sup>3</sup>, rising to 4,349,200 m<sup>3</sup> in 1993–94. The logs are utilised by both sawmills and woodchipping establishments.

From 1988, log deliveries were classified separately as coming from Crown or private land. Between 1988 and 1993 the percentage of logs delivered (by volume) coming from private (non-Crown) land was around 45%. In 1993–94 this percentage had increased to approximately 51%.

### Woodchipping

The advent of large-scale woodchipping operations in 1970–71 saw an increase in forest-based production. Whereas there had been only a couple of pulp mills chipping wood for their own paper production, there were now three major export chipping sites commencing operations—two on the Tamar River and one at Triabunna on the East Coast. These mills were equipped with a full range of wood handling, de-barking and chipping machinery, were extensively automated and situated at deepwater ports, utilising bulk-chip-handling conveyors and loading facilities for direct export by special container ships to Japan.

Initial production of 828,600 tonnes (green weight) of woodchips in 1970–71 was derived from 771,500 m<sup>3</sup> of bush logs coupled with 125,000 m<sup>3</sup> of off-cuts processed by sawmilling establishments with small, end-of-line chippers.

Many sawmills which previously had few avenues for disposal of their waste wood were now able to install a chipper and sell their chips to either local processors (pulp and paper manufacturers) or for export.

**LOG USAGE AND PRODUCTION, TASMANIA  
(green weight)**

Year	Total log usage '000 m <sup>3</sup>	Woodchips produced '000 tonnes	Sawn timber '000 m <sup>3</sup>
1988–89	5 071.2	4 260.5	343.8
1989–90	4 567.9	3 798.6	337.1
1990–91	4 281.2	3 559.1	297.3
1991–92	3 978.7	3 356.0	297.1
1992–93	4 233.7	3 565.8	324.1
1993–94	4 349.2	3 726.1	348.0

Source: ABS catalogue no. 1303.6

## Forest fires

Following the disastrous 1967 bushfires in southern Tasmania, in which 62 people died and 1,300 homes were destroyed, an Inquiry was undertaken by D M Chambers, QC. This Inquiry was influential in determining much of the fire legislation, fire management practice, and fire management policy of the 1970s and 1980s.

However, it became apparent that, because of several factors, after 20 years, the findings of the Chambers Inquiry were becoming less relevant. For example, there had been substantial changes in pastoral practices and the distribution of Tasmania's rural population. There was also a larger part of Tasmania's population living on the outskirts of urban areas, often in bushland or rural areas but commuting to metropolitan and urban areas to work.

In September 1993 the Tasmanian Government established a Fire Review Committee headed by Mr W. Bales, QC. Mr Bales was assisted by 6 members and a consultant.

The Committee's terms of reference were:

- To review the role of vegetation fire in the Tasmanian environment including the effects of weather, topography, fuel and changing land uses on fire behaviour.
- To review circumstances in which fuel management is necessary, the best ways of carrying it out and the relative greenhouse effects of planned burning versus wildfires.
- To review public policies as they affect fire management in Tasmania.

The Committee determined that:

*The central issue for the future then is how best to control and manage future vegetation fire so that it continues to play its essential role in maintaining vegetation types without being the cause of unwanted change in natural areas and damage or destruction in other areas.*

In the course of its deliberations it received over 60 written submissions and met 15 experts or peak bodies. The Committee of Inquiry recognised that some areas, such as farmland, forests, and conservation reserves, were of particular community concern.

The Committee found that with high commodity prices throughout much of the post-World War II period, more attention was paid to fuel reduction burns in broadacre 'run country'. However, in the 1990s with generally depressed commodity prices there could be a build up of combustible material which in earlier decades may have been burnt.

With regard to forests, and conservation areas the Committee found that vegetation types and the plant and animal communities within them were the result of complex interactions between climate, soils, topography, and fire regimes over a long period of time. The Committee pointed to changes in vegetation type over the past 200 years because of a different approach to fire management relative to Aboriginal management of fire.

Evidence was heard on the possible greenhouse effects of vegetation fires. Wildfires in forests contribute about 16% of the carbon dioxide released by all vegetation fires in Australia, and prescribed fires release about 11%. The Committee was of the view that forest fires contribute little, if anything, to any long term increase in the amount of greenhouse gases in the atmosphere, provided that the total forest biomass remained substantially unaltered. The Committee recommended the allocation of an additional expenditure per annum of about \$800,000.

There were also a number of legislative and regulatory recommendations proposed, including amendments to the *Fire Service Act 1979* to establish a Vegetation Fire Management Planning Authority.

Usage of off-cuts to produce woodchips grew from the 125,000 m<sup>3</sup> in 1970–71 to 268,700 m<sup>3</sup> in 1973–74. It fluctuated until 1980–81 when it peaked at 308,800 m<sup>3</sup> of logs, which were converted to woodchips. A dip in 1982–83 was in line with a similar decline in production from sawmills supplying the off-cuts. Over the next five years, usage rose steadily to another high point of 305,000 m<sup>3</sup> in 1986–87. From then until the present time usage has been just below the 300,000 m<sup>3</sup> level.

Total production of woodchips reached 3,042,600 tonnes in 1973–74 and remained at about the 3,000,000 level until 1979–80 when output reached 3,673,000 tonnes. Following a decline to 3,118,600 tonnes in 1981–82, production climbed to 3,650,700 tonnes in 1984–85 and reached the highest on record of 4,260,500 tonnes in 1988–89. Following a dip to 3,356,000 tonnes in 1991–92 there has been an increase in production to 3,726,100 tonnes in 1993–94, the highest since 1989–90.

### **Sawn timber**

From a mere 155,400 m<sup>3</sup> of sawn timber from the 176 mills existing in 1924 (apart from a decline in 1931 and 1932), production grew steadily. By 1955 a figure of 331,300 m<sup>3</sup> was achieved and 10 years later the all-time high of 420,200 m<sup>3</sup> was reached. Thereafter followed a period of similarly buoyant production, until 1976 when production dropped below the 400,000 m<sup>3</sup> level and fell to a low level in 1983 of 248,100 m<sup>3</sup>. After 1984–85 production averaged close to 300,000 m<sup>3</sup>. The quantity of suitable log resource available for sawmilling has been a regulating factor affecting production levels.

## **FURTHER READING**

### **ABS PUBLICATIONS**

*Tasmanian Statistical Indicators* (1303.6)

### **OTHER PUBLICATIONS**

Forestry Tasmania, *Annual Report 1993–94*.

Tasmanian Forest Research Council Inc., *Annual Report 1992–93*.

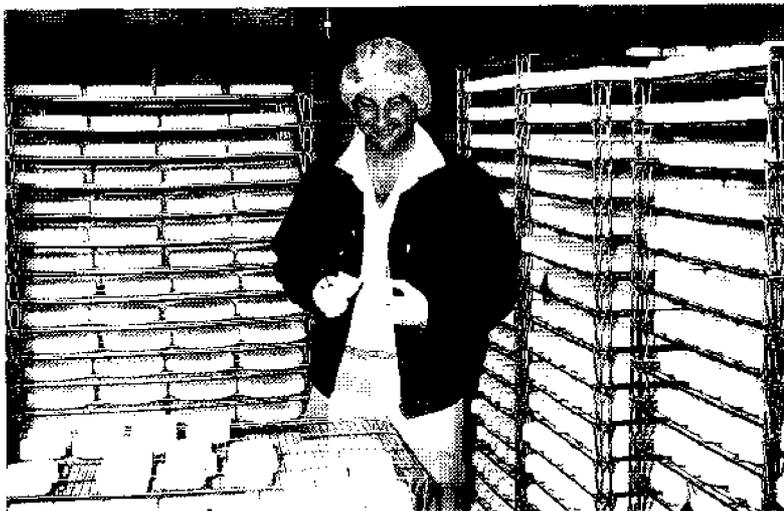
Tasmanian Fire Review Committee, 1994, *Review of Vegetation-Based Fire in Tasmania* (the Bales Report), Tasmanian Government Printing Office.

### **ACKNOWLEDGEMENTS**

Forestry Tasmania

Private Forestry Tasmania

# 19 | Manufacturing and energy



Grading camembert  
before wrapping at  
the Lactos Cheese  
Factory.

*The Mercury*

## MANUFACTURING

TURNOVER FOR THE YEAR 1991–92 by manufacturing establishments operating in Tasmania was \$3,904 million, which represented a 5.3% decrease, in current price terms, from the \$4,124 million in turnover recorded for the 1990–91 year.

This was the first time that turnover, at current prices, for the manufacturing industry in Tasmania had fallen compared to the previous year since 1968–69, when the ABS began collecting integrated economic statistics.

The percentage contribution by Tasmania to total Australian manufacturing turnover in 1991–92 was 2.3%. In 1988–89 Tasmania's contribution was 2.5%.

Of the 857 establishments operating at the 30 June 1992, 48 were large establishments employing 100 or more people.

## Employment

The decline in manufacturing employment from the 1970s continued into the 1990s. In the early 1970s manufacturing employed over 31,000 people, but by 1992 that figure had dropped to around 23,300, a decrease of around 25%.

The industry subdivision of food, beverages and tobacco employed 6,100 people in 1991-92. The other main industry subdivision in employment terms was paper, paper products, printing and publishing, which employed 4,400 people. These two industries accounted for 45% of Tasmania's manufacturing employment.

## Manufacturing activity

The two subdivisions which dominate manufacturing in Tasmania are both based mainly on the processing of Tasmanian natural resources. The first is the food, beverages and tobacco subdivision, which had a turnover of \$1,182 million in 1991-92, when it accounted for 30% of the total turnover by the Tasmanian manufacturing industry.

The other subdivision was paper, paper products, printing and publishing, which had a turnover of \$696 million, or 18% of the State total.

Manufacturing activity based on Tasmania's forestry resources is of great importance to the manufacturing sector and the State economy. Wood, wood products and furniture plus paper, paper products, printing and publishing employ over 7,200 people or 31% of all manufacturing employment in Tasmania.

These two industries combined accounted for \$260 million in wages and salaries or 36% of total salaries paid. They also accounted for around 29% of Tasmanian manufacturing industry turnover.

By comparison the same industry subdivisions at the Australian level accounted for 18% of employment and salaries, and about 13% of turnover.

When compared to Australian totals, Tasmania accounts for between 2% to 3% on most of the key measures in manufacturing.

The industry subdivisions food, beverages and tobacco; wood, wood products and furniture; and paper, paper products, printing and publishing make up between 55% and 60% of Tasmania's contribution to the Australian total on most of the key measures of manufacturing.

All are industries based on the processing of either natural resources or processing output from the agricultural sector.

### KEY AGGREGATES PER EMPLOYEE: MANUFACTURING (\$'000)

Year	Wages and salaries	Turnover
1982-83	16.1	81.7
1983-84	16.9	90.6
1984-85	18.1	98.9
1986-87 (a)	21.6	125.4
1987-88	22.7	130.6
1988-89	24.1	140.2
1989-90	26.7	156.7
1990-91	29.3	168.5
1991-92	30.7	167.5

(a) No census 1985-86; 1986-87 was the latest year of full manufacturing census.

Source: ABS catalogue no. 8221.6

### EMPLOYMENT IN MANUFACTURING

Year ended 30 June	At 30 June ('000)	Persons employed per establishment (no.)
1988 (a)	25.4	26
1989 (a)	27.5	29
1990 (a)	26.1	30
1991	24.5	29
1992	23.3	27

(a) Excludes establishments employing fewer than four persons.

Source: ABS catalogue no. 8221.6

**MANUFACTURING ACTIVITY (a) BY INDUSTRY SUBDIVISION, TASMANIA**

ASIC subdivision	1991-92		
	Establishments (no.)	Employment ('000)	Turnover (\$m)
Food, beverages and tobacco	145	6.1	1 181.9
Textiles	19	1.4	140.1
Clothing and footwear	10	0.4	29.7
Wood, wood products and furniture	207	2.8	439.8
Paper, paper products, printing and publishing	79	4.4	695.5
Chemical, petroleum and coal products	16	0.5	n.p.
Non-metallic mineral products	50	0.9	159.6
Basic metal products	15	3.0	n.p.
Fabricated metal products	124	1.5	146.9
Transport equipment	36	1.0	129.5
Other machinery and equipment	91	0.8	74.4
Miscellaneous manufacturing	65	0.6	55.1
<b>Total</b>	<b>857</b>	<b>23.3</b>	<b>3 903.7</b>

(a) Excludes establishments employing fewer than four persons.  
Source: ABS catalogue no. 8221.6

**COMPARISON OF TASMANIAN AND AUSTRALIAN MANUFACTURING 1991-92  
PROPORTION OF TOTAL (per cent)**

ASIC subdivision	Tasmania		Australia	
	Employment at 30 June ('000)	Wages and salaries (\$m)	Employment at 30 June ('000)	Wages and salaries (\$m)
Food, beverages and tobacco	6.1	156.1	166.0	4 607.6
Textiles	1.4	33.1	26.2	742.1
Clothing and footwear	0.4	5.4	49.8	1 127.7
Wood, wood products and furniture	2.8	80.0	71.7	1 685.9
Paper, paper products, printing and publishing	4.4	180.1	100.3	3 217.4
Chemical, petroleum and coal products	0.5	n.p.	50.5	1 937.4
Non-metallic mineral products	0.9	26.6	37.6	1 223.7
Basic metal products	3.0	n.p.	62.1	2 508.0
Fabricated metal products	1.5	35.4	88.8	2 415.1
Transport equipment	1.0	27.7	81.6	2 550.4
Other machinery and equipment	0.8	19.6	114.2	3 432.3
Miscellaneous manufacturing	0.6	11.3	58.2	1 620.4
<b>Total</b>	<b>23.3</b>	<b>714.9</b>	<b>906.9</b>	<b>27 068.0</b>

Source: ABS catalogue no. 8202.0

**Environmental protection**

The 1991-92 manufacturing census included questions relating to environmental protection. In all, 7% of manufacturing establishments in Tasmania reported conducting environmental impact assessments or audits during the year.

These establishments contributed 31% of total manufacturing turnover, reflecting the substantially higher incidence of environmental impact assessments being conducted by larger establishments.

## MAJOR MANUFACTURERS

The companies selected here are representative of the sectors within manufacturing at June 1995; they are not just the largest or those with most employees.

### Food and beverages

#### *Cadbury Schweppes Australia Ltd (Claremont)*

In 1921 an association of three British confectioners established their Australian plant at Claremont, near Hobart. Today, Cadbury Schweppes is a public company, controlled by a single United Kingdom parent. The plant is the largest cocoa and confectionery factory in Australia and employs about 1,000 people. Approximately 50 million litres of fresh Tasmanian milk is used each year, most of which is collected and processed at Cadbury's Burnie dairy factory.

The factory specialises in the production of moulded chocolate block, fancy boxed assortments, cocoa, drinking chocolate and the well-known Flake, Turkish Delight Bars, After Dinner Mints and Twirl.

The company maintains an active investment program in its Burnie and Claremont factories with its equipment and operations matched to Best Practice in the international confectionery industry.

#### *Cascade Brewery Company Pty Ltd (Hobart)*

Cascade is Australia's longest established manufacturing company and operates the country's oldest brewery. In 1992-93 it became part of a major Australian brewing group, Carlton and United Breweries, after being owned by New Zealand interests for a number of years. Cascade operates its historic brewery in Hobart, as well as the nearby Cascade beverage factory and the Woodstock reception centre. Their products include the flagship brand, Cascade Premium Lager and other Cascade beers and stout, as well as products such as cider, fruit juices, toppings, cordials and concentrates marketed under the brand names of Mercury, Apple Isle and Ultra-C Blackcurrant Syrup.

#### *Tasmanian Breweries (Launceston)*

Tasmanian Breweries owns the J. Boag and Son Brewery, which has brewed a wide range of beers since 1832. Process and equipment upgrades over the past decade have enabled the brewery to establish export markets, and Boags brands regularly receive awards in international competitions. The brewery has a flexible and versatile packaging line which produces kegs, a range of bottle sizes including products in premium-style packaging, and a full range of aluminium can sizes. Total output is around 25 million litres and increasing. Tasmanian Breweries also operates hotels throughout the State.

#### *United Milk Tasmania Ltd (Smithton, Wynyard, Devonport and Legerwood)*

U.M.T. is a major producer and exporter of dairy products. Each year the company exports dairy products worth around \$70 million to about 25 countries mainly in Asia but also in North America and Europe. The company operates three modern plants at Wynyard, Devonport and Legerwood. U.M.T. is a co-operative owned by some 480 farmers in Tasmania.

#### *Lactos*

After commencing operations in Tasmania in 1953, Lactos was acquired by the French company, Bongrain, in 1981. A renewed focus on marketing and product development by management has led Lactos away from 'hard' cheese markets to high quality, specialty 'soft' products.

Bongrain opened a soft, ripened cheese factory in Burnie in 1985. In 1992, extensions to these operations were completed, bringing soft, ripened cheese production to 10,000 tonnes per annum. Lactos now has 50% of the Australian soft cheese market. Export markets have been developed in Japan, Malaysia, Indonesia, the United States, New Zealand, Noumea and French Tahiti. The company is expanding its line of twelve specialty cheeses with the introduction of two new washed rind cheeses and one new soft cheese, marketed under the Lady Nelson brand name.

*Edgell-Birds Eye (Devonport, Ulverstone and Scottsdale)*

Edgell-Birds Eye is Tasmania's largest processor of frozen vegetables. The company is a large contributor to the State's economy employing over 800 people and spending over \$70 million on 275,000 tonnes of locally produced vegetables.

The Ulverstone factory is the largest potato processing factory in Australia and was re-built in 1992-93. Using the latest technology, this world-class facility supplies most of the french fries and chips used by McDonalds and KFC in Australia. The Ulverstone operation also produces hash browns and dehydrated potato granule. Export sales have been made to a number of Asian countries and are expected to increase significantly in the short term.

Scottsdale also processes potatoes, producing chips and gems mainly for the retail market. About one-third the size of the Ulverstone plant, this plant also exports to Japan.

Devonport produces a range of frozen vegetables for local and export markets. In recent years the factory has converted from part cannery, part frozen product to producing only frozen product. Major products include peas, beans, carrots and cauliflower.

*McCain Foods (Aust.) Pty Ltd (Smithton)*

In 1984 the Canadian-owned firm McCains purchased the vegetable processing factory at Smithton from General Jones. The factory processes frozen vegetables, in particular specialty potato products, green peas, carrots and corn marketed under the brand names of Copper Kettle, Pict and McCain. A \$5 million upgrade has recently increased capacity by 25% so that the factory now processes around 70,000 tonnes of raw materials per annum. McCain employs 300 full-time staff with up to 300 part-time staff in peak periods.

*Clements and Marshall Consolidated Ltd (Hobart, Launceston, Devonport, Cygnet, Huonville and Smithton)*

Clements and Marshall Consolidated is a diversified company involved in orcharding, apple processing and fresh apple exports; vegetable exports, including onions; fruit and vegetable prepacking; food storage and distribution; and interstate freight operations. Annual sales total nearly \$100 million and principal markets include Europe, the United Kingdom and Asia as well as the Australian domestic market. Major brands in use include Clemar, Cygnet, Poppy, Stork, Tasmanian Onion Company and Tasmanian Apple Company. The company's principal project is an orchard development program which already embraces 250,000 apple trees across five orchards.

**Textiles, clothing and footwear**

*Coats Patons (Aust.) Pty Ltd (Launceston)*

Coats Patons first produced yarns in Tasmania over 60 years ago. The factory produces knitting yarns, both wool and synthetic, as well as craft kits and accessories. Annual production is around 1.5 million kilograms.

*Textile Industries Australia Ltd (Derwent Park)*

The mill commenced operations in 1948 and has been owned by Textile Industries Australia Ltd since 1986. Production includes textile printing and finishing of 100% cotton

and polyester cotton/percale fabrics. A full range of premium-quality bed linen products for both Australian and export market distribution is also manufactured on site.

*Blundstone Pty Ltd (Moonah)*

Founded in 1870 in Hobart, Blundstone moved to its present location in Moonah in 1980. The company manufactures industrial, work, safety, bushwalking and waterproof footwear for interstate and overseas markets, mainly Europe and the Pacific Rim. Blundstone Pty Ltd has two subsidiary companies; one manufactures gumboots, the other is a tannery. The company has won a design award for specially designed safety boots as well as an export award for excellence in expansion of export sales.

*Australian Weaving Mills (Devonport)*

Australian Weaving Mills manufacture Australia's leading towel brand names, including Dri Glow, Palm Beach, Tara, Cotton Fields, Sylvan and Olympic Jacard. Their product range includes piece-dyed towels, beach towels, jacquards, embroideries, fabric embellishments, prints and bath robes. The facility at Devonport has been continuously upgraded since 1989 and is now acknowledged as one of the most sophisticated in the world with modern Sulzer looms and upgraded dye-house equipment, along with both fully automated and manual sewing processes. AWM now aims to become the most competitively priced towel manufacturer in Australia.

*Tascot Templeton Carpets*

Tascot Templeton Carpets is the only carpet manufacturer in Tasmania, and operates in the relatively small top end of the Australian carpet market. Established in 1961, the company has built up a reputation as a leading manufacturer of high quality Axminster, Wilton and Fusion-bonded carpets and carpet tiles.

The major portion of Tascot's business stems from the commercial sector, including hotels, clubs, restaurants, offices, theatres and entertainment centres. In addition to servicing the Australian market, Tascot also exports carpets to New Zealand, South East Asia, the United States of America and Canada. The company recently manufactured and supervised the laying of carpet for a new hotel complex in Sri Lanka.

The company's major carpet projects have been Parliament House in Canberra, the Regent Hotel in Melbourne and the Burswood Casino, Hotel and Convention Centre in Perth.

Tascot employs over 220 people at its East Devonport plant, with a further 25 sales and design personnel employed in other States. The company has recently embarked on an expansion program, and has ordered a new \$1 million computerised jacquard broadloom from the United Kingdom, together with a sophisticated computerised design facility from Holland.

**Wood, wood products and paper products**

*Australian Paper Tasmania (Burnie, Wesley Vale)*

These two mills are part of the Fine Papers Group of Australian Paper which is wholly owned by Amcor Ltd. They produce a major share of Australia's fine printing and writing papers, magazine papers and coated papers. The Burnie pulp and paper

**PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING INDUSTRIES (a)**

	Employment at 30 June ('000)	Wages and salaries (\$m)	Turnover (\$m)
1988-89	5.1	147.0	797.7
1989-90	4.7	140.9	756.1
1990-91	4.6	162.5	803.8
1991-92	4.4	180.1	695.5

(a) Comprises: ANZSIC subdivision 26.  
Source: ABS catalogue no. 8221.6

plant commenced paper production in 1938 and has an annual capacity of 120,000 tonnes and produces office and printing papers including Reflex and Glopaque. The Wesley Vale site is an integrated pulp and paper complex, which opened in 1970. This plant annually produces around 70,000 tonnes of un-coated paper, magazine and printing papers, as well as coating approximately 45,000 tonnes of paper from the Burnie Mill to produce the highest quality book, magazine and label papers.

#### WOOD, WOOD PRODUCTS AND FURNITURE (a)

	Employment at 30 June ('000)	Wages and salaries (\$m)	Turnover (\$m)
1988-89	4.1	82.0	532.1
1989-90	3.8	88.8	529.2
1990-91	3.3	84.2	473.0
1991-92	2.8	80.0	439.8

(a) Comprises ANZIC subdivision 25.  
Source: ABS catalogue no. 8221.6

#### *Australian Newsprint Mills Ltd (Boyer)*

ANM began operations in 1941 and now produces over 260,000 tonnes of newsprint and related grades each year. The company, which is jointly owned by Fletcher Challenge and News Corporation, also operates a newsprint mill at Albury in New South Wales with an output of 200,000 tonnes per annum. ANM is Australia's only producer of newsprint and the two mills supply 60% of Australia's requirement. At the Boyer plant, \$300 million has been spent to upgrade equipment and improve environmental controls. The Boyer mill won the coveted Australian Employer of the Year title in 1994.

#### Non-metallic mineral products

##### *Goliath Portland Cement Company Ltd (Railton)*

Goliath have been manufacturing cement in Tasmania since 1928. In 1989 a joint venture company owned by CSR and Pioneer International took over ownership of Goliath and subsidiaries Besser Tasmania and the Cornwall Coal Company. Around \$85 million has since been spent on upgrading the Railton plant to lift production from 600,000 tonnes per year to 1,000,000 tonnes per year. The latest improvements have raised output from their pre-heater dry process kiln to over 3,000 tonnes per day making it the largest capacity kiln of its kind in the world.

A large new cement mill operating in excess of 110 tonnes per hour will provide the capacity required for the new 15,000 tonne bulk cement carrier *M. V. Goliath* to ship bulk cement to various ports including Adelaide, Melbourne, Sydney and Newcastle.

Goliath has also exported bagged cement, and in recent years many thousands of tonnes of palletised cement have been despatched to Papua New Guinea, Bougainville copper mines and other Pacific islands. A new quarry area is being established to provide raw material for the next 100 years of production.

#### Basic metal products

##### *Comalco Aluminium (Bell Bay) Ltd (George Town)*

Australia's first aluminium smelter commenced production in 1955 as a joint venture between the Commonwealth Government and the Tasmanian Government. The smelter was acquired by Comalco in 1960 after which production capacity grew from 12,000 tonnes per annum to more than 124,000 tonnes per annum.

Comalco's Bell Bay aluminium smelter produces primary aluminium in a range of approximately 45 different alloys, tailored to suit customer requirements. Approximately

half of the metal produced at Bell Bay is exported, particularly to markets throughout South East Asia. Of the metal supplied to domestic markets approximately 20% has value added before it too is exported. The smelter also provides hot metal directly to neighbouring Comalco value-adding enterprises: Southern Aluminium (wheels) and Comalco Aluminium Powder Company (aluminium powder, paste and granules).

The power contract for the smelter expires in 2001. Comalco would like to redevelop its Bell Bay operations and continue to operate in Tasmania beyond this time; however, this is dependent on the company being able to negotiate a new and secure long-term power arrangement with the Tasmanian Government and the Hydro-Electric Commission.

*Pasminco Metals-EZ (Risdon and Rosebery)*

Established in 1916, the factory at Risdon is the largest producer of zinc in Australia and one of the top six electrolytic zinc plants in the world. It exports an extensive range of zinc and zinc alloys to over 30 countries and supplies a large proportion of Australia's total requirements.

The EZ Risdon plant has the capacity to produce more than 600 tonnes of zinc per day. Apart from the zinc and zinc alloys, the plant also produces cadmium, sulphuric acid and superphosphate. In 1989, the Risdon plant received its first load of Hellyer zinc concentrate. Mine production capacity at the company's West Coast mines at Rosebery is 650,000 tonnes of silver-lead-zinc-copper-gold ore per annum. The associated concentrating mill at Rosebery has the capacity to treat 850,000 tonnes of ore per annum, including ore from the Que River mine.

*Tasmanian Electro-Metallurgical Co. Pty Ltd (Bell Bay)*

In 1962, BHP transferred its major alloy-making facility from Newcastle to Bell Bay. In 1976, expansion gave export capacity and added ferro-silicon and manganese ore sinter to the existing product range of high carbon ferro-manganese and silico-manganese. Approximately 70% of TEMCO's production is now being exported to steel makers and foundries in South East Asia, the Middle East, Japan, the United States of America and New Zealand.

In December 1992, the No. 5 furnace was converted from the production of ferro-silicon to silico-manganese at a cost of \$14 million. The development of a waste water treatment plant in conjunction with the George Town Council was completed in 1993.

In 1994 TEMCO opened its \$700,000 Wetlands System, designed to treat stormwater from the plant, the last stage in TEMCO's Environmental Performance Improvement Plan for liquid effluent. A new health, fitness and rehabilitation centre was also made available for all employees and their partners.

### **Fabricated metal products**

*ACL Bearing Company (Launceston)*

The factory was established in 1949 to manufacture engine bearings for the Australian spare parts trade. The company has since expanded and the workforce exceeds 600 in four factories, on two sites.

The range of products has expanded and now consists of automotive bearings, bushings and thrust washers, powder metal components for the automotive and whitegoods industries, copper and tin metal powders and bearing metal strip. The products are marketed under the brand names of ACL, Repco, Performance and Dura Glide 780.

All products are sold in export markets as well as the Australian domestic market with direct export accounting for one-third of production. Export markets include the United States of America, New Zealand, North East Asia, South East Asia, South Africa, the Middle East and Europe.

ACL Bearing Company is a major supplier to Australian car manufacturers and supplies original equipment to Holden, Ford, Toyota and Mitsubishi.

### Transport equipment

#### *INCAT Tasmania Pty Ltd (Incat)*

Incat is the world's largest producer of aluminium fast ferries and specialises in the manufacture of large passenger/vehicular ferries. To date Incat has sold fourteen passenger/vehicular ferries to customers in the United Kingdom, Europe and South America.

The company produces two types of vessel: the wave piercer which is designed to operate in wave heights of up to three metres, and the 'K' class, a conventional catamaran designed to operate in calmer waters. The company employs around 650 people and engages approximately 150 subcontractors. Production is around 3.5 vessels per annum with plans to expand production to 7 vessels per annum.

The company operates from purpose-built premises at the Prince Of Wales Bay and has recently commenced building vessels from its new 'Coverdales' facility, which incorporates a dry dock.

In 1994 Incat won the Tasmania—Development and Resources Premiers Award for Export Success.

## ENERGY

The Hydro-Electric Commission (HEC) generates electricity at 28 hydro power stations around the State as well as at an oil-fired thermal station at Bell Bay and two diesel stations, one each on King and Flinders islands. This system transmits power to load centres, distributing electricity to all inhabited parts of mainland Tasmania and providing a 24 hours a day, seven days a week, 52 weeks a year, service to 240,000 customers.

The Hydro-Electric Commission, the largest supplier of energy in the State, is the largest business in the State, with some 1,700 employees; and an annual income of \$486 million.

The *State Authorities Financial Management Act 1990* required that the HEC, among others, generate a reasonable return on assets for its shareholders, the Tasmanian Government. This, and the scheduled completion of the Anthony Power Development and Tribute Power Station signalling the imminent end of construction of large dams and power stations in Tasmania for the foreseeable future, fostered a fundamental organisation reassessment.

Called 'commercialisation', it resulted in a refocus on the HEC's core business. Its assets were revalued on a commercial basis and those not necessary for the core business were disposed of.

Commercialisation features a strong focus on the customer. This necessitates very reliable hardware, a flexible workforce, a shop-front presence and strong marketing. There has been a period of considerable reduction of the workforce because of the end of power scheme construction and its necessary support processes which were labour-intensive.

The HEC has traditionally had the regulatory role in the electricity industry, but this is to change with the passage and proclamation of the Electricity Supply Industry Act and its associated Acts.

This body of legislation will set up an independent regulator, grant to it the existing regulatory responsibilities of the HEC and remove existing regulatory restrictions preventing the entry of other participants to the industry.

## The Anthony Power Development

As early as 1914 it was recognised that the water of the upper Henty and Anthony rivers could be used to generate electricity for use in the mining fields between Zeehan and Rosebery. In 1917 it was proposed to erect a large-scale plant for the reduction of zinc concentrates in the vicinity of Zeehan. To provide electricity for the plant preliminary plans were drawn up for what was known as the Rolleston Scheme, which would allow water to be drawn from several areas, and by means of races and a tunnel, divert the water to a main storage. The site for the power house was to be on the Henty River at its junction with Falls Creek, ten miles exactly from both Rosebery and Zeehan.

This early scheme was greeted enthusiastically because it could come on line quickly, was regarded as economical at a total cost of £500,000, and the area could be reached easily by extending the Lake Margaret two-foot steel tramway.

But the scheme, along with its sister development of the King River, was shelved when it was decided not to construct a smelting works on the West Coast, but to transfer the ore to the established works at Risdon on the bank of the Derwent River.

### THE PLANNING OF THE ANTHONY SCHEME

Detailed investigations into the Anthony Scheme began in the early 1980s. In July 1983 the High Court of Australia upheld the power of the Commonwealth Government to prevent construction of the Gordon River Power Development, Stage Two (also known as the Gordon-below-Franklin). This decision threw the Commission's long-term planning into disarray. Within a few weeks the HEC reported to Parliament on two alternative smaller schemes, the King and the Anthony Power developments.

Following Parliamentary approval for the Anthony scheme, investigations were largely completed in parallel with construction of access roads and initial site works.

The Anthony Power Development is situated north of Queenstown and diverts the headwaters of the Henty River across to the Anthony River thus developing the full potential of the Anthony River.

The main storage for the scheme, Lake Plimsoll, with an area of 3.8 square kilometres, was formed by the construction of the 40-metre high concrete-faced rockfill Anthony Dam. The storage is linked to the power station by a 6.8 km long headrace tunnel, which is unlined for most of its length.

The tunnel has an operating flow of 34 cubic metres per second and a flow velocity of about four kilometres per hour.

The underground power station near Lake Murchison contains one turbo-generator, with an installed capacity of 84 megawatts. The water from the power station is discharged into Lake Murchison to be re-used by the three power stations which make up the Pieman River Power Development: Mackintosh, Bastyan and Reece.

### ENVIRONMENTAL ASPECTS

One of the main environmental issues was the preservation of the high scenic qualities existing throughout most of the Anthony area. When designing roads, canals and dams great care was taken to limit the visual impact, thus retaining the integrity of the area.

When locating quarries and other works areas, every opportunity was taken to find sites that would eventually be covered by the new lakes. Excess road spoil and material from other engineering works were also dumped below what would become minimum water levels.

To preserve the tranquillity of beautiful Lake Selina, a small glacial lake in the middle of the Anthony area, the nearby road was moved about half a kilometre to keep it well clear of the lake.

**HYDRO-ELECTRIC COMMISSION, TASMANIA, STATISTICAL SUMMARY**

Year	Output (a)			Total consumption (m kWh)
	Installed generating capacity (a) (MW)	Units generated (GW.h)	Change over previous year (%)	
1988-89	2 315	8 908	1.4	8 224.9
1989-90	2 315	9 021	1.3	8 303.1
1990-91	2 315	9 026	0.1	8 403.7
1991-92	2 460	8 923	- 1.1	8 267.0
1992-93	2 435	8 849	- 0.8	8 183.2
1993-94	2 518	8 865	0.2	8 233.5

(a) Excludes King and Flinders islands.

Source: Hydro-Electric Commission, Annual Report 1994

**HYDRO-ELECTRIC COMMISSION, TASMANIA, CUSTOMERS AND SALES**

Particulars	1992-93	1993-94
Installation numbers—		
Domestic	191 693	195 630
Public utilities	—	—
Industrial	6 107	6 654
Commercial	20 684	20 821
Miscellaneous	8	20
Rural	12 418	12 503
Education	889	888
Health	884	862
Major industrial	19	21
<b>Total</b>	<b>232 662</b>	<b>237 399</b>
Sales (million kWh)—		
Domestic	925.3	863.8
Industrial	560.9	622.7
Commercial	587.8	597.2
Bulk commercial	15.2	12.2
Major industrial	5 224.5	5 195.6
Other	869.5	942.0
<b>Total</b>	<b>8 183.2</b>	<b>8 233.5</b>

Source: Hydro-Electric Commission, Annual Report 1994

**FURTHER READING**

Other statistical tables relating to this chapter are located in the Historical Series at the back of this book.

**ABS PUBLICATIONS***Manufacturing Industry, Australia* (8221.0)*Manufacturing Industry, Tasmania* (8221.6)*Manufacturing Production, Australia* (8301.0)**OTHER PUBLICATIONS**Hydro-Electric Commission, *Annual Report 1994*.**ACKNOWLEDGEMENTS**

Tasmania—Development and Resources

Hydro-Electric Commission



## 20 | Housing and construction



The new Tasmania Fire Service headquarters under construction. It will incorporate a State-wide operations centre.

*Mark Drury and Partners Pty Ltd Architects*

SHELTER SATISFIES both physical and social needs. The location and type of accommodation that people choose provide insights into a wide range of social and economic influences on the population. One of the major investment decisions made by people and businesses is the choice of shelter or an appropriate workplace, and this decision is affected by a range of factors. These factors include price, location, access to work, amenities and public infrastructure, planning and government decision making, and personal preference.

The housing and construction industry is usually the first sector to show signs of recovery after an economic downturn. The amount of building activity undertaken is affected by economic circumstances, and the reduction in interest rates on housing and commercial loans appears to increase activity. Building activity is significant to the whole economy.

A resurgence in building activity has further downstream benefits, in that houses are constructed from materials that are produced in the manufacturing sector. The housing

**NUMBER OF DWELLING APPROVALS, TASMANIA**

Year	Private		Public	
	Houses	Other	Houses	Other
1988-89	2 684	864	206	160
1989-90	2 547	764	116	92
1990-91	2 466	827	89	101
1991-92	2 774	965	95	69
1992-93	2 928	1 023	28	115
1993-94	3 065	973	48	61

Source: ABS catalogue no. 8731.6

**RESIDENTIAL DWELLING APPROVALS**

Region	1992-93	1993-94
<b>Greater Hobart Statistical Division</b>	<b>1 654</b>	<b>1 766</b>
<b>Southern Statistical Division</b>	<b>491</b>	<b>561</b>
Greater Launceston Statistical Subdivision	939	810
Central North Statistical Subdivision	147	133
North-Eastern Statistical Subdivision	133	178
<b>Northern Statistical Division</b>	<b>1 219</b>	<b>1 121</b>
Burnie-Devonport Statistical Subdivision	514	475
North-Western Rural Statistical Subdivision	195	201
Lyell Statistical Subdivision	21	13
<b>Mersey-Lyell Statistical Division</b>	<b>730</b>	<b>689</b>
<b>Tasmania</b>	<b>4 094</b>	<b>4 147</b>

Source: ABS catalogue no. 8731.6

and construction industry (including roads, bridges, dams and wharfs) employs around 5% of the employed workforce, and contributes approximately 6% of the State's gross product at factor cost.

**HOUSING**

Home ownership has been described as the great Australian dream. The 1991 Census revealed that, at that time, 70% of Tasmanian households had either bought or were in the process of buying their own home. This compares with 63% home ownership in Britain, 73% in New Zealand and 52% in Sweden.

Some 41.8% of occupied private dwellings in Tasmania were owned by the occupants compared to 39.1% at the 1986 Census. Occupants renting accommodation also showed a rise, while the number of occupants purchasing their own home dropped from 32.0% in 1986 to 27.7% in 1991.

Within Tasmania the highest proportions of ownership were recorded in the municipalities of Beaconsfield with 82%, and Kingborough and Sorell with 80%. Municipalities with the lowest proportion were Waratah with 14%, Brighton with 48%, and Zeehan with 49%.

**BUILDING APPROVED IN STATISTICAL LOCAL AREAS, 1993-94**

Statistical region sectors and statistical local areas	New houses		Other new residential buildings		Alterations and additions to residential buildings (\$'000)	Value of non- residential building (\$'000)	Total building (\$'000)
	Number	Value (\$'000)	Number	Value (\$'000)			
Brighton	164	11 575	9	420	330	420	12 745
Central Highlands	38	1 490	6	300	107	312	2 209
Clarence	261	24 707	112	5 882	4 632	6 766	41 986
Glamorgan/Spring Bay	95	5 637	29	1 200	502	2 576	9 915
Glenorchy	173	15 637	183	8 998	1 801	11 217	37 654
Hobart	175	16 625	182	15 837	7 677	27 658	67 797
Huon Valley	142	8 705	17	863	915	1 633	12 116
Kingborough	331	30 181	42	2 373	3 955	4 819	41 329
New Norfolk	61	4 906	4	210	452	3 559	9 127
Sorell	189	11 347	13	636	788	140	12 911
Southern Midlands	58	3 752	5	168	218	—	4 138
Tasman	48	2 384	—	—	480	122	2 986
<b>Greater Hobart-Southern Statistical Division</b>	<b>1 735</b>	<b>136 948</b>	<b>602</b>	<b>36 887</b>	<b>21 856</b>	<b>59 222</b>	<b>254 912</b>
Break O'Day	106	6 654	13	667	512	500	8 333
Dorset	53	3 179	5	239	424	390	4 232
Flinders	1	24	—	—	40	—	64
George Town	38	2 534	—	—	507	1 828	4 868
Launceston—Inner	186	15 849	168	8 940	4 368	31 937	61 094
Meander Valley	212	15 228	27	1 403	1 188	1 548	19 367
Northern Midlands	88	6 148	11	489	735	520	7 892
West Tamar	183	16 568	30	1 695	1 858	1 643	21 765
<b>Northern Statistical Division</b>	<b>867</b>	<b>66 184</b>	<b>254</b>	<b>13 433</b>	<b>9 632</b>	<b>38 366</b>	<b>127 615</b>
Burnie	51	4 273	39	2 477	1 109	25 592	33 451
Central Coast	123	9 996	32	1 421	1 250	2 887	15 553
Circular Head	42	2 875	5	190	1 320	2 641	7 027
Devonport	86	7 274	63	3 297	1 135	10 604	22 310
Kentish	48	2 768	6	411	298	538	4 015
King Island	6	518	4	220	196	505	1 439
Latrobe	80	5 934	22	1 223	824	1 440	9 421
Waratah/Wynyard	65	5 025	4	240	1 850	2 664	9 779
West Coast	10	276	3	93	52	1 464	1 885
<b>Mersey-Lyell Statistical Division</b>	<b>511</b>	<b>38 939</b>	<b>178</b>	<b>9 572</b>	<b>8 034</b>	<b>48 335</b>	<b>104 880</b>
<b>Tasmania</b>	<b>3 113</b>	<b>242 071</b>	<b>1 034</b>	<b>59 892</b>	<b>39 522</b>	<b>145 922</b>	<b>487 407</b>

Source: ABS catalogue no. 8731.6

**The location of residential building**

Over the past 20 years the majority of residential building has occurred in and around the urbanised centres of Hobart, Launceston, Devonport and Burnie. These regions of development have shown periods of high levels of residential building, though few have shown consistent growth.

The levels of house building are affected by the overall economic climate, particularly the levels of home loan interest rates. The siting of public housing development can also have a significant effect on the structure and growth of particular areas.

### New housing

Building activity, as measured by the number of new dwellings approved, reflects the economic health of the State. There were 4,147 dwelling units approved in 1993-94. This was the highest number recorded since 1984-85. In 1993-94, 43% of new residential building approved was in the Greater Hobart Statistical Division, where 41% of the State's population live. The Greater Launceston Statistical Subdivision accounted for 20% of approvals, while the Burnie-Devonport Subdivision recorded 12%. These two areas have 21% and 17% of the State's population respectively.

In the Greater Hobart-Southern Statistical Division, during 1993-94, the City of Clarence and the Municipality of Kingborough each recorded 373 new dwelling unit approvals, followed by the City of Hobart with 357 and the City of Glenorchy with 356.

Of the more outlying areas the Municipality of Sorell recorded 202 new dwelling unit approvals, followed by the Municipality of Brighton with 173 and the Municipality of Huon Valley with 159.

In the Northern Statistical Division the City of Launceston recorded 354 new dwelling unit approvals followed by the Municipality of Meander Valley with 239, the Municipality of West Tamar with 213, the Municipality of Break O'Day with 119 and the Municipality of Northern Midlands with 99.

The Mersey-Lyell Statistical Division was led by the Central Coast Municipality with 155 dwelling unit approvals, followed by the City of Devonport with 149, the Municipality of Latrobe with 102 and the City of Burnie with 90.

### Housing Services

Housing Services is a program of the Department of Community and Health Services. The desired outcome of this program is to ensure that all low-income Tasmanians have access to secure, adequate and appropriate housing at an affordable price.

Assistance is provided through a number of program areas. These include public rental, private rental assistance, home ownership assistance, community housing, crisis accommodation, and special purpose housing for client groups such as youth, the elderly and people with disabilities. The program is planned and developed within the objectives of the Commonwealth State Housing Agreement (CSHA). This agreement is also the principal source of funding for the program.

The program is delivered on a regional basis through local offices managed within each region. Stock acquisition and management, program development, special programs and planning functions are coordinated centrally.

As at 31 March 1995 there were 14,659 public rental dwellings managed by Housing Services. This stock is made up of different types of homes designed to cater for the various needs of clients. During the 12 months to 31 March 1995, Housing Services has assisted

#### DWELLING UNIT APPROVALS TREND ESTIMATES

*The building approvals trend series reduces the influences of seasonal and irregular fluctuations, found in the monthly approvals figures.*

*Between January 1991 and June 1992 the trend series showed a gradual increase from approximately 280 to around 360 dwelling units approved. It declined to around 320 in the latter months of 1992 only to again increase to nearly 370 towards the end of 1993. Since then the series has shown continual decline, dropping to below 300 in June 1994.*

valued at \$311.3 million, or 63.3% of the total, and non-residential building work done was \$139.4 million.

The value of work done on non-residential buildings in 1993-94 was \$139.4 million, an increase of 24.2% on the 1992-93 figure of \$112.2 million. The largest increases in the value of work done in the non-residential area were for education facilities, which rose from \$19.5 million in 1992-93 to \$26.1 million in 1993-94, and health which increased from \$12.5 million in 1992-93 to \$33.8 million in 1993-94.

The value of non-residential buildings approvals in 1993-94 was \$145.9 million, a 41.5% increase on the \$103.1 million approved in 1992-93.

#### AVERAGE COSTS FOR BUILDINGS COMPLETED, TASMANIA (\$/m<sup>2</sup>)

	1992 93	1993 94
New houses	456	476
Other new residential dwellings	593	594
Non-residential building	1 062	838

Source: ABS unpublished data

#### TOTAL VALUE OF CONSTRUCTION WORK DONE, TASMANIA (\$m)

Year	Building	Engineering	Total
1990 91	393.5	289.8	683.3
1991-92	449.0	302.6	751.6
1992 93	431.8	311.1	742.9
1993-94	491.4	243.4	734.8

Source: ABS catalogue no. 8752.6

### Engineering construction

Engineering construction relates to the building of roads, bridges, railways, dams and sewerage systems. The public sector is responsible for most of this activity. In Tasmania the value of work done on engineering construction projects during 1993-94 was \$243.4 million, a decrease of 21.8% on the 1992-93 figure of \$311.1 million. The value of engineering construction commenced during 1993-94 was \$185.3 million, a decrease of 22.7% on the 1992-93 figure of \$239.8 million.

This indicates that infrastructure development has slowed due to the economic conditions, with progress on many projects being delayed due to financial constraints. The value of work yet to be done measures the ongoing nature of these activities, and at the end of 1993-94 there was \$56.7 million worth of engineering construction to be completed, compared with \$120.0 million still to be completed at the end of June 1993.

#### ENGINEERING CONSTRUCTION, VALUE OF WORK DONE, TASMANIA (\$m)

Project	1991-92	1992-93	1993 94
Roads, highways and subdivisions	93.2	119.9	108.8
Bridges	6.7	12.7	14.8
Railways		0.1	0.3
Harbours	3.8	7.7	9.4
Water storage and supply	52.2	44.2	27.3
Sewerage and drainage	7.0	10.0	12.6
Electricity generation, transmission and distribution	36.3	31.7	20.7
Pipelines	0.2	....	—
Recreation	2.5	6.1	5.5
Heavy industry	85.0	43.1	11.6
Telecommunications	14.0	28.8	31.6
Other	1.6	0.8	0.6
<b>Total</b>	<b>302.6</b>	<b>305.4</b>	<b>243.5</b>

Source: ABS catalogue no. 8762.0

HOME OWNERSHIP, TASMANIA				
Dwellings	1986		1991	
	Number	%	Number	%
Owned	58 157	39.1	67 915	41.8
Being purchased	47 588	32.0	44 963	27.7
Rented	36 747	24.7	40 931	25.2
Other	6 307	4.2	8 512	5.3
<b>Total</b>	<b>148 799</b>	<b>100.0</b>	<b>162 321</b>	<b>100.0</b>

Source: ABS Census data

VALUE OF WORK DONE, TASMANIA (\$m)			
Type of building	1991-92	1992-93	1993-94
New houses	204.5	221.4	248.0
Other new residential buildings	49.5	62.4	63.3
<b>Total new residential buildings</b>	<b>254.0</b>	<b>283.8</b>	<b>311.3</b>
Alterations and additions to residential building	33.5	35.8	40.7
Hotels etc.	3.9	5.5	4.9
Shops	11.4	10.7	11.6
Factories	11.0	17.4	14.8
Offices	67.9	28.3	20.1
Other business premises	5.7	8.0	8.3
Educational	23.1	19.5	26.1
Religious	1.0	1.6	1.0
Health	21.1	12.5	33.8
Entertainment and recreational	4.6	2.9	4.7
Miscellaneous	11.8	6.0	14.1
<b>Total non-residential building</b>	<b>161.4</b>	<b>112.2</b>	<b>139.4</b>
<b>Total all building</b>	<b>449.0</b>	<b>431.8</b>	<b>491.4</b>

Source: ABS catalogue no. 8752.6

2,899 new households to access public rental housing. As at this date there were 14,056 tenancies managed by Housing Services. This means that Housing Services has assisted around 32,000 people through public housing.

### Cost of building

The average costs for buildings completed provides a measure of the changing costs of building over the past five years. The unit cost per square metre has increased steadily since 1989-90 for new houses. Other new residential dwellings have not shown the same pattern of increase. This is due partly to the changing mix of high density dwelling types. Unit costs for non-residential buildings are influenced by the type of buildings. Large scale construction such as international hotels and office accommodation has a significant influence on the non-residential building sector in Tasmania.

## CONSTRUCTION

### Building construction

The value of building work done in 1993-94 was \$491.4 million which was a 13.8% increase on the \$431.8 million recorded for 1992-93. Work done on new residential building was

## The Royal Australian Institute of Architects

~ Contributed by the Tasmanian Chapter of the Royal Australian Institute of Architects ~

The resurgence in the building profession in Tasmania, which started in 1993, has continued into 1995, particularly with major projects in both the capital, Hobart, and regional centres.

Two major initiatives that are affecting members of The Royal Institute of Architects (RAIA) in particular, but with spin-offs for the building profession and the public, are mandatory 'Professional Development' and 'Qualification Based Selection'. The former aims to ensure that RAIA members constantly update and improve their skills and knowledge. The latter is a process that enables the client to obtain the services of a highly qualified architect at a fair and reasonable cost; an investment in quality which is aimed at achieving substantial savings over the life cycle of the project.

### ANNUAL ARCHITECTURE AWARDS

Probably the most public manifestation of the Royal Australian Institute of Architects members' activities and worth is the Annual Architecture Awards program, held in the first half of the year, culminating in an Awards presentation evening. Awards are offered in four categories, namely Residential, New and Extended Buildings (which also includes Urban Design, Commercial and Interior Architecture), Recycling and Conservation and the S.W.T. Blythe Award for Students.

In the first three categories, entry is limited to work carried out in Tasmania by architects registered in Tasmania.

In 1991, named awards were re-introduced. These are the James Blackburn Award for Residential Buildings, John Lee Archer Award for New and Extended Buildings, and Henry Hunter Award for Conservation including Recycled Buildings. One of these awards is offered each year on a triennial rotation, and is contested by the award winners in that category for the preceding three years.

In 1995, the John Lee Archer Award was shared by the 'Ecologically Sustainable Tourist Development' at the Friendly Beaches (Architect: Latona Masterman) and the Strahan Visitor Centre (Architect: Forward Viney Woollan, Morris-Nunn & Associates).

Twenty-four buildings were nominated for the 1995 Architecture Awards and seven entries nominated in the Student section. The following awards were made:

### RESIDENTIAL CATEGORY

The Furnage-Forward House  
*Architects:* Forward Viney Woollan

### NEW AND EXTENDED BUILDING CATEGORY

Hollybank Forest Training Centre  
*Architects:* Leigh Woolley and David Travalia

Mount Stuart Primary School—new classrooms  
*Architects:* Crawford Wegman Architects

Salamanca Mews  
*Architects:* Eastman Heffernan Walsh and Button (Urban Design section)

Northern Midlands Council  
*Architects:* Morris-Nunn and Associates (Interiors section)

### RECYCLING AND CONSERVATION CATEGORY

Conservation of Temple House  
*Architects:* Professional Services Group (Conservation section)

Northern Midlands Council  
*Architects:* Morris-Nunn and Associates (Recycled section)

### S.W.T. BLYTHE STUDENT AWARD

Christopher Exner for his 'Tasmanian Art Gallery at the Hobart Domain' project.

At least three of the above projects have been short-listed for the National Awards to be announced in Brisbane in November 1995.

## Lake St Clair Park Centre

~ *Contributed by Stubbs Constructions Pty Ltd* ~

Tasmanian Parks and Wildlife, through the Department of Environment and Land Management, commissioned the Tasmanian Property Services Group to call for submissions from interested architectural firms to design the Park Centre.

Hobart-based architects Eastman Heffernan Walch and Button presented the best ecologically sustainable proposal, which was successfully tendered for and awarded to Stubbs Constructions Pty Ltd, Burnie, for \$1.4 million.

The centre is constructed from Tasmanian timbers including exposed Celery Top Pine structural members, laminated hardwood beams and pine-lined curved roof trusses. Double-glazed observation windows give visitors maximum viewing from within the heated centre. Board walks and a covered verandah allow visitors the opportunity to

walk outside, under shelter, and to feed the local wildlife without damaging the sensitive flora. The external timber cladding and colour-bonded steel roof blends the centre into the surrounding environment.

The Park Centre was built to cater for tourists and to provide world-class facilities for visitors travelling between Hobart and the West Coast. Lake St Clair is Tasmania's deepest lake and provides excellent trout fishing. Bushwalkers may enjoy the world-renowned overland track between Lake St Clair and Cradle Mountain.

The Minister for National Parks and Wildlife, Mr Cleary said, 'The Lake St Clair redevelopment is one of the most exciting projects under way in our National Parks and this visitors centre is just one part of the redevelopment'. It will feature an interpretation hall, restaurant and reception area.

### FURTHER READING

Other statistical tables relating to this chapter are located in the Historical Series at the back of this book.

#### ABS PUBLICATIONS

*1991 Census: Local Government Areas: Tasmania* (2790.6)

*Building Activity, Tasmania* (8752.6)

*Building Activity, Australia* (8752.0)

*Building Approvals, Tasmania* (8731.6)

*Dwelling Unit Commencements Reported by Approving Authorities, Tasmania* (8741.6)

*Engineering Construction Survey, Australia* (8762.0)

#### ACKNOWLEDGEMENTS

Tasmanian Chapter of the Royal Institute of Architects  
Stubbs Constructions Pty Ltd

## 21 | Transport and communications



Cyclists at the December 1993 opening of the bicycle track that extends from Hobart to Glenorchy.

*Hobart City Council*

TRANSPORT AND COMMUNICATION is an important industry sector and accounts for about 5% of the State's employment (excluding agriculture, forestry, fishing and hunting).

In recent years the Commonwealth Department of Transport and Communications has promoted greater competition between and within transport modes and communication media, both to provide an incentive for industries to improve efficiency and to provide a framework within which the benefits of improved efficiency can be passed on to users.

The telecommunications sector, which had been characterised by strong growth in demand for telecommunications services, an increasing focus on service quality and rapid technological change, has been an area of particular public interest.

In spite of the apparent competition from the electronic media, the more regionally-based print media continues to serve an important complementary function.

## TRANSPORT

## Roads

*New road-works*

The Tasmanian Department of Transport is responsible for the planning and design of State-classified roads and bridges. The construction and maintenance work is either tendered or arranged through Works Tasmania. Highlights of the 1993–94 financial year included:

- Channel Highway—completion of a 4 km reconstruction between Flood Road and Kellaways Creek;
- Ridgley Main Road—commencement of the section from Oonah Road to West Ridgley;
- Tasman Highway—new culverts under the Sorell Causeway to improve drainage from Orielson Lagoon;
- Bass Highway—Welcome River Bridge completion;
- King Island Main Road—Yellow Rock River Bridge completion;
- Stanley Fishing Dock Stage 2 completion; and
- Ridgley Main Road—commencement of widening, safety and noise amelioration works.

*Motor vehicles*

Motor vehicle registrations (excluding motorcycles) grew from approximately 304,100 in 1992–93 to approximately 309,100 in 1993–94. At 30 June 1994, Tasmania had the highest rate of motor vehicle ownership in Australia, with 654 vehicles per 1,000 population.

*Road traffic accidents*

In 1994, 58 people were killed and 1,739 injured on Tasmanian roads. The number killed on the roads was the same as that recorded for the previous year. The number of people injured in road accidents in 1994 was 3% higher than in 1993, while the number of accidents involving casualties in 1994 was also 3% higher than the figure recorded in 1993.

**MOTOR VEHICLES, TASMANIA (a) (b)**

Year	Number of vehicles on register ('000)	Vehicles per 1,000 population (no.)
1910	0.4	2
1920	4.1	20
1930	19.5	89
1940	26.2	109
1950	43.2	156
1960	93.2	271
1970	154.3	398
1980	229.5	542
1990	294.3	644
1994	309.1	654

(a) At 30 June.

(b) Excluding motor cycles.

Source: ABS catalogue no. 9303.6

**MOTOR VEHICLES ON REGISTER BY STATE, 1994 (a) (b)**

State	Number of vehicles on register ('000)	Vehicles per 1,000 population (c) (no.)
NSW	3 190.3	527.2
Vic.	2 738.5	611.8
Qld	1 905.8	596.1
SA	893.2	607.7
WA	1 105.3	649.5
Tas.	309.1	654.3
<b>Australia</b>	<b>10 407.4</b>	<b>583.3</b>

(a) Excluding motorcycles.

(b) At 30 June.

(c) Population based on estimates at 30 June 1994.

Source: ABS catalogue no. 9303.3

**ROAD ACCIDENTS, TASMANIA**

Year	Accidents involving casualties	Number of people	
		Killed	Injured
1989	1 482	80	1 997
1990	1 386	71	1 905
1991	1 291	77	1 788
1992	1 234	74	1 712
1993	1 190	58	1 687
1994	1 223	58	1 739

Source: Department of Transport

In 1994, speed was the primary cause in 22% of accidents where a person (or people) were killed. Alcohol was involved in 29% of fatal accidents, but also could have been a contributing factor in other accidents in which someone was killed.

*Bus services*

The Metropolitan Transport Trust (MTT) is the State Government-run bus service in Tasmania. It operates in the major metropolitan areas around the State, providing bus services to the public. In 1993-94 the number of passenger trips conducted by MTT was estimated to be 11,750,000, a decrease of 1.7% compared with 1992-93. Full adult patronage declined; however, school travel increased, as did adult concession travel.

<b>MTT SERVICES, TASMANIA (a)</b>		
	1992 93	1993-94
Buses	243	243
Total distance travelled ('000 km)	10 592	10 582
Passengers ('000)	11 958	11 752

(a) Total: Hobart, Launceston and Burnie  
Source: Department of Transport

Service improvements included the Rosny Park Transit Mall which was commissioned on 31 January 1994. It provides a strategic transport node on Hobart's Eastern Shore. The Glenorchy Bus Station, which was commissioned on 9 March 1994, provides a similar facility within the Northern Suburbs of Hobart.

Metro Express was extended to Hobart's Eastern Shore and into Launceston, in the north of the State, to attract adult patronage in the peak time.

Metro also introduced services to Hadspen for the first time. The suburb, just out of Launceston, was recognised as a growth area and considered appropriate for Metro urban services.

Electronic ticketing was introduced to Burnie in December 1994, providing flexible ticketing options and accurate data.

**Ferries**

*Bass Strait services*

The TT-Line's new vessel *Spirit of Tasmania* replaced the company's original vessel, *Abel Tasman* on 29 November 1993.

In the twelve months ended June 1994, the *Abel Tasman* and the *Spirit of Tasmania* carried 229,705 passengers, 63,637 vehicles and 19,122 Total Equivalent Units (TEU) of freight.

*Bruny Island service*

Transport Tasmania operates the ferry service between Kettering and Roberts Point, to connect Bruny Island to the Tasmanian mainland. The *Miranbeena* ferry replaced the *Harry O'May* in 1990.

<b>BRUNY ISLAND FERRY</b>			
	1990 91	1991-92	1992 93
Voyages	6 956	6 632	6 674
Vehicles	104 124	108 211	116 211
Revenue	741 489	584 000	709 000
Expenditure	1 350 692	2 362 000	1 636 000
Depreciation	11 186	283 000	272 000
Profit/(Loss)	(620 389)	(1 007 000)	(1 020 000)

Source: Department of Transport & Works, Annual Report 1992-93

<b>DOMESTIC FREIGHT MOVEMENTS, MAIN AIRPORTS, TASMANIA (a) (tonnes)</b>				<b>PASSENGER MOVEMENTS, MAIN AIRPORTS, TASMANIA (a) ('000)</b>			
<i>Airport</i>	1990-91	1991-92	1992-93	<i>Airport</i>	1990-91	1991-92	1992-93
Hobart	3 609	4 331	6 142	Hobart	575	673	697
Launceston	22 403	16 407	8 524	Launceston	402	456	468
Devonport	17	19	23	Devonport	184	130	113
Wynyard	56	40	42	Wynyard	76	70	84
Flinders Island	32	49	51	Flinders Island	17	20	20
King Island	926	672	924	King Island	33	78	33

(a) Scheduled domestic and regional airline services only, including all freight, non-trade items. Charters are not included.

Source: Department of Transport and Communications

## Air

Air transport provides a vital role in the maintenance and development of passenger and air-freight flows between Tasmania and the mainland. This role of air transport is far more important than in other States, where alternative transport modes exist for interstate movement of passengers and freight.

Regular domestic air services, to and from Tasmania, are provided by Qantas, Ansett, Southern Australian Airlines, Hazelton, Kendell, and Chartered Airlines of Australia. Air New Zealand provides international flights by flying weekly to Christchurch. Airlines of Tasmania, Wilderness Air, Western Aviation and Tasair provide passenger, charter and tourist flights within the State. Airlines of Tasmania, Flinders Island Airways and Promair connect Flinders and King islands and also provide services to Melbourne.

Hobart Airport is located 18 kilometres from the city and in 1992-93 handled around 697,000 passengers. The airport has been developed to accommodate Boeing 747 aircraft. The runway is 2,251 metres long and is served by modern radar and navigation aids which provide all-weather capability. In 1988 the Federal Airports Corporation was vested with the operation of Hobart Airport as well as 16 other major airports throughout Australia, including Launceston and Cambridge.

Launceston Airport is located 16 kilometres south-east of the city. It is the base for the Royal Flying Doctor Service and is used for commuter operations, pilot training, light aircraft charter and other aerial-work operations. Launceston Airport is also the major freight-handling airport in Tasmania for IPEC, Ansett and Qantas, as well as for charter and non-scheduled operators. It is ranked fifth in Australia for the movement of freight.

Tasmania has nine other aerodromes--at Cambridge, Devonport, Flinders and King islands, Smithton, St Helens, Queenstown, Strahan and Wynyard. Devonport and Wynyard airports have runways large enough to carry jet aircraft and they handle regular passenger services to Victoria. All of these aerodromes handle internal commuter, charter and private aircraft traffic and some interstate freight services.

## Rail

The 784 kilometre freight-only rail network, operated by AN Tasrail, services many of Tasmania's principal industries via links with all major ports and cities.

The main goods transported are bulk cement and fertilizer, coal for a number of major Tasmanian industries, sulphuric acid, logs for woodchip export and paper production, liquid clay, and goods by container.

AN Tasrail carried 1.943 million tonnes of freight in 1993-94, an increase of 17.3% on the 1.656 million tonnes carried in 1992-93, for a task of 333.8 million net tonne kilometres (NTK). This was up 13.8% on the 293 million NTK recorded in 1992-93.

AN Tasrail's deficit of \$7.5 million, before abnormal transactions and receipt of government supplements and grants, was 49.1% less than 1992-93.

A major event was the commissioning of new workshops at East Tamar Junction. Construction was completed in September 1993 and the maintenance operations were progressively transferred.

The Road Railer bi-modal technology was also launched in Tasmania, with two prototype units entering traffic for trials.

Cement tonnages were up 29.9% on the previous year, reflecting the value of the upgraded facility for Goliath at Railton.

<b>TASRAIL FREIGHT GOODS CARRIED ('000)</b>		
<i>Commodity</i>	<i>1992-93</i>	<i>1993-94</i>
Woodchip logs	257.3	294.7
Other logs	96.9	52.8
Coal	261.1	307.4
Cement	527.5	685.5
Containers	265.7	313.8
Sulphuric acid	98.9	103.9
Fertilizer	89.1	102.6
Minerals	59.1	82.0
Other goods	—	—
<b>Total</b>	<b>1 655.6</b>	<b>1 942.7</b>

*Source: Australian National Railways Commission, Annual Report 1993-94*

## TELECOMMUNICATIONS

Australia's telecommunications infrastructure is currently undergoing dramatic change. In January 1989 Telecom became a corporation. Areas of service that had previously been exclusively provided by Telecom such as cabling and wiring of client premises, and PABX mainframes and their maintenance are now open to private competition such as OPTUS.

Tasmania has had its communication facilities upgraded, through the provision of extensive optical-fibre cable lines to replace the traditional cables. By 1996 the target is to have the optical-fibre cable linked around Australia. This includes the installation of an optical-fibre submarine cable to include Tasmania in the network.

## RADIO AND TELEVISION SERVICES

Radio and television broadcasting is the responsibility of the Commonwealth Minister for Communications and the Arts. The Australian broadcasting system consists of free-to-air services, subscription narrowcasting and subscription broadcasting services (television only). The four types of free-to-air service are:

- national radio and television services, provided by the ABC, SBS and Parliamentary broadcasting;
- commercial radio and television services, provided by commercial companies under licence;
- community radio and television services, provided by non-profit-making organisations under licence; and
- open narrowcasting services, provided by any operator under the standing authority established by the relevant open narrowcasting 'class licence'. A narrowcasting service is one whose reception is limited in some way, for example by being targeted to special interest groups or to cover a special event.

The two types of subscription television broadcasting services (pay TV), of which none operate in Tasmania, are:

- satellite delivered; and
- non-satellite delivered (e.g. cable).

Subscription narrowcasting services may be provided by any operator under the standing authority established by the 'class licence'. Examples of such services include radio and television sports services received in hotels and clubs.

### Free-to-air services

#### *National broadcasting services*

In May 1995 the ABC provided one television service nationally, and five radio services (Radio National, Regional Radio, ABC Classic FM, JJJ, and the Parliamentary and News Network PNN), while SBS TV was available in Hobart, Launceston and other regions of Tasmania. SBS radio will be made available in Hobart in late 1995.

The ABC and SBS are a major users of the Australian satellite system, Optus Communications (formerly AUSSAT). This enables people in remote areas to receive ABC and SBS television and three ABC radio services.

#### *Commercial broadcasting services*

A commercial radio or television licensee is required under the *Broadcasting Services Act 1992* to provide a service that, when considered together with other broadcasting services available in the licence area of the licence, contributes to the provision of an adequate and comprehensive range of broadcasting services in that licence area.

In April 1994 the licence areas of TVT (WIN) and TNT (Southern Cross) were aggregated. This meant that two commercial TV stations became available throughout most of Tasmania. WIN carries Channel Nine network programs and Southern Cross carries a composite of Channel Seven and Ten programs. At the same time there has been an expansion of FM radio services, ABC Radio National and Radio Regional, in Tasmania.

In May 1995 there were 11 radio and four television free-to-air services in Tasmania: ABC, SBS, Southern Cross and WIN.

#### *Community broadcasting services*

Community broadcasting services under the *Broadcasting Services Act 1992* were previously known as 'public' broadcasting services under the former *Broadcasting Act, 1942*. A community broadcasting service is required under the *Broadcasting Services Act 1992* to provide a service that, when considered together with other broadcasting services available in the licence area of the licence, contributes to the provision of an adequate and comprehensive range of broadcasting services in that licence area.

### RADIO STATIONS IN OPERATION, 1994

Call sign	Classification	Location
7FG	ABC	Fingal
7ABCFM	ABC	Hobart
7JJJ	ABC	Hobart
7PB	ABC	Hobart
7RN	ABC	Hobart
7ZR	ABC	Hobart
7NT	ABC	Launceston
7QN	ABC	Queenstown
7SH	ABC	St Helens
7ABCRN	ABC	Strahan
7ABCRN	ABC	Waratah
7BU	Commercial	Burnie
7AD	Commercial	Devonport
7HO	Commercial	Hobart
7HT	Commercial	Hobart
7TTT	Commercial	Hobart
7XXX	Commercial	Hobart
7EX	Commercial	Launceston
7LA	Commercial	Launceston
7XS	Commercial	Queenstown
7XS/T	Commercial	Rosebery
7SD	Commercial	Scottsdale
7RGY	Community	Geeveston
7HFC	Community	Hobart
7RPH	Community	Hobart
7THE	Community	Hobart
7LTN	Community	Launceston
7WAY	Community	Launceston
7DBS	Community	Wynyard

Source: Australian Broadcasting Authority

Community radio services have expanded rapidly throughout Australia since 1978, when the Minister announced policy guidelines for their development. From 12 stations in 1978 the sector now comprises over 250 stations. In May 1995 there were seven community radio stations in Tasmania.

Funds for these services come from a variety of sources including government and non-government grants, subscriptions and sponsorship announcements. Community radio services are essentially local in focus with program material intended to reflect the wide range of information, and cultural and educational interests in each service area.

#### *Open narrowcasting services*

The category of open narrowcasting radio services was established under the *Broadcasting Services Act 1992*. Open narrowcasting services are provided under the open narrowcasting radio 'class licence'. In 1995 the great majority of such services Australia-wide are very low power information services. There were 15 such services, most offering tourist information, in Tasmania in May 1995.

## NEWSPAPERS

Newspapers are another important medium for daily communication across the State. *The Mercury* has the largest circulation around Tasmania, followed by *The Examiner*. The Sunday versions of both these newspapers have higher circulation figures compared with the daily version produced during the week.

There are a number of other smaller, local newspapers published throughout the State, for example the *Derwent Valley Gazette* which is circulated primarily in New Norfolk, Bridgewater, Maydena and Hamilton.

### NEWSPAPERS, TASMANIA (a)

Name	Frequency	Circulation (no.)	Location
<i>The Mercury</i>	Mon.-Sat.	54 047	Hobart
<i>Sunday Tasmanian</i>	Sunday	53 944	Hobart
<i>The Sunday Examiner</i>	Sunday	41 164	Launceston
<i>The Examiner</i>	Mon.-Sat.	38 047	Launceston
<i>The Advocate</i>	Mon.-Sat.	25 839	Burnie
<i>Bay City Star</i>	Weekly	21 800	Hobart
<i>Glenorchy Star</i>	Weekly	21 700	Hobart
<i>Launceston Week</i>	Thursday	20 466	Launceston
<i>Eastern Shore Star</i>	Weekly	17 100	Hobart
<i>Devonport City News</i>	Wednesday	15 364	Burnie

(a) Circulation figures relate to the survey period November 1993 to March 1994.  
Source: Margaret Gee's *Australian Media Guide*

## POSTAL SERVICES

The Australian Postal Corporation, trading as Australia Post, is a Government Business Enterprise owned by the Commonwealth of Australia. It operates under the *Australian Corporation Act 1989*. Australia Post is independent of Government funding. In financial terms, the Corporation achieves a profit performance equal to the best of private sector enterprises. It pays the full range of government taxes and charges and has apportioned 50% of its after-tax profits as a dividend to the government.

The Corporation offers letter and parcel services within Australia and internationally. It also provides a range of related services including electronic bulk mail handling; advertising mail; bill payment, money order and banking services; express delivery services; and philatelic products and services.

At 30 June 1994, Australia Post employed 700 staff in Tasmania. There were 34 post offices, and 140 licensees around the State. Mail was distributed to a total of 186,631 delivery points, involving 170,192 households and 16,439 businesses.

#### FURTHER READING

Other statistical tables relating to this chapter are located in the Historical Series at the back of this book.

#### ABS PUBLICATIONS

*Motor Vehicle Registrations, Tasmania* (9303.6)

#### OTHER PUBLICATIONS

Australian National Railways Commission, *Annual Report*, Canberra.

Department of Transport and Works, *Annual Report*, Hobart.

Department of Transport & Communications, *Radio & Television Broadcasting Stations*, Canberra.

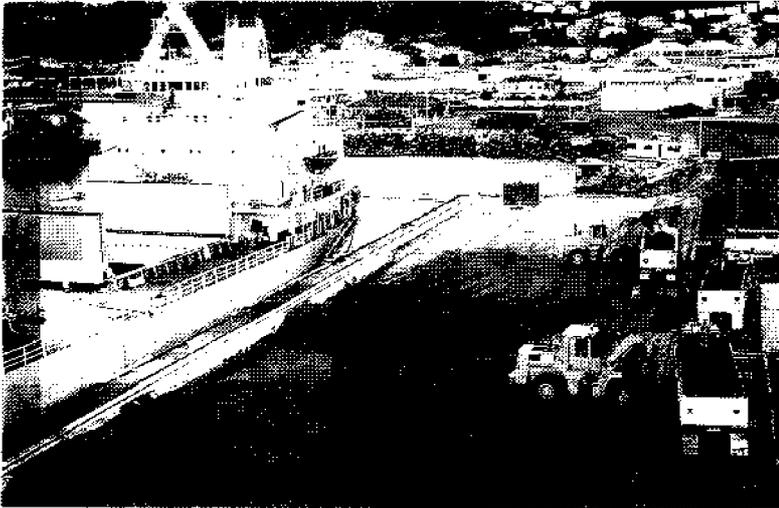
#### ACKNOWLEDGEMENTS

Australian Broadcasting Authority

Australia Post

Department of Transport

## 22 | Trade



*Burnie Port Authority*

The Burnie port has grown to be Tasmania's largest port in terms of revenue tonnes.

TASMANIA'S FIRST RECORDED TRADING ACTIVITY occurred in 1808 when a cargo of sugar arrived at the colony from Bengal. Exports began in 1812 when the *Cyclops* sailed for Sydney with a cargo of locally grown wheat. In June 1813 ports were opened to commerce and trading began in Van Diemen's Land. Twenty thousand bushels of wheat was exported to Sydney in 1817. In 1819 wheat to the value of £4,000 (\$8,000) was exported and in 1820, 43,917 pounds (19,962 kg) of salted meat, which was produced at the settlement of Hobart, was exported to Sydney.

During the 1820s the economy of the colony was becoming diversified even though it still remained very basic. Imports arrived from Britain, India, Mauritius and Batavia while exports were shipped to Britain and Sydney. In 1822 goods exported consisted of wheat, oil, whalefins, seal and kangaroo skins, logs of pine and beefwood, salt, wool, horses and hides. In 1823 exports consisted of wheat, barley, potatoes, oil, whalebone, seal and kangaroo skins, cedar logs, pine logs, wool and tallow.

In the *Statistical Returns of Van Diemen's Land 1835-38*, compiled from official records in the Colonial Secretary's office, it was recorded 'that the imports for the three years have increased 20 per cent, and the very pleasing fact that the exports for the same period have increased at the astonishing rate of 81 per cent, or from £320,679 (\$641,358), in 1835 to £581,475 (\$1,162,950) in 1838.'

The most prominent import into Van Diemen's Land, during the early years of settlement was livestock. By 1837, however, two years after the settlement of Port Phillip, livestock had become the major export line and, with wool, it dominated export trade.

During the 1840s exports dropped due to a slump in the price of the colony's staple commodity, wool. There was also a decline in the export of oil and whalebone which were main export commodity items. The largest increase in trade occurred with the British colonies during this period.

In 1842 the value of imports into Van Diemen's Land was a high £21 (\$42) per head compared with only £2 10s (\$5) per head in Britain. The value of exports for the same year was £10 (\$20) per head for Van Diemen's Land compared with only £2 (\$4) per head for Great Britain and Ireland. By the mid-1800s the value of trade, especially exports, had grown dramatically.

As the colony developed and progressed through the late 1800s, exporting locally produced commodities became increasingly important to the economy of the State.

By 1880 the value of exports had exceeded the value of imports. This balance of trade (excess of exports over imports) see-sawed over the following five decades, then stabilised over the period 1937-38 to 1948-49 with exports once again exceeding the value of imports. From 1949-50 to 1954-55 the balance fluctuated once again, but from 1955-56 the value of exports has consistently exceeded the value of imports. As a result of this healthy balance of trade the State plays a vital role as an earner of export income for Australia.

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#### OVERSEAS EXPORTS, TASMANIA (\$m)

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	1992-93	1993-94	% change
Cork and wood	50.6	228.8	352.2
General industrial machinery	3.1	13.7	341.9
Transport equipment	65.9	101.3	53.7
Iron and steel	65.2	92.0	41.1
Dairy products & birds' eggs	54.6	70.8	29.7
Vegetables and fruit	47.9	62.1	29.6
Meat & meat preparations	66.6	84.5	26.9
Paper, paperboard	22.9	28.4	24.0
Fish & crustaceans	136.4	140.0	2.6
Textile yarns and fabrics	15.7	15.7	0.0
Metalliferous ores	207.4	181.7	-12.4
Textile fibres and waste	47.4	40.5	-14.6
Dyeing, tanning materials	17.9	14.9	-16.8
Medicinal & pharmaceutical products	19.1	15.6	-18.3
Road vehicles	22.3	18.2	-18.4
Non-ferrous metals	436.9	353.4	-19.1

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Source: *Foreign Trade, Australia: Merchandise Exports, Detailed Commodity Tables (5436.0) on microfiche*

## INTERNATIONAL TRADE

### Tasmania's trade performance

The value of Tasmania's overseas exports rose by 2.3% to \$A1,558 million in the 1993-94 financial year. This rise was less than half that of 1992-93 when the value of overseas exports rose by 5.7% to \$A1,521 million. Tasmania's export growth has been sluggish when compared to the total value of Australian exports, which rose by 6.3% in the 1993-94 financial year and 10.5% in the previous year.

While Tasmania's economic production contributed only 2.2% to the Australian total, it contributed 2.4% to the nation's value of overseas exports. Thus per dollar of economic production, Tasmania contributes more to Australian exports than other States do. Tasmania's economy is heavily export oriented, due to the small domestic market for the bulk of Tasmania's produce. In fact the value of foreign exports formed 17.1% of Tasmania's production in 1993-94, while the total value of exports from Australia comprised only 15.2% of the nation's production. While it may seem beneficial that Tasmania contributes significantly to total Australian exports for the size of its economy, it can also be a problem.

Since a large proportion of Tasmania's production is derived from exports, a large proportion of the Tasmanian economy can be severely affected by movements in world prices. This problem is exaggerated due to the small size of Tasmania's economy which forces it to specialise in a few key industries and so its foreign exports are concentrated in a handful of commodities.

Overseas imports to Tasmania are often forwarded on after being imported to the larger mainland ports and so are not included in the figures reported for imports to Tasmania. Thus imports into Tasmania are under reported as only direct imports into Tasmania can be recorded.

The value of direct imports rose sharply during 1993-94 by 33.9% to \$A447 million. This rise is much larger than that of 1992-93 when the value of direct imports rose by 16.4% from the previous year to \$A334 million. This was mainly due to a \$111.0 million (224%) increase in transport equipment (excluding road vehicles), a \$7.9 million (75%) increase in general industrial machinery, equipment and parts, a \$6.5 million (128%) increase in imports of metalliferous ores and metal scrap and a \$6.0 million (1,539%) increase in telecommunications and sound recording and reproducing apparatus and equipment. This was partly offset by a \$11.1 million (35%) fall in imports of machinery specialised for particular industries and a \$10.1 million (60%) fall in the imports of power generating machinery and equipment.

### Major exports market

In 1957-58 Tasmania's major trading partners in terms of the value of goods exported were:

• United Kingdom	\$18.6 million
• United States of America	\$4.0 million
• India	\$3.7 million
• Italy	\$2.8 million
• France	\$2.8 million
• Japan	\$2.8 million
• Federal Republic of Germany	\$2.4 million

**TASMANIA'S MAJOR EXPORT MARKETS**

<i>Country or country group</i>	<i>1993-94 (\$'000)</i>	<i>1993 94 share (%)</i>	<i>Increase from 1992-93 (%)</i>
<b>Association of South East Asian Nations (ASEAN)—</b>			
Brunei	324	0.0	62.8
Indonesia	89 321	5.7	-7.4
Malaysia	78 628	5.0	-4.7
Philippines	13 294	0.9	55.5
Singapore	27 937	1.8	-3.3
Thailand	74 136	4.8	0.7
<b>ASEAN Total</b>	<b>283 640</b>	<b>18.2</b>	<b>-2.3</b>
<b>European Economic Community (EEC)—</b>			
Austria	576	0.0	100.7
Belgium-Luxembourg	6 517	0.4	-25.1
Denmark	813	0.1	34.6
Finland	3 795	0.2	14.0
France	9 713	0.6	7.9
Germany	28 327	1.8	-14.3
Greece	500	0.0	-83.8
Ireland	1 094	0.1	-28.4
Italy	13 521	0.9	9.3
Netherlands	9 363	0.6	52.3
Portugal	82	0.0	-72.1
Spain	843	0.1	33.4
Sweden	2 886	0.2	60.6
United Kingdom	97 604	6.3	54.8
<b>EEC Total</b>	<b>175 634</b>	<b>11.3</b>	<b>22.1</b>
<b>Other major trading partners—</b>			
Argentina	35 376	2.3	-42.0
Canada	14 602	0.9	34.4
China	9 899	0.6	21.0
Hong Kong	90 547	5.8	15.4
India	10 315	0.7	-52.7
Japan	478 532	30.7	4.8
New Zealand	43 793	2.8	9.2
Saudi Arabia	22 963	1.5	0.7
Republic of Korea	54 111	3.5	76.8
Taiwan	104 047	6.7	-19.8
United States of America	164 095	10.5	-11.2
<b>Total</b>	<b>1 028 280</b>	<b>66.0</b>	<b>-2.7</b>
Other countries, re-imports	70 626	4.5	131.6
<b>Total exports</b>	<b>1 558 139</b>	<b>100.0</b>	<b>2.4</b>

Source: *Foreign Trade, Australia: Merchandise Exports, Detailed Commodity Tables (5436.0) on microfiche*

During the late 1960s Japan became the principal recipient of Tasmanian exports when it substantially increased its iron-ore requirements. In the twelve months to June 1968, Japanese importers spent \$9 million on Tasmanian goods and the following year this had jumped to \$17 million, most of which was for iron-ore.

In 1993-94 Tasmania's major trading partners in terms of value of goods exported were:

• Japan	\$478.5 million
• United States of America	\$164.1 million
• Taiwan	\$104.0 million
• United Kingdom	\$97.6 million
• Hong Kong	\$90.5 million
• Indonesia	\$89.3 million
• Malaysia	\$78.6 million
• Thailand	\$74.1 million
• Republic of Korea	\$54.1 million
• New Zealand	\$43.8 million
• Argentina	\$35.4 million
• Germany	\$28.3 million
• Singapore	\$27.9 million
• Saudi Arabia	\$23.0 million
• Canada	\$14.6 million

### Japan

Japan continued to be Tasmania's largest export market taking almost a third (30.7%) of the State's exports by value during 1993-94. Exports to Japan increased by 4.8% from \$456.8 million in 1992-93 to \$478.5 million in 1993-94. However, this figure is still below the high of 1988-89 when exports to Japan were \$516.2 million. Tasmania's largest export to Japan was woodchips. During 1993-94 over 2.7 million tonnes of woodchips were exported to Japan at a value of \$199.6 million.

### The Association of South East Asian Nations (ASEAN)

The ASEAN countries, which comprise Brunei, Indonesia, Malaysia, the Philippines, Singapore and Thailand, take 18.2% of the value of Tasmania's exports. Exports to the region fell by 2.3% from the record of \$290.3 million in 1992-93 to \$283.6 million in 1993-94.

Exports to ASEAN have risen considerably over the past decade with Indonesia and Malaysia taking a steady stream of Tasmanian exports. In 1993-94 Indonesia was Tasmania's sixth largest export market taking 5.7% of the total value of the State's exports and Malaysia the seventh largest taking 5.0% of Tasmania's exports by value. Exports to Singapore have declined slightly in recent years but this has been more than compensated for by large increases in exports to Thailand, which took 4.8% of Tasmania's 1993-94 exports, and a smaller increase in exports to the Philippines.

#### TASMANIAN EXPORTS TO JAPAN, 1993-94 (a)

Commodity	Value (\$m)
Woodchips	199.6
Copper ores and concentrates	65.8
Meat of bovine animals	43.0
Abalone, prepared or preserved	25.1
Cheese	20.8
Fish	19.8

(a) The top six export commodities to Japan by value.  
Source: *Foreign Trade, Australia: Merchandise Exports, Detailed Commodity Tables (5436.0)* on microfiche

#### TASMANIAN EXPORTS TO ASEAN COUNTRIES, 1993-94 (a)

Commodity	Value (\$m)
Zinc	92.4
Aluminium	62.4
Ores and concentrates of base metals (tin, zinc and lead)	47.2
Fruit and nuts (apples)	18.3
Ferro alloys	9.6
Milk, cream, whey and milk products (excl. butter and cheese)	8.8

(a) The top six export commodities to ASEAN by value.  
Source: *Foreign Trade, Australia: FASTTRACCS Service (5461.0)*

**TASMANIAN EXPORTS TO THE EEC  
1993-94 (a)**

Commodity	Value (\$m)
Ships and boats	64.3
Ores and concentrates of base metals (tin, zinc and lead)	23.8
Vegetables (mainly onions)	23.6
Wool	23.1
Made-up textile materials	6.8
Oil seeds and oleaginous fruits (incl. flours and meals) n.e.c.	6.3

(a) The top six export commodities to the EEC by value.  
Source: *Foreign Trade, Australia: FASTTRACCS Service* (5461.0)

**TASMANIAN EXPORTS TO USA,  
1993-94 (a)**

Commodity	Value (\$m)
Zinc	31.5
Ferro alloys	30.4
Meat of bovine animals	27.0
Fish	26.0
Oil seeds and oleaginous fruits (incl. flours and meals) n.e.c.	7.4
Transmission shafts, plain shaft bearings, gearing, speed changers and parts	7.2

(a) The top six export commodities to the USA by value.  
Source: *Foreign Trade, Australia: Merchandise Exports, Detailed Commodity Tables (5436.0) on microfiche*

**TASMANIAN EXPORTS TO TAIWAN,  
1993-94 (a)**

Commodity	Value (\$m)
Zinc	45.2
Abalone, prepared or preserved	21.2
Aluminium	10.0
Crustaceans, molluscs and aquatic invertebrates	5.7
Pigments and preparations based on titanium dioxide	3.6
Ferro alloys	2.9

(a) The top six export commodities to Taiwan by value.  
Source: *Foreign Trade, Australia: Merchandise Exports, Detailed Commodity Tables (5436.0) on microfiche*

**TASMANIAN EXPORTS TO HONG KONG  
1993-94 (a)**

Commodity	Value (\$m)
Zinc	62.8
Abalone, prepared or preserved	7.6
Crustaceans, molluscs and aquatic invertebrates	5.1
Pigments and preparations based on titanium dioxide	3.0
Milk, cream, whey and milk products (excl. butter and cheese)	2.8
Vegetables	1.6

(a) The top six export commodities to Hong Kong by value.  
Source: *Foreign Trade, Australia: Merchandise Exports, Detailed Commodity Tables (5436.0) on microfiche*

*The European Economic Community (EEC)*

Exports to the EEC have fluctuated over the past years and 1993-94 was no exception. Exports to the EEC rose by 22.1% from \$143.9 million in 1992-93 to \$175.6 million in 1993-94 after falling 21.1% the previous year. The United Kingdom was the largest export market within the EEC taking 6.3% of the total value of Tasmania's exports. Germany was the second largest market taking 1.8% of Tasmania's total exports by value.

*United States of America (USA)*

The United States of America remained Tasmania's second largest national export destination after Japan in 1993-94 buying 10.5% of the State's exports. However, exports to the USA fell by 11.2% from \$184.8 million in 1992-93 to \$164.0 million in 1993-94.

*Taiwan*

Taiwan has grown to become the third largest market for Tasmania's exports and in 1993-94 took 6.7% of Tasmania's exports. Exports to Taiwan fell by 19.8% from the record of \$129.7 million in 1992-93 to \$104.0 million in 1993-94.

*Hong Kong*

Exports to Hong Kong almost doubled in the past four years to 1993-94. It became the fifth largest export destination for Tasmanian products taking 5.8% of the State's exports.

Exports to Hong Kong rose by 15.5% from \$78.4 million in 1992-93 to \$90.5 million in 1993-94.

### Commodities exported

Tasmania's international exports are basically raw materials and produce, and are dominated by a few commodities. In fact the top four broad export commodity groups of non-ferrous metals (22.7%), cork and wood (14.7%), metalliferous ores and metal scrap (11.7%) and fish, crustaceans, molluscs and aquatic invertebrates (9.0%) accounted for more than half of Tasmania's exports in 1993-94. In the past, Tasmania's exports were dominated by resource-based commodities such as ores and concentrates, processed metals and forestry products. Recently exports of fine pure foods, and manufactured goods and equipment have begun to reduce Tasmania's reliance on resource-based exports.

#### TASMANIAN OVERSEAS EXPORTS, 1993-94 (a)

Commodity	Value (\$'000)	Share of total exports (%)	Cumulative share of total (%)
Zinc	268 335	17.2	17.2
Woodchips	201 831	13.0	30.2
Ships and boats (catamaran ferry ships—98.0%)	101 304	6.5	36.7
Base metal ores and concentrates, n.e.c. (tin—51.7%, zinc—37.9%, lead—10.2%)	91 381	5.9	42.5
Ferro alloys	90 586	5.8	48.4
Aluminium	82 492	5.3	53.6
Meat of bovine animals	80 459	5.2	58.8
Copper ores and concentrates	72 541	4.7	63.5
Abalone, prepared or preserved	62 858	4.0	67.5
Fish (livers and roes—45.1%, salmon—43.0%)	49 523	3.2	70.7
Wool and other animal hair (greasy shorn wool—99.2%)	40 329	2.6	73.3
Vegetables (onions—70.6%)	37 717	2.4	75.7
Cheese	33 742	2.2	77.9
Paper and paper board	26 805	1.7	79.6
Crustaceans, molluscs and aquatic invertebrates (abalone—52.0%, rock lobsters—41.6%)	25 902	1.7	81.2
Milk, cream, whey and milk products (excl. butter and cheese)	25 541	1.6	82.9
Wood in the rough or roughly squared	24 990	1.6	84.5
Fruit and nuts (apples—99.1%)	22 084	1.4	85.9
Parts and accessories for motor vehicles, special purpose vehicles and tractors	17 797	1.1	87.0
Medicinal and pharmaceutical products (opium products—93.1%)	15 546	1.0	88.0
Pigments and preparations based on titanium dioxide	14 893	1.0	89.0
Oil seeds and oleaginous fruits (incl. flours and meals) n.e.c.	14 733	0.9	89.9
Transmission shafts, plain shaft bearings, gearing, speed changers and parts	11 889	0.8	90.7
Butter and other milk fats	11 367	0.7	91.4
Made-up textile materials (bed linen—81.7%)	11 177	0.7	92.1
Other commodities	117 851	7.6	100.0
<b>Total</b>	<b>1 558 139</b>	<b>100.0</b>	

(a) The top 25 overseas exports from Tasmania by value.

Source: Foreign Trade, Australia: FASSTRACCS Service Hardcopy Reports (5461.0)

**TASMANIAN OVERSEAS IMPORTS, 1993-94 (a)**

<i>Commodity</i>	<i>Value (\$'000)</i>	<i>Share of imports (%)</i>	<i>Cumulative share of total (%)</i>
Ships, boats and floating structures	160 338	35.8	35.8
Pulp and waste paper	29 555	6.6	42.4
Cocoa	15 233	3.4	45.8
Base metal ores and concentrates	11 501	2.6	48.4
Metallic salts and peroxy salts of inorganic acids	9 670	2.2	50.6
Private motor vehicles	9 228	2.1	52.6
Fertiliser	9 182	2.1	54.7
Aluminium	8 315	1.9	56.6
Residual petroleum products and related materials n.e.c.	8 048	1.8	58.4
Transport and special purpose motor vehicles	7 603	1.7	60.1
Rubber tyres, treads, flaps and inner tubes	6 989	1.6	61.6
Textile yarn	6 806	1.5	63.1
Coke and semi-coke of coal, lignite or peat	6 761	1.5	64.6
Telecommunications equipment and parts for radio, television, video etc.	6 286	1.4	66.1
Paper and pulp mill machinery	5 637	1.3	67.3
Non-electrical machinery	5 635	1.3	68.6
Machinery, equipment and parts for particular industries	5 592	1.2	69.8
Electrical machinery and apparatus n.e.c.	5 342	1.2	71.0
Fruit and nuts	5 044	1.1	72.1
Crude materials n.e.c.	4 610	1.0	73.2
Power generating machinery	4 185	0.9	74.1
Civil engineering and contractor's plant and equipment	4 021	0.9	75.0
Measuring, checking, analysing and controlling instruments and apparatus	3 731	0.8	75.8
Articles of plastic n.e.c.	3 541	0.8	76.6
Crude vegetable material n.e.c.	3 493	0.8	77.4
Other commodities	101 064	22.6	100.0
<b>Total</b>	<b>447 410</b>	<b>100.0</b>	

(a) The top 25 direct overseas imports to Tasmania by value.  
 Source: *Foreign Trade, Australia: FASTTRACCS Service (5461.0)*

A better picture of Tasmania's overseas exports and how heavily concentrated they are in a few key commodities, can be obtained by examining exports at the more detailed commodity group level. Almost one-third (30.3%) of the value of Tasmania's exports was derived from exports of zinc and woodchips in 1993-94. Tasmania's top ten exports formed 70.9% of the total value of exports and, with the notable exception of the export of catamaran ferry ships, are all raw materials and food produce.

Zinc was Tasmania's most valuable export in 1993-94. Some 23.4% was sent to Hong Kong, 17.7% to Indonesia, 16.8% to Taiwan and 11.8% to the USA. Japan took almost all, 98.9%, of Tasmania's second largest export, woodchips, with the remainder going to Taiwan. Two catamarans were exported to the United Kingdom and another to Argentina representing 63.4% and 34.5% respectively of the export of ships and boats, now Tasmania's third largest export. Of Tasmania's tin, zinc, and lead ores and concentrates that are exported, 26.4% was sent to Malaysia, 26.0% to the EEC countries, 25.3% to Thailand and 17.9% to Japan.

The USA was sent 33.6% of Tasmania's fifth largest export by value, ferro alloys, and Saudi Arabia 21.1%. Of aluminium, 39.8% was exported to Indonesia and 26.5% to Thailand. Most of Tasmania's meat of bovine animals was sent to Japan, 53.5%, and the USA, which took 33.5% of the exports. Of Tasmania's copper ores and concentrates exports, 90.8% was sent to Japan and 12.3% to the Republic of Korea.

Almost all of Tasmania's highly valuable prepared and preserved abalone were sent to Asia, with Japan buying 40.0%, Taiwan 33.7%, Hong Kong 12.1% and Singapore 11.1%. Of Tasmania's tenth largest export by value, fish, 52.4% was sent to the USA and 40.0% to Japan.

### Commodities imported

It is difficult to get an accurate picture of what Tasmania imports from overseas as only those goods imported directly into the State and not via a mainland port are recorded. Items directly imported into Tasmania include capital equipment and machinery, and intermediate goods to be used in further downstream processing. During 1993-94 Tasmania's chief import at the broad import commodity group level was transport equipment (non-road). This made up 35.9% of the value of imports to the State.

The other significant contributors and their shares of the State's total value of imports at this level were pulp and waste paper, 6.6%; road vehicles, 4.8%; machinery specialised for particular industries, 4.6%; general industrial machinery, equipment and parts, 4.2%; coffee, tea, cocoa and spices, 3.5%; and textile yarns and fabrics, 3.2%.

A more detailed view of Tasmania's direct imports from overseas can be obtained by examining imports at the more detailed commodity group level. Tasmania's largest import during 1993-94 was the purchase of the *Spirit of Tasmania* from Germany. The import of bleached and unbleached wood pulp from Canada and New Zealand was the second largest import and is used by Tasmania's paper producing mills. Cocoa butter and cocoa cake, mainly from Singapore, was the third largest import by value and is used by the Cadbury chocolate factory. The majority of Tasmania's fourth largest direct import consisted of titanium ores and concentrates, chiefly from Canada, which are used by the Tiioxide plant in the production of pigment and pigment related products.

### TASMANIAN PORTS

Tasmania has a number of ports capable of accommodating overseas vessels; they are situated on the Derwent and Huon rivers in the south (Hobart and Port Huon); in Spring Bay on the east coast; on the Tamar River in the north (Inspection Head, Long Reach and Bell Bay); on the Mersey River (Devonport), in Emu Bay (Burnie) and at Port Latta, all in the North-West.

All of these ports provide berths of a depth of nine metres or greater. Port Latta provides a depth of 16 metres nearly one and a half kilometres off-shore.

There are four main port authorities servicing these areas. Interstate and intrastate trade passes through the main ports of Hobart, Launceston, Devonport and Burnie as well as through the smaller ports at Strahan, Stanley, Ulverstone, Currie (on King Island) and Lady Barron (on Flinders Island).

A feature of Tasmanian trade is that, while the main airports are controlled by the Federal Airports Corporation, the airports at Wynyard (Burnie) and Devonport are controlled by local port authorities, giving each of these authorities responsibility for an integrated network.

**TASMANIAN SEAPORT TRADE, 1993-94**  
 (revenue tonnes)

Major ports	Inwards	Outwards	Total
Burnie	2 256 207	2 928 100	5 184 307
Launceston	1 153 836	2 501 775	3 655 611
Devonport	1 600 165	1 804 967	3 405 132
Hobart	1 550 285	1 618 898	3 169 183
<b>Total</b>	<b>6 560 493</b>	<b>8 853 740</b>	<b>15 414 233</b>

Source: annual reports from the relevant port authorities

### Hobart

The Hobart Marine Board controls about two-thirds of Tasmania's coastline from Cape Portland on the north coast to Temma Harbour in the west. It is responsible for operations in the major ports of Hobart, Port Huon and Spring Bay (at Triabunna) as well as minor (mainly fishing) ports at Bicheno, Strahan, St Helens, Scamander and Dover, among others. During 1993-94 legislation was prepared in order to amalgamate the marine boards of Circular Head and Hobart.

Hobart provides three roll-on roll-off berths, five general cargo berths, two berths suitable for container operations or general cargo, a bulk wheat berth and a bulk petroleum berth. In addition there are two docks (Constitution and Victoria) for handling fishing vessels and recreational craft, and three slips capable of handling vessels of up to 1,200 tonnes. Hobart has expanded its traditional role of maintenance and supply for pelagic fishing and Antarctic supply ships. The *Aurora Australis*, Australia's Antarctic vessel, is registered here.

During 1993-94 the Old Self's Point wharf was demolished and strengthening work was undertaken to the paving on Macquarie Wharf 5 and 6. The Murray St Pier was being redeveloped and expressions of interest were called for the commercial development of the Elizabeth St Pier. A state-of-the-art cold store was built to cater for the needs of southern Tasmanian importers and exporters. Security on Macquarie Point was increased by the installation of additional security cameras. In March 1993, Pasminco-EZ made the decision to relocate their transport and distribution operation to Macquarie Point. This increased the utilisation of Marine Board of Hobart equipment and led to increased direct services to Tasmanian shippers with markets in south-eastern Asia, the USA and Japan.

The main goods that were shipped through the port in 1993 were pulp and waste paper, metals and ores, petroleum products, chemicals, paper, general cargo, fruit and vegetables, timber products, cereals, beverages and edible products.

During 1993-94 Hobart was visited by 513 ships, a decrease of 77 from the previous year. This was due to Coastal Expressline's new shipping schedules and a reduction in Japanese long-line vessels. Total gross registered tonnage of shipping for 1993-94 was 5,018,185, up 3.0% from the previous year. Cargo throughput for 1993-94 was 2,633,711 mass tonnes which was up 0.8% from the previous year.

Port Huon provides two general cargo and fruit handling berths, and Triabunna (Spring Bay) has a woodchip handling berth. Other private facilities also exist.

The trade of boat building has in recent years been revived within the Hobart area. Of particular importance is the new generation of wave-piercing catamarans which have the potential to radically change ferry services around the world. Other boat builders produce smaller fibreglass catamarans and both modern and traditional sailing craft.

## Launceston

The Port of Launceston is situated on the Tamar River. At its mouth, deep water and broad expanses of river provide a valuable natural harbour. In this area, encompassing the anchorages of Bell Bay, Inspection Head and Long Reach, are located the major activities of the port. A tidal range of up to 3.6 metres creates strong tidal currents which, by natural scouring, eliminate the need for any maintenance dredging in the lower reaches of the river.

The Australian Maritime College has facilities at Beauty Point for training crew for fishing vessels and international and domestic shipping operators. It also has a towing tank for hull design testing. This facility is of world class standard and has been used for the new generation of Australian boats preparing for the America's Cup. Private firms in the area are engaged in the maintenance and construction of boats for domestic and overseas markets.

During 1993-94 the Port of Launceston Authority (PLA) continued with steady growth. The PLA played a role in feasibility studies of a Sydney to George Town ferry and the PLA purchased the ferry terminal at Hospital Point from the liquidators of Tasmanian Ferry Services and plan to maintain it in working order for future use. The No. 4 tanker berth at Bell Bay was completed, replacing the old tanker berth built over 40 years ago. It includes the latest fire fighting equipment. A mobile woodchip bulk loader and new pilot launch were purchased and the construction of the pile-driving barge completed.

Comalco continued its vital importance to the port, importing approximately 200,000 tonnes of alumina and then converting it into 100,000 tonnes of aluminium for export. Comalco cargoes also included imports of liquid pitch, fuel oil and soda ash and exports of aluminium powder and alloy wheels. BHP Temco was another important user of the port, importing approximately 380,000 tonnes of manganese ore and significant amounts of coal and coke. It exported approximately 200,000 tonnes of manganese alloys. Woodchips from North Forest Products and Boral Timber Forest Resources were the largest export from the port, totalling 1.7 million tonnes. Other significant goods handled through the port were newsprint, petroleum products, pine logs and other timber, scrap metal, vegetables, wheat and general cargo.

A total of 513 vessels visited the port in 1993-94, representing 5.9 million gross registered tonnes of shipping, which was down marginally from the previous year. Cargo throughput increased 5.4% to 3,655,611 mass tonnes, a three-year high.

## Devonport

The Port of Devonport is situated on the Mersey River within two kilometres of the coast. The entrance is sheltered by Mersey Bluff on the west and by a retaining wall extending over half a kilometre northward from the eastern shore of the river. The river was always a natural harbour for small craft, and its development by extensive dredging and engineering works has resulted in a secure harbour for larger ships. Although originally a general port, in recent years there has been a concentration on servicing a few major users, such as the TT-Line.

The highlight for the Port of Devonport was the arrival of the State's new passenger ferry, *Spirit of Tasmania* which replaced the *Abel Tasman* in late 1993. These two ships ferried 224,688 passengers during 1993-94, up 24.6% from the previous year and the best performance since the pilot's strike of 1989-90. Alterations were made at the No. 1 Berth East during 1993-94 to cater for the larger passenger ferry.

The Port of Devonport is a port with a wide range of cargo due to the wide industry base it serves. New shipments of plantation logs were made to Korea in 1993-94 and there

were imports of fertiliser. There were increases in imports of gypsum, salt, wheat and wood pulp. The port's cold stores increased the usage of the port over the past few years, being vital in the export of the north-west region's vegetables. The multi-million dollar expansion of Goliath Portland Cement Company's plant at Railton and the first full year of operation of the bulk cement carrier in 1993-94 helped boost cargo throughput by 19.6% to 1,530,392 mass tonnes, a three-year high.

During 1993-94, 447 ships visited the Port of Devonport, down 82 from the previous year due to the loss of 24 scheduled sailings of the *Searoad Mersey* and the replacement of the Goliath bulk cement carrier with a vessel with three times its capacity. Total gross registered tonnage of shipping for 1993-94 was 6,447,720, up 35.2% from the previous year.

### **Burnie**

The ports of Hobart, Launceston and Devonport all lie within the shelter of rivers, but the Port of Burnie, on Emu Bay, was built out into the open sea in the lee of Blackman Point. Protection from the potentially rough waters of Bass Strait is afforded by two large breakwaters. Burnie is a deep-water port with no tidal restrictions except occasionally for the larger vessels, and it is virtually fog-free.

During 1993-94 the Burnie Port Authority installed a second portainer crane, the second largest in the southern hemisphere, at the No. 6 Berth further increasing the port's capacity to handle containers. The No. 7 Berth was lengthened from 87 to 220 metres and dredged to a depth of 11.5 metres. The port's capacity to handle and store refrigerated containers was increased by 40 to 385 for overseas shipping. The port is now the fifth largest container port in the country and also one of the cheapest for handling containers.

The main goods that were shipped through the port were mineral concentrates and magnetite, fruit and vegetables, paper, woodchips and timber products, chemicals, petroleum products, motor vehicles and general cargo.

In 1993-94, 489 ships called at the Burnie port, up 17 from the previous year, although the total gross registered tonnage of shipping for 1993-94 was 3,925,290, down 1.4% from the previous year. Cargo throughput for 1993-94 was 2,755,039 mass tonnes, which was up 6.3% from the previous year. The Burnie port grew to be Tasmania's largest port in terms of revenue tonnes.

## **INTERSTATE TRADE**

Tasmania trades with the other States of Australia by sea or air. Much of Tasmania's new value-added industries such as pharmaceuticals, salmon, trout, rock lobsters, cheese and other specialist foodstuffs are sent by air. With the increased use of just-in-time stock control, more basic manufactured goods that have a high value for their weight such as textiles, yarns, clothing and footwear are also being sent by air to the mainland.

Detailed information on Tasmania's interstate air trade is not kept, making it virtually impossible to analyse the State's interstate trade performance. Some basic data can be obtained from the port authorities of Tasmania.

## **FURTHER READING**

Other statistical tables relating to this chapter are located in the Historical Series at the back of this book.

### **ABS PUBLICATIONS**

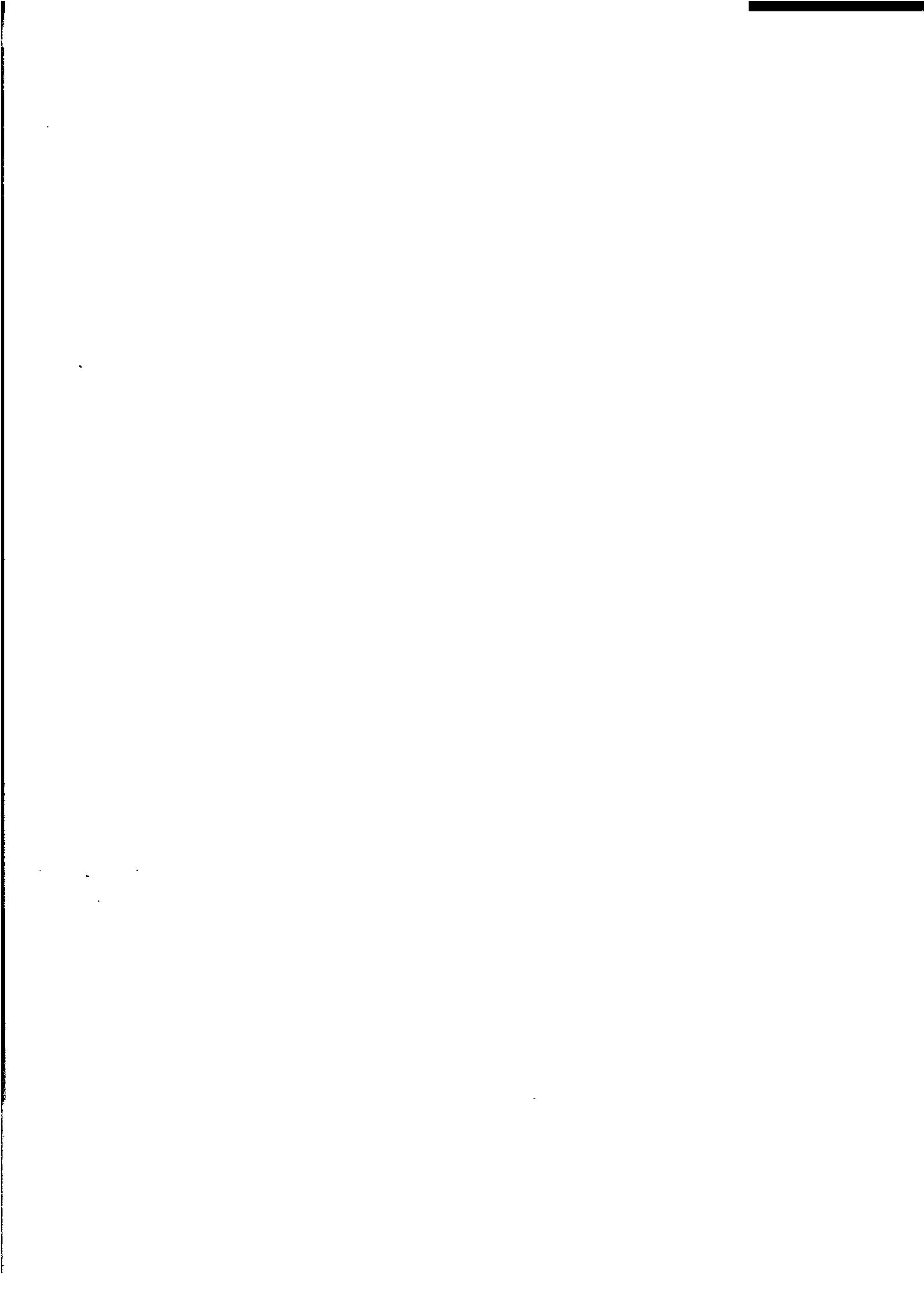
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## 23 | Commerce



The retailing industry is a good indicator of changes in the social and economic environment.

*Every One an Original*

COMMERCE MAKES AN IMPORTANT CONTRIBUTION to the Tasmanian economy. In terms of Gross State Product, the contribution of wholesale and retail trade is surpassed only by public administration, defence and community services, and manufacturing. But employment in commerce has grown much more slowly in Tasmania than in Australia as a whole in the past decade.

The term 'commerce' is usually taken to cover wholesale and retail trade, and financial services such as banking and insurance. In terms of the broad Australian Standard Industrial Classification (ASIC) division, the industries covered by 'commerce' are usually taken to be wholesale and retail trade (Division F), and finance, property and business services (Division J).

At the two-digit ASIC subdivision, 'commerce' is taken to be wholesale trade (47), retail trade (48), finances and investment (61), insurance and services to insurance (62), and property and business services (63).

## COMMERCE IN THE EARLY 90s

~ Dr Alf Hagger, University of Tasmania's Centre for Regional Economic Analysis ~

### Relative importance

On the latest figures (1992-93), commerce contributes 21.2% to Tasmania's Gross State Product at Factor Cost (GSPFC), in terms of *current* prices. Wholesale and retail trade contributes 15.3% and finance, property and business services 6.0%.

In terms of contribution to current-price GSPFC, wholesale and retail trade is the State's third most important broad ASIC subdivision (industry). Only the subdivisions for public administration, defence and community services (10.2% of GSPFC) and manufacturing (15.9% of GSPFC) are more important.

The finance, property and business services subdivision is at the other end of the scale. The only ASIC subdivisions with a smaller GSPFC contribution are mining (1.8%), recreation, personal and other services (5.0%), electricity, gas and water (5.6%), agriculture (5.7%) and general government (3.1%).

Wholesale and retail trade plays much the same role in the Tasmanian economy as it does in the Australian economy as a whole. In 1992-93 wholesale and retail trade contributed 13.7% to Australia's current-price GDPFC, compared with 15.3% for Tasmania.

The position of finance, property and business services is quite different. In 1992-93 finance contributed 10.2% to Australia's GDPFC. The Tasmanian figure was only 5.9%. Therefore, in terms of GDPFC, finance is over 70% more important to the Australian economy than it is to the Tasmanian economy.

### Growth since 1980

The best measure of growth in Tasmania's commerce sector is the average annual percentage increase in the contribution made by wholesale and retail trade and by finance, property and business services, to the State's *constant*-price GSP. Unfortunately this measure cannot be calculated exactly because there is no official break-up of constant-price GSP by industry. An estimate can be derived, however, in the following way.

The share of wholesale and retail trade in *current*-price GSPFC (Gross State Product at Factor Cost) can be calculated for each of the years 1980-81 to 1992-93 from official statistics. If this share is applied year-by-year to the known value of constant-price GSP (on the assumption that the share of wholesale and retail trade in constant-price GSP is the same as its share in current-price GSPFC) an annual series, running from 1980-81 to 1992-93, can be estimated for the contribution to constant-price GSP made by wholesale and retail trade. An annual series for the contribution made by finance, property and business services to constant-price GSP can be derived in the same way. Once these series are available the required growth-rates can be calculated.

Proceeding in this way the figure of 2.96% per annum is found for the average annual percentage increase from 1980-81 to 1992-93 in the constant-price GSP of wholesale and retail trade. The corresponding figure for finance, property and business services is 4.41% per annum, while for commerce as a whole the figure is 3.34% per annum.

Comparison between these growth rates and employment growth rates over the same period, is of interest. Between May 1980 and May 1994 the annual percentage increase in employment in wholesale and retail trade was 0.89% per annum. The figure for finance, property and business services was 1.46% per annum. The figure for commerce as a whole was 1.03% per annum. Over the same period, aggregate employment increased at the rate of 1.02% per annum. When these employment growth rates are compared with the constant-price GSP growth rates given in the preceding paragraph a significant increase in productivity in the commerce sector over the 14-year period, is suggested.

## PERSONAL FINANCE, TASMANIA (\$m)

Month	Type of lender				Total
	Banks	Credit co-operatives	Finance companies	Others	
1993—					
January	14.5	8.4	5.5	0.9	29.2
February	18.4	7.2	5.1	0.7	31.3
March	20.1	7.5	5.0	1.2	33.8
April	18.4	7.0	6.3	1.4	33.1
May	20.6	6.8	5.8	1.2	34.4
June	22.2	5.5	5.2	1.2	34.0
July	18.4	7.2	6.0	1.0	32.6
August	20.3	10.7	7.2	0.8	39.0
September	23.5	7.2	5.8	0.9	37.5
October	23.4	7.9	5.5	3.5	40.3
November	19.5	8.3	6.3	1.0	35.1
December	27.2	7.0	5.1	1.4	40.6
1994—					
January	25.0	7.0	6.0	0.8	38.8
February	23.5	7.7	5.7	0.8	37.7
March	28.7	9.9	6.1	1.0	45.7
April	22.1	6.9	5.1	0.9	35.0
May	30.9	9.5	5.6	1.0	47.0
June	31.1	8.6	6.0	1.1	46.8
July	30.8	8.1	6.4	0.7	46.1
August	29.6	8.0	6.4	1.1	45.1
September	28.2	7.4	6.8	1.4	43.8
October	23.8	6.6	6.1	2.1	38.6
November	28.4	8.3	7.1	0.8	44.6
December	26.2	6.0	7.1	1.2	40.4
1995—					
January	23.4	4.8	7.1	0.9	36.1
February	27.5	4.9	6.9	0.9	40.2

Note: A difference exists between the totals.  
Source: ABS catalogue no. 5642.0

During the 1980s female employment grew much more rapidly in Tasmania's commerce sector than male employment. The growth rate of female employment over the period May 1980 to May 1994 was 1.3% per annum, compared with 0.8% per annum for males. Wholesale and retail trade recorded a 1.4% per annum increase in female employment over this period while finance, property and business services recorded a 1.1% per annum growth rate. The corresponding figures for male employment in Tasmania were 0.5% per annum and 1.8% per annum, respectively.

Finally, it is interesting to note that, in the 14 years from May 1980 to May 1994, employment in the commerce sector grew much less rapidly in Tasmania than in the nation as a whole. Over these years the growth rate in commerce-sector employment was 1.0% per annum in Tasmania compared with 2.6% per annum Australia-wide. Over the same period, employment in wholesale and retail trade grew at an average rate of 0.9% in Tasmania, compared with Australia's 1.9% per annum. For finance, property and business services the comparison was 1.5% per annum for Tasmania and 4.2% per annum for Australia.

<b>DWELLING UNITS FINANCED, TASMANIA (a)</b>			
<i>Month</i>	<i>No.</i>	<i>\$m</i>	<i>%</i>
1993—			
January	812	47.9	10.00
February	832	50.8	10.00
March	1 141	66.4	10.00
April	976	55.5	10.00
May	1 020	60.0	9.50
June	1 031	60.5	9.50
July	941	61.0	9.50
August	945	61.5	9.50
September	1 026	66.1	8.75
October	894	60.3	8.75
November	1 012	67.4	8.75
December	1 207	82.1	8.75
1994—			
January	887	58.8	8.75
February	1 113	74.0	8.75
March	1 241	84.9	8.75
April	1 032	70.8	8.75
May	1 198	79.5	8.75
June	1 083	71.3	8.75
July	985	69.2	8.75
August	963	66.7	8.75
September	935	64.4	9.50
October	903	60.5	9.50
November	1 066	78.6	9.55
December	874	62.8	10.50
1995—			
January	753	53.4	10.50
February	862	63.4	10.50

(a) Included in the value of units financed is the value of alterations and additions.  
Source: ABS catalogue no. 5609.0

## PRIVATE FINANCE

Private finance is influenced by a number of aspects in the Australian economy ranging from the availability of the various types of finance to whether it is appropriate to undertake such financing given the present economic environment. Over the past five years there has been a steady increase in private finance. Much of this increase can be attributed to a more positive feeling about the economy. Interest rates have been stable and relatively low in the 90s by comparison to the 80s, and therefore more people and companies have been inclined to borrow and invest.

### Personal finance

The purpose of personal finance is mostly for the purchase of used and new cars. Other goods and services purchased include other vehicles, blocks of land, and alterations to dwellings.

In Tasmania, banks provide the majority of personal finance, with 62% of market share in the two-year period ending February 1995. This is an increase of 11% from the previous two-year period ending February 1993. Total lending commitments, while undergoing seasonal fluctuations, did not change greatly over the two-year period. Total commitments over the twelve months ending February 1995 (\$509.4 million) were higher than the previous twelve months (\$436.9 million).

**COMMERCIAL FINANCE, TASMANIA (\$ m)**

Month	Type of lender			Total
	Other lenders	Finance companies	Banks	
<b>1993—</b>				
January	5.6	6.9	43.0	55.5
February	5.5	7.5	71.0	84.0
March	7.0	8.7	72.8	88.4
April	6.7	7.4	91.9	106.1
May	6.6	8.7	78.2	93.4
June	8.1	9.4	91.9	109.4
July	7.1	10.8	76.3	96.2
August	7.3	6.9	68.5	82.6
September	7.2	7.4	68.5	83.0
October	8.4	7.7	56.5	72.6
November	11.5	9.7	67.6	88.9
December	7.2	9.6	74.0	90.8
<b>1994—</b>				
January	4.9	7.8	62.2	74.9
February	9.3	8.1	64.6	82.0
March	10.9	9.6	89.5	110.0
April	8.3	8.4	54.0	70.6
May	4.0	10.5	69.2	83.7
June	3.8	7.6	90.0	101.4
July	3.2	10.3	74.7	88.2
August	2.1	10.8	79.7	92.9
September	2.7	10.0	69.2	86.3
October	2.0	10.0	76.9	88.9
November	1.9	10.8	109.2	121.9
December	3.1	12.3	155.2	170.6
<b>1995—</b>				
January	2.2	9.2	67.9	83.1
February	2.4	9.9	65.6	77.9

Source: ABS catalogue no. 5643.0

**Housing finance**

Secured new housing finance commitments for owner occupation in Tasmania during 1994 averaged \$70.1 million per month, with an average of 1,023 dwellings financed per month. This is an increase from 1993 where the average expenditure on housing for a month was \$61.6 million, with an average of 986 dwellings financed per month. The fluctuation can be explained mostly by the interest rate.

The relationship between total expenditure on housing and the home loan interest rate was notable. Early in 1993 when the interest rate was 10%, average expenditure amounted to \$55.2 million a month. However, when the interest rate fell to 9.5%, average expenditure increased to \$60.8 million. Similarly when the interest rate fell further to 8.75%, average expenditure increased to \$70.9 million a month, and when the interest rate rose to 10.5%, average expenditure on housing over the period decreased to \$59.9 million.

**Commercial finance**

Commercial finance includes commitments made by significant lenders to government, private and public enterprises, and non-profit organisations, as well as commitments to individuals for investment and business purposes. From March 1994 to March 1995 total lending commitments were valued at \$1,175.5 million, an increase of 10% from the

previous year. Over the two-year period, the months of December and June exhibited the highest values in commercial finance with \$109.4 being recorded in June 1993 and \$170.6 being recorded in December 1994.

### Lease finance

Lease finance is mainly used for the purchase of motor vehicles. Over the two-year period ending February 1995, total commitments for Tasmania averaged \$4.2 million a month with a high of \$6.5 million in May 1994, and a low of \$1.9 million in January 1995.

### PRICES AND PRICE INDEXES

A price index is one of the most effective means of measuring a change in the price of goods and services. The basic principle behind an index is to select a list of commodities and services, which become representatives of the field to be covered and to combine the prices of these commodities and services at regular intervals by use of 'weights' which represent the relative importance of the items in that field. One of the most popular forms of measuring price changes is through the Consumer Price Index (CPI).

### Consumer Price Index

This is the householder's guide to price changes. It measures quarterly changes in the price of goods and services that account for a high proportion of expenditure by metropolitan wage and salary households. It is made up of eight main groups of expenditure items: food, clothing, housing, household equipment and operation, transportation, tobacco and alcohol, health and personal care, and recreation and education. Each of these groups is indexed separately for specific purposes or, as is the usual practice, grouped together as a summary of the changes in prices affecting the wage earner's weekly expenditure.

The Consumer Price Index (CPI) does not measure the cost of living. It

### LEASE FINANCE, TASMANIA

Month	Type of lender		(a) Total
	Banks	Finance companies	
1993			
January	1.7	2.4	4.0
February	1.1	1.6	2.9
March	1.0	2.4	3.4
April	2.4	1.9	4.3
May	0.5	2.0	2.4
June	0.9	3.6	4.5
July	0.9	2.6	5.4
August	0.4	2.3	4.5
September	1.2	2.7	5.9
October	0.5	2.0	4.1
November	1.0	1.9	4.7
December	1.0	3.6	6.4
1994—			
January	0.2	3.0	4.9
February	0.7	1.8	4.4
March	0.5	1.9	4.4
April	0.7	2.4	4.9
May	1.0	3.5	6.5
June	1.0	3.4	6.0
July	0.6	2.7	3.4
August	1.4	1.3	3.0
September	1.1	1.7	2.9
October	1.0	1.8	2.9
November	0.8	1.9	2.8
December	0.9	3.8	4.9
1995—			
January	0.4	1.1	1.9
February	0.4	1.5	2.1

(a) Includes money market corporations and general financiers.  
Source: ABS catalogue no. 5644.0

### CONSUMER PRICE INDEX, HOBART (Base of each index: 1989-90 = 100.0)

Group	1991-92	1993 94
Food	106.1	111.7
Clothing	105.7	106.6
Housing	98.9	94.0
Household equipment and operation	109.1	111.9
Transportation	106.9	112.2
Tobacco and alcohol	111.5	133.7
Health and personal care	122.7	136.1
Recreation and education	106.1	110.2
<b>All groups</b>	<b>107.1</b>	<b>111.7</b>

Source: ABS catalogue no. 6401.0

**AVERAGE RETAIL PRICES OF SELECTED FOOD ITEMS, HOBART (a) (b) (c) (d)**

Item	Unit	1992 (cents)	1994 (cents)	Change (%)
Groceries, etc.—				
Bread, ordinary white sliced	680 g	142	155	9.2
Flour, self-raising	2 kg	223	236	5.8
Tea	250 g	173	196	13.3
Coffee, instant	150 g	439	512	16.6
Sugar	2 kg	201	236	17.4
Rice	1 kg	120	128	6.7
Breakfast cereal, corn-based	500 g	327	357	9.2
Peaches, canned	825 g	199	217	9.0
Potatoes	1 kg	62	76	22.6
Onions	1 kg	86	112	30.2
Dairy produce, etc.—				
Butter	500 g	203	206	1.5
Margarine, table, polyunsaturated	500 g	153	157	2.6
Eggs	1 doz (52 g min.)	237	258	8.9
Bacon, rashers, pre-pack	250 g	315	313	-0.6
Milk, fresh, cartons	1 litre	102	112	9.8
Meat—				
Beef—				
Rump steak	1 kg	991	1 108	11.8
Silverside, corned	1 kg	681	690	1.3
Lamb—				
Leg	1 kg	492	525	6.7
Loin chops	1 kg	656	703	7.2
Pork, leg	1 kg	689	668	-3.0

(a) The table units are not necessarily those for which the original price data were obtained; in such cases, prices have been calculated for the table unit.

(b) Prices are the averages of the recorded prices for the four quarters of each calendar year.

(c) This is a price list of selected retail goods. The prices in the list are the averages of prices for specified grades, qualities and brands charged by a number of selected retailers in a city. They are included in the calculation of the CPI.

(d) The list should be regarded as no more than an approximate indicator of price levels and price changes and the average prices for some items may not be comparable from city to city nor from quarter to quarter as the specifications of the products, brands etc. may change.

Source: ABS catalogue no. 6403.0

measures price changes in a 'basket of goods' that represent much of a wage and salary earner's expenditure. Expenditure patterns will vary from household to household just as standards of living vary considerably.

However, it is the most accurate measure of inflation as meaning an upward trend in the general internal price structure of an economy. To be strictly correct, though, no single index can be regarded as the correct measure of inflation.

During the 1990s this index has been relatively stable, with one of the lowest figures for a financial year being recorded in Hobart: 1.3% for 1992-93 financial year. Nationally, it was even lower with 1% being recorded. However the CPI in Hobart did not stay at this level for long. An increase of 2.4% was recorded over 1993-94, and further increases occurred over the 1994-95 financial year with 1.7% recorded for 1995 the March quarter.

In Hobart it has been interesting to note the changes in CPI. Housing prices from 1991-92 to 1993-94 have decreased by 5.0%. Other categories have enjoyed moderate increases in their index with changes of less than 10% over the two-year period from 1991-92 to 1993-94. The exceptions to this were Tobacco and alcohol, and Health and personal care, which increased by 19.9% and 10.9% respectively.

**HOBART HOUSE PRICES**

Year	Established house prices (index nos.)	Annual increase (%)	Project home prices (index nos.)	Annual increase (%)
1990-91	106.3	..	106.4	..
1991-92	112.0	5.4	110.1	3.5
1992-93	116.6	4.1	114.1	3.6
1993-94	122.5	5.1	117.7	3.2

Source: ABS catalogue no. 6416.0

However, similar changes occurred in other State capitals. Housing prices decreased in every State with Perth having the largest decrease of 8.3% over a two-year period. Every State had moderate increases in the price of clothing, with the exception of Brisbane which had a decrease. Household equipment and operations prices increased in Melbourne, Adelaide and Perth, with the other States having a decrease. The categories Food, Transportation, and Recreation and education increased in all States, as did Tobacco and alcohol, and Health and personal care which both increased by more than 10%.

There are other methods of determining price changes other than using the Consumer Price Index. Such methods include average retail prices, house price indexes, and price indexes of building materials.

**Average retail prices**

From the 1992 calendar year to the 1994 calendar year there was an increase in food prices. Most food products had moderate increases with an increase of less than 10%, the exception being tea, coffee, sugar, potatoes, onions and rump steak, each of which had an increase of over 10% over the two-year period. Pork-leg and bacon were products where the price decreased by 3.0% and 0.6% respectively.

**House price indexes**

The house price indexes provide estimates of change in housing prices for each capital city. Separate price indexes have been constructed for established houses and for project homes.

Since 1990 the price of established housing in Hobart increased by 15.2%, while project homes increased by 10.6% over a four-year period. This was the trend throughout Australia with housing prices increasing at a slower rate than they did during the 80s. This slow increase in prices continued to occur even throughout the September and December quarters of 1994. The exceptions were Canberra, which experienced drops in the prices of both project homes and established housing, and Darwin which experienced an increase of over 10% per quarter for established housing and over 6% per quarter for project homes.

*Note:* There is a difference between the house price indexes and the housing index in the CPI. This difference results from the weights and variables given to each index. For example, the CPI calculation not only involves the price change in dwellings and land, but also other factors such as local government rates, rents, and housing insurance, all of which contribute to movements in the index.

**Price indexes of building materials**

The prices of building materials over the period 1990-91 to 1993-94 experienced an even slower price rise than was the case for housing. The only building materials which increased in price by over 10% over a four-year period were non-ferrous pipes and fittings.

## Extension of shopping hours

The extension of Tasmania's shop trading hours was a controversial issue in the first half of the 1990s. Much of that controversy abated during 1995 after the Tasmanian Parliament passed legislation to allow the extension of shop trading hours for large retail shops.

Pressure for extended trading hours came from a number of quarters. The tourism sector argued that tourism would benefit because tourists needed access to shops at hours that suited them. Large retail establishments argued that consumers should be given wide freedom of choice. As well, there were those in the community who argued for deregulation of unnecessary and counter-productive restrictions on trade and personal freedom.

This pressure was resisted by small shop-keepers who felt that their investment was threatened. Also, some members of Parliament resisted this pressure because they felt that it might jeopardise social stability. Some religious and sporting groups also felt that the regulations should remain unchanged as they thought that the regulations might be further extended to Sunday trading; this would interfere with traditional religious observance and attendance at sporting events.

In the first half of 1995 restrictions of the hours of retail shop trading, which had prohibited large retail stores from opening on Saturday afternoons, were lifted.

### BENEFITS

The main benefit of deregulated shop trading hours would be the extra convenience for shoppers, particularly day-workers. Another potential benefit would be that tourist service industries could adjust their opening hours to suit their clients.

There are a number of groups in Tasmania who will be relatively unaffected by the extension of shop trading hours. For example, those who live or work in rural or remote areas. However, since the majority of shoppers will find life more convenient

and the rest will not be inconvenienced, shoppers as a whole will benefit.

### COSTS

A possible cost could be the fall in income, and inconvenience which the lifting of restrictions imposes on some small shop-keepers. Undoubtedly many small shop-keepers have positioned themselves in the retail market to capitalise on limited opening hours of large supermarkets. Many of these small shop-keepers have above-average takings on Saturdays and after normal business hours. Much of this market advantage could be lost as shoppers learn to make full use of Saturday trading.

For some small shop-keepers there is the problem that diminished takings might mean that they are forced to open longer, or to reduce employment in their establishments.

There may also be a cost to consumers to offset the benefits arising from the added convenience of extended shop trading hours. Longer hours of opening are likely to mean higher costs because of such things as penalty rates that apply to Saturday afternoon shopping. This cost could take the form of higher retail prices or poorer service, or both.

The lifting of restrictions on shop trading hours may impose another cost in the form of a transfer of income from Tasmania to the mainland: profits of many of Tasmania's large mainland-based retailers could increase.

Furthermore, profits of some of the small locally owned shops that already open at weekends may fall because of the diversion of custom to the major retailers.

However, any analysis of the net impact of extended shop trading hours is complicated by the fact that the Tasmanian and Australian economies, like most economies, are reasonably dynamic. It would be difficult to measure changes in the Tasmanian economy and establish which changes were due to the extension of shop trading hours.

structural timber, ready-mixed concrete, structural steel, sand and aggregate and builders hardware. Carpets decreased in price by 1.5% over the same period.

### RETAILING IN TASMANIA

The retailing industry is a good indicator of changes in the social and economic environment. Fluctuations in the industry not only occur due to changes in investment, but also due to reactions by consumers. During the 1980s retailing flourished in terms of the number of shop fronts, employment and turnover. Since the 1980s turnover increased, but the number of shop fronts, and the number of people employed in the industry, decreased.

#### Number of shop fronts

When the economy experienced a downturn, the retail industry responded in the same way with a reduction in the number of shop fronts from 4,586 in 1985-86 to 4,407 in 1991-92. There are now fewer clothing and soft goods retailers. Over the 1980s when the economy was booming, there was an increase in retail outlets of all types, with the exception of department stores which stayed on 17. However, since the recession during the early 1990s, there are fewer retail outlets in Tasmania.

#### Employment

Employment in retailing also responded to changes in the economic environment. There were 23,179 people employed at the 30 June 1986 in the retailing sector (when the economy was booming in the 1980s), but by 1991-92 there were only 21,135 people employed, a reduction of 8.8%.

#### Turnover

By contrast with retail outlets and employment, turnover has increased. In 1985-86 total retail expenditure was \$1,624.1 million, increasing in 1991-92 to \$2,556.9 million, a 57.4% increase. This is a large increase by comparison with the changes in median family income, which only increased from \$22,161 in 1986 to \$28,810 in 1991, an overall increase of 30%.

### RETAIL PRICE INDEX NUMBERS, SIX STATE CAPITAL CITIES COMBINED

Year	Index number
1901	47
1911	53
1921	90
1951	167
1981	926
1991 (a)	1 898
1992 (a)	1 917
1993	1 952
1994	1 989

(a) Weighted average of eight capital cities.

### TURNOVER OF RETAIL ESTABLISHMENTS, TASMANIA (a)

Type of store	1992-93 (\$m)	1993-94 (\$m)	Change (%)
Food retailing	1 125.0	1 155.1	2.7
Clothing and soft goods retailing	192.5	193.2	0.4
Household goods retailing	256.0	243.5	-4.9
Recreational goods retailing	208.4	206.8	-0.8
Hospitality and services	425.9	440.2	3.4
Other retailing (b)	451.3	510.0	13.0
<b>Total</b>	<b>2 659.1</b>	<b>2 748.8</b>	<b>3.4</b>

(a) Excludes motor vehicles and spare parts dealers, service stations etc.

(b) Includes department stores.

Source: ABS catalogue no. 8501.0

**PRIVATE NEW CAPITAL EXPENDITURE, TASMANIA AND AUSTRALIA (a) (\$m)**

Year	New buildings and structures	Equipment, plant, and machinery	Total
<b>Tasmania</b>			
1989-90	88	487	575
1990-91	180	416	596
1991-92	79	359	438
1992-93	104	342	446
1993-94	98	343	441
<b>Australia</b>			
1989-90	11 463	18 613	30 076
1990-91	10 897	17 570	28 467
1991-92	8 076	16 145	24 220
1992-93	7 761	18 086	25 847
1993-94	8 166	20 592	28 758

(a) Estimates based on a sample survey and therefore subject to sampling variability. Covers selected industries only—mining, manufacturing, finance, property and other selected industries.

Source: ABS catalogue no. 5646.0

Since 1991-92 total turnover in retailing has been \$2,659.1 million in 1992-93 and \$2,748.2 million in 1993-94, an average each month of \$221.6 million and \$229.0 million respectively.

Recreational goods retailing is the area which had the greatest increase in turnover, with an increase of 154.1% from 1985-86 to 1993-94. Food retailing showed an increase of 83.8% while clothing and soft goods retailing increased by only 33.7%.

Growth in turnover for any industry in the retail sector can be due to increased prices as well as improved sales volumes, but does not necessarily equate to a subsequent increase in profitability. However, retailing may change even further with the introduction of all-day Saturday trading.

## PRIVATE NEW CAPITAL EXPENDITURE

Capital expenditure estimates indicate the amount of investment in buildings, plant and equipment being made by businesses conducting activities throughout Australia. The estimates are also a key component of the National Account figures.

Private new capital expenditure does not include houses built by speculative builders or money spent on renovations.

During 1989-90, private new capital expenditure in Australia was recorded at \$30 billion. By the end of the 1991-92 financial year it had declined to \$24 billion but made a recovery in the following years, with \$29 billion recorded for 1993-94.

In comparison Tasmania recorded \$575 million worth of private new capital expenditure in 1989-90. This increased to \$596 million in 1990-91 but declined in the following years to finish 1993-94 with a figure of \$441 million or 1.5% of the Australian total.

## FURTHER READING

Other statistical tables relating to this chapter are located in the Historical Series at the back of this book.

### ABS PUBLICATIONS

*A Guide to the Consumer Price Index* (6440.0)

*Australian Housing Survey 1994* (4181.0)

*Australian National Accounts, State Accounts* (5220.0)  
*Average Retail Prices of Selected Items, Eight Capital Cities* (6403.0)  
*Consumer Price Index* (6401.0)  
*Household Expenditure Survey 1993-94 Summary of Results* (6530.0)  
*House Price Indexes: Eight Capital Cities* (6416.0)  
*Housing Finance for Owner Occupation, Australia* (5609.0)  
*Price Index of Materials used in Building other than House Building, Eight Capital Cities* (6407.0)  
*Price Index of Materials used in House Building, Six State Capital Cities and Canberra* (6408.0)  
*Retail Trade, Australia* (8501.0)  
*Retailing in Tasmania 1991-92* (8623.6)  
*Retail Industry: Details of Operations, Tasmania 1985-86* (8622.6)  
*State Estimates of Private New Capital Expenditure* (5646.0)

**OTHER PUBLICATIONS**

*Reserve Bank of Australia Bulletin.*

**ACKNOWLEDGEMENT**

Centre for Regional Economic Analysis

# Statistical geography

THE STATE IS DIVIDED FOR STATISTICAL PURPOSES into a number of general-purpose, regional spatial units arranged in a hierarchy, and reflecting the various geographic, social and economic focuses.

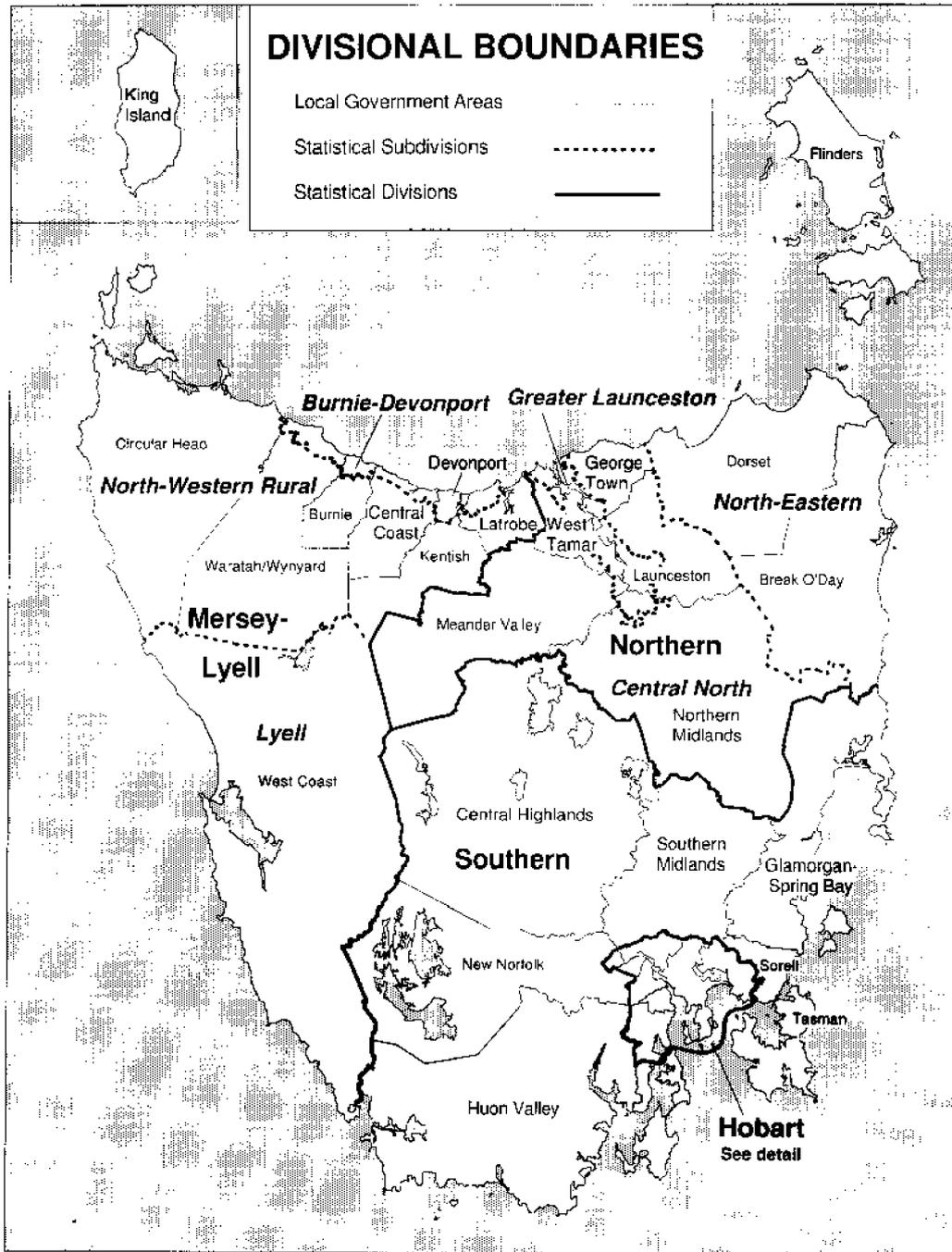
Statistical divisions are the largest of these units, and are composed of one or more statistical subdivisions. Statistical subdivisions are defined in terms of their component statistical local areas (SLAs). These in turn are defined in terms of local government areas. Local government areas having parts in more than one subdivision are delineated by virtue of one or more of the geographic, social and economic components. Thus, a local government area may have an urban component (SLA Part A) and a rural component (SLA Part B).

## History of Tasmanian statistical geography

The groupings of administrative areas into divisions for statistical purposes can be found in annual volumes of the *Statistics of Tasmania* dating back to the nineteenth century. The administrative areas included police districts, registration districts, electoral districts, and municipalities. The boundaries of these areas were subject to periodic changes. The *Local Government Act 1906* provided a basis for the whole State coming under uniformly constituted local government and gradually the divisional grouping of administrative areas was confined, in official statistics, to municipalities.

After the 1966 population census the Hobart Statistical Division, comparable with similar capital city divisions in other States, was established. In 1972 a new divisional structure, using the three principal urban centres of influence as a basis, was designed. In the south, centred on Hobart, were Hobart and Southern divisions. In the north, centred on Launceston, was Northern Division, split into Tamar and North-Eastern subdivisions. In the north-west and west, centred on the urbanised Burnie to Devonport axis, was the Mersey-Lyell Division split into the North-Western and Western subdivisions.

With the introduction of the Australian Standard Geographical Classification (ASGC) in 1985, there were changes to statistical subdivisions, with the more important predominantly urban areas being delineated. In the Northern Division the Tamar Subdivision was



divided into and replaced by the Greater Launceston Subdivision, centred around the Tamar River basin, and the Central North Subdivision. In the north-west, the North Western Subdivision was divided into and replaced by the Burnie-Devonport Subdivision, representing the predominantly urbanised coastal segment, and North-Western Rural Subdivision, representing the rural balance.

In 1993, Tasmania's municipal structure underwent wholesale and significant changes, resulting in a reduction in the number of municipalities from 46 to 29. Only a small number of municipalities remained unchanged. Changes for the majority ranged from relatively minor boundary adjustments and straightforward amalgamations to complete reconstructions.

As the ABS's statistical geography structure utilises municipal boundaries, these variations forced changes to this structure. Setting aside any minor and inconsequential boundary realignments these changes are summarised as follows:

- At the statistical division level there was one major change. The Hobart Statistical Division boundary was redrawn to encompass the whole of a much reduced Brighton (formerly divided by the old Hobart Statistical Division boundary), and the new outer boundary of an enlarged Clarence. In addition, parts of Sorell and New Norfolk were absorbed in order to incorporate growth areas and to maintain a regular shape.
- At the subdivision level there were a number of changes. The Central North Subdivision was altered to include the whole of the Northern Midlands municipality, whereas before two of its old constituent municipalities, Campbell Town and Ross, were included in the North-Eastern Subdivision. In addition the North-Western Rural Subdivision was altered to include the whole of a newly amalgamated Waratah/Wynyard municipality, whereas before the old Waratah municipality was included in the Western Subdivision. The former Western Subdivision, now comprising solely the West Coast municipality, was renamed the Lyell Subdivision.

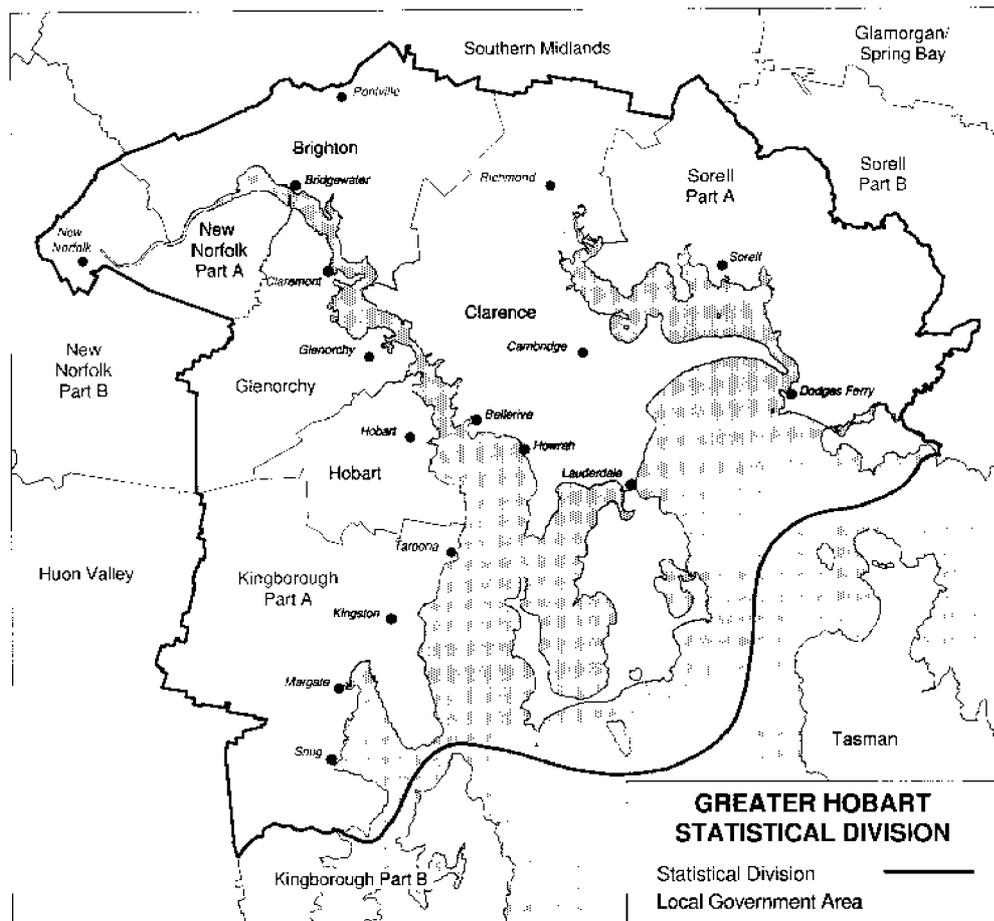
### Current structure

#### *Greater Hobart Division*

This division comprises the local government areas of Hobart, Glenorchy, Clarence and Brighton, and the predominantly urban parts of Kingborough, New Norfolk and Sorell. The Division is Tasmania's principal industrial region and administrative focus. The boundary encloses the main urban area and other areas in close contact with it, including anticipated outward growth for the next twenty to thirty years. *Urban Hobart* is an important component of the Division. It covers the contiguous densely settled area of Hobart, and comprises the suburbs from Granton to Taroona on the western shore of the Derwent River and from Risdon Vale to Rokeby on the eastern shore.

#### *Southern Division*

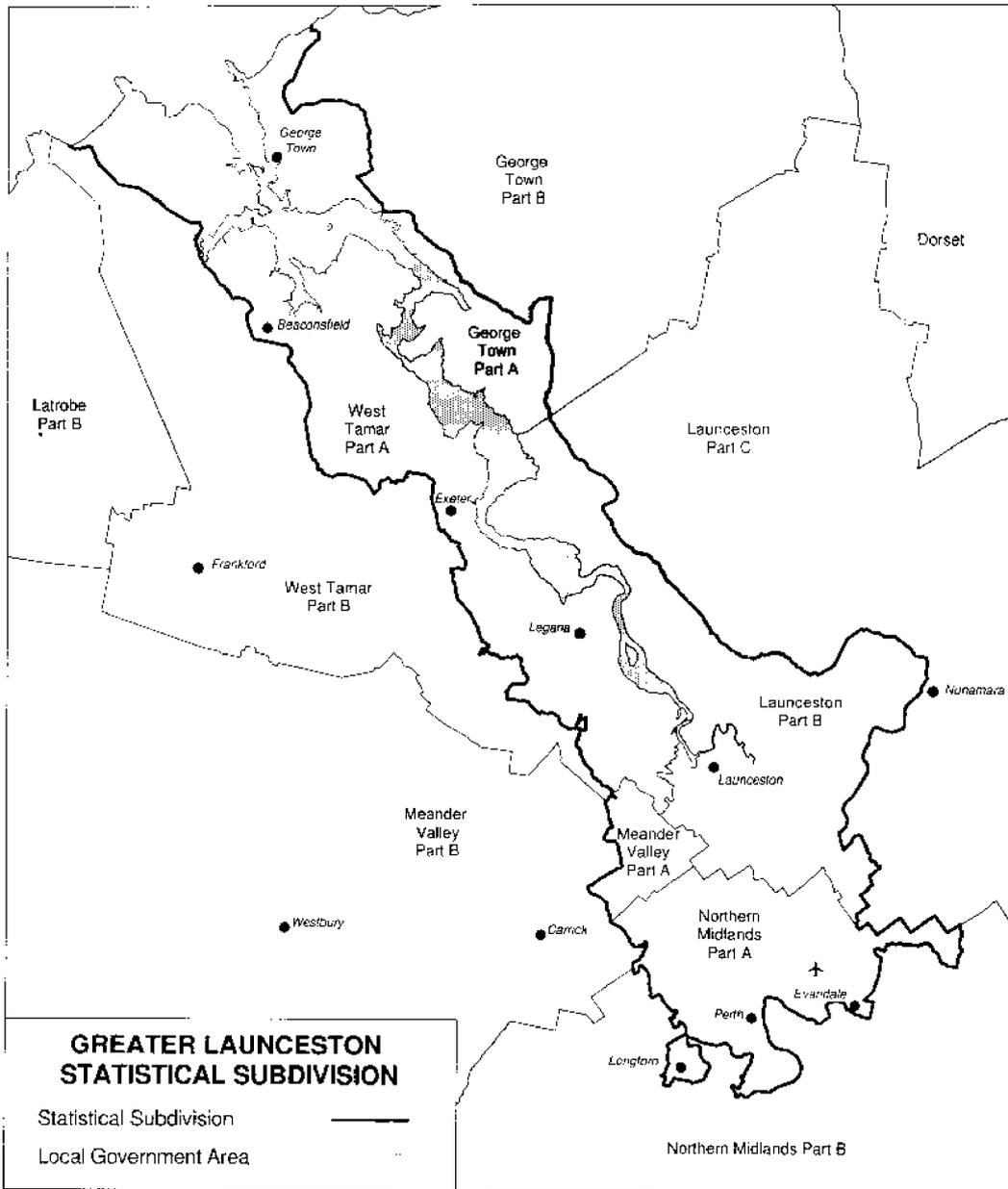
This division comprises the predominantly rural parts of the local government areas of Kingborough, New Norfolk and Sorell and the other southern local government areas of Central Highlands, Southern Midlands, Glamorgan/Spring Bay, Tasman, and Huon Valley. Activities include orcharding, sheep and cattle grazing, and forestry and timber processing.

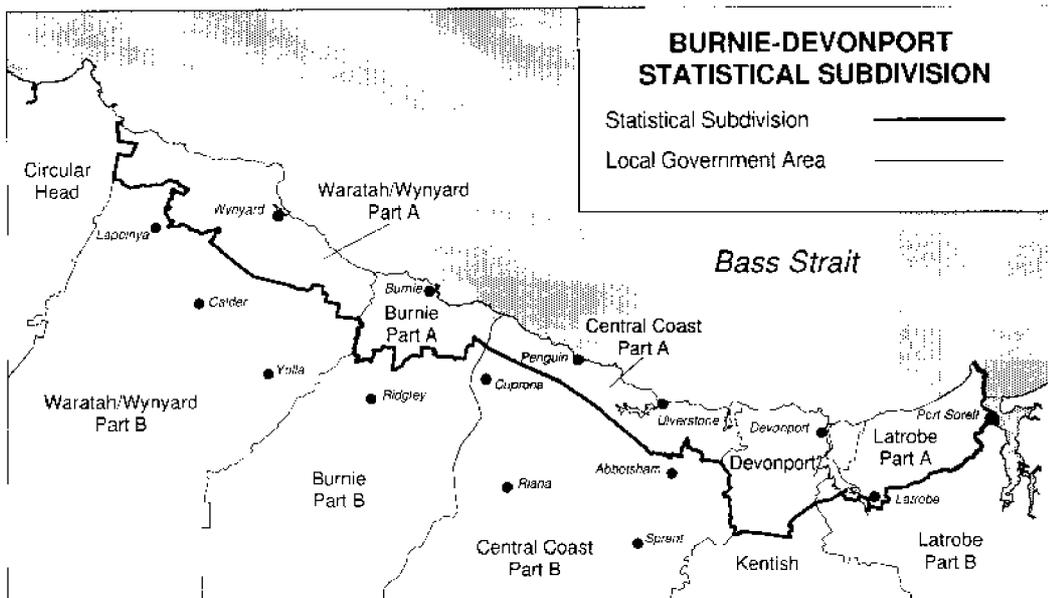


*Northern Division*

This division has Launceston as its urban focus and is divided into three subdivisions.

- *Greater Launceston Subdivision:* This area around the Tamar River basin contains the predominantly urban part of the local government areas of George Town, Launceston, West Tamar, Meander Valley and Northern Midlands. It includes several major manufacturing and transport facilities and represents the commercial and social focus of the Northern Division. *Urban Launceston* is an important component of the subdivision and comprises the contiguous densely settled areas of Launceston. It represents Launceston and its suburbs from Riverside to Prospect Vale on the western side and Youngtown to Rocherlea on the eastern side.
- *Central North Subdivision:* This region comprises the predominantly rural parts of the local government areas of George Town, Launceston, West Tamar, Meander Valley and Northern Midlands. It is an important agricultural, pastoral, dairying and forestry area.
- *North-Eastern Subdivision:* This comprises the local government areas in the far north-east of the State: Dorset, Break O'Day and Flinders. Principal activities include agriculture, dairying, sheep and cattle grazing, forestry and timber and some mining.





*Mersey-Lyell Division*

This division has the Burnie-Devonport axis as its commercial and social focus, and has three subdivisions.

- *Burnie-Devonport Subdivision:* This area contains the predominantly urban portions of the North-West coast: the local government area of Devonport and parts of Waratah/Wynyard, Burnie, Central Coast and Latrobe that are adjacent to the coastline. There are several major urban areas and important manufacturing and transport facilities.
- *North-Western Rural Subdivision:* This comprises the local government areas of King Island, Circular Head, and Kentish, as well as the rural parts of Waratah/Wynyard, Burnie, Central Coast and Latrobe. It is a major agricultural, pastoral, dairying and forestry area.
- *Iyell Subdivision:* This area comprises the single local government area of West Coast. This is the State's predominant mining area.

# Historical series

IN THE FOLLOWING pages, an historical summary of the more important statistics available that relate to Tasmania is shown. Only brief footnotes have been included and readers should refer to publications listed at the end of each relevant chapter. Naturally, the range of statistics for early years is very limited. Also, it should be borne in mind that perfect comparability over long periods of time is difficult to attain due to changes in definitions, scope of statistical collections, etc. While major breaks in series are shown, minor changes to series are not indicated and the statistics should be interpreted with this in mind.

Generally, the first year shown on each page is the earliest for which any series on that page is available. Due to space constraints, earlier details for some series are given only for either every five or ten years.

## SUMMARY OF POPULATION AT SELECTED CENSUS DATES, TASMANIA (a) (b)

Chapter 7

Particulars		At 30 June					At 6 August		
		1933	1947	1954	1961	1971	1981	1986	1991
<b>Persons</b>	no.	<b>227 599</b>	<b>257 078</b>	<b>308 752</b>	<b>350 340</b>	<b>390 413</b>	<b>418 957</b>	<b>438 353</b>	<b>452 837</b>
Males	no.	115 097	129 244	157 129	177 628	196 442	208 641	216 480	223 755
Females	no.	112 502	127 834	151 623	172 712	193 971	210 316	219 873	229 082
Masculinity (c)	no.	102	101	104	103	101	99	98	98
Age distribution (years)—									
0-15	no.	73 030	77 483	102 171	123 331	129 307	116 942	114 843	114 190
	%	32.1	30.1	33.1	35.2	33.1	28.0	26.3	25.2
16-64	no.	138 515	159 925	183 230	200 001	230 069	261 151	275 058	286 726
	%	60.9	62.2	59.3	57.1	58.9	62.3	63.0	63.3
65 and over	no.	16 054	19 670	23 351	27 008	31 037	42 540	46 452	51 921
	%	7.0	7.7	7.6	7.7	7.9	9.9	10.6	11.5
Religion									
Church of England	no.	105 228	123 158	147 407	159 101	169 089	151 207	154 748	166 492
Methodist	no.	26 470	33 358	38 236	42 236	42 173	19 906	—	—
Catholic (d)	no.	33 189	39 844	53 042	63 993	77 250	78 143	80 479	89 496
Presbyterian	no.	13 194	12 644	15 607	16 757	17 281	11 575	12 084	13 300
Baptist	no.	4 666	5 374	6 293	7 227	8 039	7 965	8 092	9 924
Congregational	no.	3 963	4 007	4 425	4 193	4 134	1 790	1 241	189
Churches of Christ	no.	1 892	2 039	2 267	2 507	2 500	2 110	2 046	1 621
Salvation Army	no.	1 142	1 612	1 815	2 316	3 176	3 202	3 437	3 096
Uniting Church (e)	no.	—	—	—	—	—	17 688	36 724	38 812
Other Christian	no.	5 509	6 179	10 395	13 204	20 753	23 848	25 951	22 989
<b>Total Christian</b>	no.	<b>195 253</b>	<b>228 215</b>	<b>279 487</b>	<b>311 534</b>	<b>344 395</b>	<b>317 414</b>	<b>324 792</b>	<b>345 719</b>
Non-Christian	no.	87	173	256	268	561	1 263	1 967	2 669
Indefinite	no.	373	797	796	1 766	993	11 162	2 292	1 845
No religion	no.	159	506	516	775	20 221	36 222	47 852	55 372
Not stated	no.	31 727	27 387	27 697	35 997	24 243	52 896	59 363	47 232
Marital status									
Never married—									
Under 15 years of age	no.	68 590	73 371	97 452	117 289	121 323	109 604	106 538	107 448
15 years and over	no.	61 009	53 912	54 890	58 039	65 213	80 067	87 728	93 421
<b>Total</b>	no.	<b>129 599</b>	<b>127 283</b>	<b>152 342</b>	<b>175 328</b>	<b>186 536</b>	<b>189 671</b>	<b>194 266</b>	<b>200 869</b>
Married	no.	86 014	114 625	139 801	157 110	181 855	197 069	204 632	209 745
Widowed	no.	10 954	12 933	14 030	15 563	18 621	21 362	22 241	23 185
Divorced	no.	416	1 319	2 002	2 329	3 401	10 855	15 214	19 038
Not stated	no.	616	918	577	(f)	(f)	(f)	(f)	(f)
Birthplace									
Australia	no.	215 213	247 379	282 491	317 478	350 150	371 624	386 885	396 313
New Zealand	no.	1 201	1 030	1 112	1 128	1 550	2 421	2 763	3 468
United Kingdom and Ireland	no.	9 588	7 123	14 113	16 741	22 513	23 289	23 226	24 251
Netherlands	no.	11	13	2 340	3 556	3 183	3 008	2 973	2 959
Germany	no.	238	171	1 794	2 223	2 009	1 936	1 982	2 030
Italy	no.	92	64	974	1 536	1 485	1 343	1 259	1 334
Other European	no.	334	325	4 535	5 789	6 184	5 530	5 491	5 456
Other birthplace	no.	922	973	1 393	1 889	3 339	9 806	11 774	170 174

(a) Full-blood Aborigines excluded from census data prior to 1966.

(b) As recorded. Not adjusted for under-enumeration.

(c) Number of males per 100 females.

(d) Includes Catholic and Roman Catholic.

(e) The Uniting Church was formed in 1978 from members of the Congregational, Methodist and Presbyterian churches.

(f) Marital status was allocated where this information was not stated.

POPULATION, TASMANIA

Chapter 7

Estimated population (a)

Year	Total at 30 June	Mean: year ended 30 June	Mean: year ended 31 Dec	Totals at 31 December			Masculinity (b)	Annual rate of increase of population (c)
				Persons	Males	Females		
	no.	no.	no.	no.	no.	no.		per cent
1820	n.a.	n.a.	n.a.	5 400	n.a.	n.a.	n.a.	8.00
1830	n.a.	n.a.	n.a.	24 279	18 108	6 171	293.4	11.35
1840	n.a.	n.a.	n.a.	45 999	32 040	13 959	229.5	2.75
1850	n.a.	n.a.	n.a.	68 870	44 229	24 641	179.5	1.37
1860	n.a.	n.a.	88 752	89 821	49 653	40 168	123.6	5.12
1870 (d)	n.a.	n.a.	100 038	100 886	53 517	47 369	113.0	1.44
1875	n.a.	n.a.	104 000	103 739	54 678	49 061	111.4	0.55
1880	n.a.	n.a.	113 648	114 790	60 568	54 222	111.7	2.02
1885	n.a.	n.a.	127 763	128 860	67 712	61 148	110.7	2.33
1890	n.a.	n.a.	143 224	144 787	76 453	68 334	111.9	2.38
1895	n.a.	n.a.	153 701	154 895	80 485	74 410	108.2	1.35
1900	n.a.	n.a.	172 631	172 900	89 763	83 137	108.0	2.21
1905	183 351	183 834	184 478	186 385	95 947	90 438	106.1	1.52
1910	189 807	190 792	191 005	193 803	98 866	94 937	104.1	0.79
1915	195 370	196 320	196 238	197 536	98 653	98 883	99.8	0.38
1920	209 425	208 599	210 350	212 752	107 259	105 493	101.7	1.37
1925	213 991	215 997	215 552	219 364	110 172	109 192	100.9	0.70
1930	219 983	219 269	220 933	225 297	113 505	111 792	101.5	0.48
1935	228 988	229 339	229 867	233 423	118 124	115 299	102.5	0.63
1940	240 191	240 023	241 134	244 002	123 650	120 352	102.7	0.31
1945	248 633	248 971	248 596	250 280	125 854	124 426	101.1	1.37
1950	275 902	274 493	278 785	290 333	147 103	143 230	102.7	3.20
1955	314 092	312 694	315 565	324 919	165 356	159 563	103.6	1.79
1960	343 910	344 111	346 913	355 969	180 511	175 458	102.9	1.31
1961 (d)	350 340	350 077	353 623	353 258	178 864	174 394	102.6	0.76
1962	355 668	353 175	355 682	358 087	181 085	177 002	102.3	1.37
1963	360 727	358 180	360 590	362 799	183 330	179 469	102.7	1.32
1964	364 311	362 758	364 554	366 508	185 051	181 457	102.0	1.02
1965	367 905	366 366	367 970	369 608	186 483	183 125	101.8	0.85
1966 (c)	371 436	369 600	371 483	373 309	188 180	185 129	101.6	1.00
1967	375 244	373 321	375 397	377 841	190 399	187 442	101.5	1.21
1968	379 649	377 582	379 916	383 055	192 871	190 184	101.4	1.38
1969	384 893	382 710	385 079	386 998	194 788	192 210	101.3	1.03
1970	387 720	386 665	388 180	390 253	196 363	193 890	101.3	0.84
1971 (d)	398 100	(e) n.a.	(e) n.a.	399 500	200 600	198 900	100.4	(e) n.a.
1972	400 300	399 400	400 500	401 900	201 600	200 300	100.6	0.60
1973	403 100	401 800	403 200	404 600	202 800	201 800	100.5	0.67
1974	406 200	404 600	406 300	408 800	204 600	204 200	100.2	1.04
1975	410 100	408 300	410 000	411 500	205 900	205 600	100.1	0.66
1976 (d)	412 300	411 300	412 400	413 700	206 900	206 800	100.0	0.53
1977	415 000	413 700	415 100	416 500	208 300	208 300	100.0	0.68
1978	417 600	416 500	417 800	419 100	209 600	209 600	100.0	0.62
1979	420 800	419 200	420 700	422 200	210 700	211 600	99.6	0.74
1980	423 600	422 200	423 600	425 200	211 600	213 600	99.1	0.71
1981 (c)	427 200	425 300	427 100	428 300	212 900	215 300	98.9	0.73
1982	429 800	428 800	429 800	431 000	214 200	216 800	98.8	0.63
1983	432 800	431 000	432 800	435 100	216 100	219 000	98.7	0.95
1984	437 800	435 100	437 800	440 100	218 400	221 700	98.5	1.15
1985	442 800	440 100	442 500	444 600	220 700	223 900	98.6	1.02
1986 (d)	446 500	444 600	446 400	448 200	222 500	225 700	98.6	0.70
1987	449 200	448 000	449 000	449 800	223 100	226 700	98.4	0.62
1988	451 100	450 000	451 200	452 800	224 500	228 300	98.3	0.43
1989	455 300	452 900	455 400	458 400	227 400	231 000	98.4	0.91
1990	462 200	458 500	461 800	464 500	230 400	234 200	98.4	1.52
1991 (c)	466 800	464 600	466 700	468 400	232 200	236 200	98.3	1.00
1992 p	469 700	468 400	469 800	470 800	233 500	237 300	98.4	0.62
1993 p	471 400	470 700	471 500	472 000	234 100	238 000	98.4	0.35
1994 p	472 400	471 900	472 400	472 600	234 400	238 300	98.4	0.24

(a) Prior to 1966 excludes full blood Aborigines.

(b) Number of males per 100 females.

(c) The rate of increase during the previous 12 months or, in the years prior to 1936, the average (compound) rate of increase during the previous five years.

(d) Census year.

(e) Not available due to change in series.

**BIRTHS, DEATHS, MARRIAGES AND DIVORCES, TASMANIA****Chapter 7**

Year	Number				Rate per 1,000 of mean population			Deaths under one year of age	Rate per 1,000 live births
	Births	Deaths	Marriages	Divorces	Births	Deaths	Marriages	Number	
1830	460	270	163	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1840	404	501	457	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1845	1 506	697	658	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1850	2 025	1 070	923	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1855	2 948	1 692	1 257	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1860	3 238	1 749	689	n.a.	36.48	19.71	7.76	n.a.	n.a.
1865	3 069	1 263	591	n.a.	32.96	13.56	6.35	n.a.	n.a.
1870	3 054	1 404	670	n.a.	30.53	14.03	6.70	298	97.6
1875	3 105	2 079	689	n.a.	29.86	19.99	6.83	407	131.1
1880	3 739	1 832	840	n.a.	32.90	16.12	7.39	420	112.3
1885	4 637	2 036	1 054	n.a.	36.29	15.94	8.25	522	112.6
1890	4 813	2 118	954	n.a.	33.60	14.79	6.66	508	105.6
1895	4 790	1 811	846	5	31.16	11.78	5.50	391	81.6
1900	4 864	1 903	1 332	4	28.18	11.02	7.72	389	80.0
1905	5 257	1 844	1 365	2	28.50	10.00	7.40	424	80.7
1910	5 586	2 120	1 493	6	29.25	11.10	7.82	568	101.7
1915	5 845	2 015	1 600	7	29.79	10.27	8.15	423	72.4
1920	5 740	2 036	1 999	18	27.29	9.68	9.50	376	65.5
1925	5 218	1 996	1 504	37	24.21	9.26	6.98	288	55.2
1930	4 786	1 948	1 450	42	21.66	8.82	6.56	242	50.6
1935	4 456	2 353	1 875	87	19.39	10.24	8.16	231	51.8
1940	4 994	2 387	2 476	83	20.71	9.90	10.27	176	35.2
1941	5 206	2 575	2 150	84	21.66	10.71	8.94	255	49.0
1942	5 305	2 430	2 431	83	22.00	10.08	10.08	255	42.4
1943	5 597	2 527	2 102	89	23.05	10.41	8.66	227	40.6
1944	5 200	2 494	1 935	115	21.17	10.15	7.88	199	38.3
1945	5 785	2 413	1 868	172	23.27	9.71	7.51	159	27.5
1946	6 847	2 549	2 650	219	27.15	10.11	10.51	207	30.2
1947	7 140	2 363	2 584	210	27.71	9.17	10.03	195	27.3
1948	6 979	2 528	2 428	185	26.49	9.60	9.22	193	27.7
1949	7 110	2 389	2 422	266	26.30	8.84	8.96	170	23.9
1950	7 242	2 466	2 560	152	25.96	8.85	9.18	172	23.8
1951	7 357	2 567	2 607	194	25.52	8.93	9.04	196	26.6
1952	7 916	2 579	2 553	217	26.53	8.64	8.56	172	21.7
1953	7 736	2 551	2 424	210	25.25	8.33	7.91	177	22.9
1954	7 770	2 696	2 512	238	24.98	8.67	8.08	186	23.9
1955	8 089	2 489	2 600	233	25.63	7.89	8.24	189	23.4
1956	8 104	2 513	2 601	197	25.24	7.83	8.10	170	21.0
1957	8 435	2 670	2 507	180	25.68	8.13	7.63	170	20.2
1958	8 568	2 708	2 475	176	25.55	8.07	7.38	167	19.5
1959	8 625	2 780	2 567	222	25.26	8.14	7.52	202	23.4
1960	8 853	2 670	2 713	210	25.52	7.70	7.82	169	19.1
1961	8 892	2 789	2 677	286	25.40	7.89	7.57	151	16.8
1962	8 894	2 870	2 485	249	25.01	8.07	6.99	184	20.7
1963	8 530	2 818	2 579	261	23.66	7.82	7.15	153	17.9
1964	8 252	3 174	2 869	230	22.64	8.71	7.87	166	20.1
1965	7 535	3 043	2 888	280	20.48	8.27	7.85	125	16.6
1966	7 401	3 159	2 946	319	19.92	8.50	7.93	108	14.6
1967	7 547	3 228	3 213	248	20.10	8.60	8.56	130	17.2
1968	8 317	3 284	3 426	303	21.89	8.64	9.02	143	17.2
1969	8 445	3 309	3 532	331	21.93	8.59	9.17	139	16.5
1970	8 185	3 174	3 535	426	21.09	8.16	9.11	116	14.2
1971	8 321	3 295	3 578	432	21.32	8.44	9.17	114	13.7
1972	7 824	3 227	3 426	446	19.94	8.22	8.73	127	16.2
1973	7 326	3 347	3 395	444	18.51	8.46	8.58	137	18.7
1974	7 398	3 484	3 567	536	18.52	8.72	8.93	123	16.6
1975	6 982	3 339	3 242	591	17.26	8.26	8.02	128	18.3
1976	6 702	3 389	3 477	1 761	16.44	8.32	8.53	77	11.5
1977	6 735	3 269	3 166	1 134	16.40	7.96	7.71	99	14.7
1978	6 788	3 271	3 148	1 132	16.41	8.00	7.61	97	14.3
1979	6 757	3 167	3 245	1 167	16.17	7.58	7.79	95	14.1
1980	6 735	3 392	3 433	1 285	15.90	7.80	8.20	79	11.7
1981	7 230	3 320	3 515	1 139	16.93	7.77	8.23	86	12.0
1982	7 103	3 444	3 576	1 391	16.53	8.01	8.32	55	7.9
1983	7 062	3 319	3 644	1 359	16.32	7.67	8.42	74	10.5
1984	7 132	3 596	3 704	1 195	16.30	8.22	8.46	81	11.4
1985	7 249	3 693	3 520	1 169	16.38	8.35	7.95	87	12.1
1986	6 950	3 454	3 302	1 245	15.57	7.74	7.40	74	10.7
1987	6 790	3 637	3 141	1 115	15.12	8.10	7.00	65	9.6
1988	6 779	3 547	3 035	1 220	15.02	7.86	6.73	59	8.7
1989	6 813	3 690	3 111	1 269	14.96	8.10	6.83	72	10.6
1990	7 043	3 713	3 026	1 170	15.25	8.04	6.55	59	8.4
1991	6 870	3 686	3 069	1 383	14.72	7.90	6.58	62	9.0
1992	6 987	3 739	3 081	1 365	14.92	7.98	6.58	46	6.6
1993	6 835	3 637	3 055	1 465	14.52	7.73	6.49	40	5.9

## EMPLOYMENT, UNEMPLOYMENT, WAGE RATES AND EARNINGS, TASMANIA

## Chapter 8

Year	Unemployment		Persons receiving unemployment benefits (b)	Prescribed weekly wage rates, adult males Hobart at 31 December		Average weekly earnings all male employees for June qtr	
	Employed persons, labour force survey (a)	Labour force survey (a)		Basic wage (c)	Minimum wage (d)	Amount (e)	Increase (f)
	(000)	(000)		\$	\$	\$	per cent
1940	n.a.	n.a.	..	8.10	..	n.a.	n.a.
1941	n.a.	n.a.	..	8.50	..	n.a.	n.a.
1942	n.a.	n.a.	..	9.20	..	9.60	n.a.
1943	n.a.	n.a.	..	9.50	..	10.40	8.3
1944	n.a.	n.a.	..	9.40	..	10.60	1.9
1945	n.a.	n.a.	..	9.40	..	10.50	-1.0
1946	n.a.	n.a.	83	10.30	..	10.80	2.9
1947	n.a.	n.a.	44	10.70	..	12.00	11.1
1948	n.a.	n.a.	28	11.80	..	14.00	16.7
1949	n.a.	n.a.	32	12.80	..	15.60	11.4
1950	n.a.	n.a.	32	16.00	..	18.00	15.4
1951	n.a.	n.a.	10	19.90	..	22.10	22.8
1952	n.a.	n.a.	104	23.00	..	27.10	22.6
1953	n.a.	n.a.	323	24.20	..	28.80	6.3
1954	n.a.	n.a.	109	24.20	..	30.60	6.3
1955	n.a.	n.a.	52	24.20	..	33.60	9.8
1956	n.a.	n.a.	71	25.20	..	35.30	5.1
1957	n.a.	n.a.	410	26.20	..	36.60	3.7
1958	n.a.	n.a.	639	26.70	..	37.50	2.5
1959	n.a.	n.a.	670	28.20	..	37.60	0.3
1960	n.a.	n.a.	522	28.20	..	41.50	10.4
1961	n.a.	n.a.	1 416	29.40	..	41.70	0.5
1962	n.a.	n.a.	1 778	29.40	..	44.60	7.0
1963	n.a.	n.a.	1 777	29.40	..	45.10	1.1
1964	n.a.	n.a.	1 399	31.40	..	46.50	3.1
1965	n.a.	n.a.	946	31.40	..	49.20	5.8
1966	144.0	2.8	457	33.40	..	51.50	4.7
1967	148.3	3.0	546	34.40	38.15	55.80	8.3
1968	155.1	2.2	635	35.75	40.45	58.50	4.8
1969	153.7	3.3	600	36.80	43.00	63.10	7.9
1970	155.9	3.3	437	36.80	43.00	68.40	8.4
1971	157.4	2.9	873	39.00	47.00	76.70	12.1
1972	157.1	3.8	1 697	41.00	51.70	83.20	8.5
1973	161.6	3.0	2 330	43.50	60.70	93.60	12.5
1974	165.9	3.9	1 769	46.00	68.70	109.60	17.1
1975	165.0	7.4	4 439	50.00	83.50	138.50	26.4
1976	164.2	8.1	7 228	62.90	102.30	155.10	12.0
1977	168.7	9.9	7 078	72.40	114.00	175.10	12.9
1978	164.5	11.6	9 757	77.50	121.90	190.10	8.6
1979	173.5	8.3	10 420	(g) 80.00	(g) 125.80	204.20	7.4
1980	172.1	12.0	11 121	87.10	137.00	234.70	14.9
1981	174.9	12.1	12 929	93.60	147.20	261.60	11.5
1982	167.3	17.5	16 263	93.60	168.00	312.00	19.3
1983	167.9	20.0	20 355	97.60	175.20	337.10	8.0
1984	169.6	20.4	19 150	101.60	182.40	371.40	10.2
1985	180.4	19.6	18 870	108.20	194.20	390.20	5.1
1986	183.5	16.3	18 702	110.69	198.70	417.10	6.9
1987	182.6	20.4	18 880	120.69	208.70	438.20	5.1
1988	192.3	18.6	18 280	130.49	221.10	460.00	5.0
1989	190.5	19.5	16 243	150.49	241.10	504.80	9.8
1990	r 200.8	r 20.3	17 839	155.00	248.30	530.80	5.2
1991	r 195.0	r 24.5	23 895	155.00	248.30	535.80	0.9
1992	r 190.5	25.5	28 644	155.00	248.30	553.20	3.2
1993	193.3	28.0	30 266	155.00	248.30	576.10	4.1
1994	195.7	21.7	30 058	155.60	248.30	602.40	4.6

(a) At August each year to 1977, at June each year from 1978 (seasonally adjusted).

(b) Persons on benefit on last Friday of June. From 1991 the monthly average number was used. Unemployment benefit was first paid in July, 1945. From September 1991, Unemployment Benefit was replaced by Job Search and Newstart Allowance.  
(Source: Department of Social Security.)

(c) The rates shown up to and including 1966 are those in Commonwealth awards. State Wages Boards awards are shown from 1967. The Commonwealth and State rates prior to 1967 were identical except between 1956 and 1959 when the State's rates were slightly higher. There has been no 'general' wage increase since 1990.

(d) The Tasmanian Wages Boards introduced the concept of the minimum wage in June 1967. There has been no 'general' wage increase since 1990.

(e) Based on the survey of average weekly earnings introduced in September quarter 1981. Amounts for June 1981 and earlier periods are estimated by linking the various pay-roll tax series with the new series at September quarter 1981.

(f) Over June quarter of previous year.

(g) Tasmanian decision of 13 July 1979 following National Wage Case decision of 27 June 1979.

**EDUCATION, PRIMARY AND SECONDARY, TASMANIA****Chapter 9**

Year	Government schools			Non-government schools		
	Number of schools	Teaching staff	Students (a)	Number of schools	Teaching staff	Students (b)
1900	309	(c) 612	24 157	224	n.a.	9 749
1910	367	677	30 805	124	420	6 278
1920	470	1 102	39 360	84	317	5 872
1930	508	1 358	40 032	66	326	5 862
1940	431	1 398	37 369	63	329	6 139
1950	332	1 687	46 394	58	375	8 330
1955	291	2 277	60 779	57	424	10 454
1960	287	2 540	65 049	60	544	12 716
1965	296	(d) 3 243	71 615	64	666	14 688
1970	283	3 766	79 385	68	810	14 673
1975 (e) (f)	247	4 247	74 337	58	717	13 838
1980 (g)	256	4 908	72 283	59	831	14 620
1981	258	4 948	70 486	61	854	14 917
1982	259	4 901	69 142	70	904	15 326
1983	257	5 025	68 387	70	976	15 940
1984	257	5 145	67 787	71	1 030	16 464
1985	256	5 011	66 863	70	1 068	17 050
1986	255	4 985	66 050	69	1 115	17 459
1987	261	4 732	65 401	66	1 130	17 602
1988	257	4 811	65 404	65	1 153	17 795
1989	254	4 732	64 977	66	1 180	18 394
1990	250	4 546	65 349	66	1 208	19 030
1991	247	4 171	65 662	65	1 258	19 952
1992	243	4 227	65 713	66	1 305	20 576
1993	237	4 260	64 727	65	1 340	21 034
1994	233	4 207	64 061	68	1 372	21 298

- (a) Aggregate enrolment for whole year prior to 1960. From 1960 as at 1 August and excluding adult correspondence students.  
 (b) Aggregate enrolment for whole year to 1919. From 1920 to 1961 enrolment as at 31 December and thereafter at 1 August.  
 (c) Includes teachers, pupil-teachers and paid monitors; excludes training college staff, junior monitors, subsidised teachers, etc.  
 (d) Includes part-time teachers but excludes teachers at special schools from 1962.  
 (e) Full-time plus full-time equivalent of part-time teachers.  
 (f) From 1974 figures exclude kindergartens.  
 (g) From 1977 Government schools figures are shown using National Schools Collection definitions.

**EDUCATION, TERTIARY, TASMANIA (a)****Chapter 9**

Year	Tasmanian State Institute of Technology			University		
	Teaching staff full-time	Students		Teaching staff full-time	Students	
		Full-time	Part-time		Full-time	Part-time
1900	..	..	..	9	51	..
1910	..	..	..	10	147	..
1920	..	..	..	23	179	..
1930	..	..	..	29	449	..
1940	..	..	..	47	452	..
1950	..	..	..	64	673	..
1955	..	..	..	78	800	..
1960	..	..	..	108	1 395	..
1965	..	..	..	145	2 300	..
1970	53	238	896	202	2 260	864
1975	203	1 748	687	280	2 314	1 085
1980	196	1 806	1 120	301	2 344	1 173
1981	123	957	1 125	373	3 189	1 893
1982	129	929	1 251	372	3 078	2 132
1983	141	1 042	1 492	359	3 101	2 128
1984	146	1 124	1 575	359	3 243	2 145
1985	141	1 144	1 468	376	3 397	2 050
1986	144	1 278	1 540	367	3 479	2 289
1987	158	1 487	1 274	363	3 457	2 786
1988	180	1 798	1 305	375	3 712	1 665
1989	195	..	3 392	379	3 992	1 626
1990	200	..	4 192	376	4 232	1 645
1991	—	—	—	628	7 378	3 769
1992	—	—	—	665	7 853	3 460
1993	—	—	—	665	8 015	3 603
1994	—	—	—	681	8 185	3 845

- (a) 1 January 1991 the Tasmanian State Institute of Technology amalgamated with the University of Tasmania to form the new University of Tasmania.

## COMMONWEALTH PENSIONS: TASMANIA

## Chapter 13

Year	Age and Disability Support Pensions (d) (e)						Disability Pensions (a)		Widows' Pensions	
	Number of pensioners		Expenditure on pensions		Weekly rate (b)	Starting from	Recipients	Amount paid	Recipients	Amount paid
	Age	Disability	Age	Disability						
no.	no.	\$'000	\$'000	\$	date	no.	\$'000	no.	\$'000	
1909-10	3 245	—	159	—	1.00	July 1909	—	—	—	—
1914-15	4 528	1 349	223	68	1.00	..	—	—	—	—
1919-20	4 806	1 947	364	145	1.50	Sept. 1923	9 551	524	—	—
1924-25	5 856	2 036	503	180	1.75	Oct. 1925	10 770	590	—	—
1929-30	7 678	2 456	753	248	2.00	July 1931	12 321	695	—	—
1934-35	8 495	2 975	737	263	1.75	Dec. 1940	12 523	724	—	—
1939-40	10 614	2 552	1 055	256	2.10	Aug. 1943	11 729	808	—	—
1944-45	9 512	2 699	1 271	368	2.70	Oct. 1948	12 081	1 103	1 564	207
1949-50	11 402	3 158	2 359	670	4.25	Nov. 1950	19 168	2 036	1 384	314
1954-55	13 679	2 681	4 795	967	7.00	Oct. 1955	25 731	3 934	1 409	475
1959-60	15 835	3 206	7 471	1 605	9.50	..	28 048	4 832	1 773	833
1960-61	16 552	3 338	(c) 10 101	—	10.00	Oct. 1960	28 305	5 166	1 849	940
1961-62	17 522	3 299	11 404	—	10.50	Oct. 1961	28 398	4 988	1 912	1 037
1962-63	17 760	3 343	11 717	—	10.50	..	28 214	5 668	1 977	1 084
1963-64	18 303	3 363	12 343	—	11.50	Nov. 1963	27 913	6 158	2 109	1 467
1964-65	18 892	3 532	13 184	—	12.00	Oct. 1964	27 109	6 214	2 248	1 699
1965-66	19 181	3 444	13 439	—	12.00	..	26 446	6 919	2 327	1 791
1966-67	19 590	3 530	14 574	—	13.00	Oct. 1966	25 629	6 645	2 432	1 988
1967-68	20 411	3 548	15 414	—	13.00	..	25 015	6 790	2 588	2 125
1968-69	21 029	3 819	16 768	—	14.00	Oct. 1968	24 485	7 622	2 678	2 465
1969-70	23 915	4 051	19 517	—	15.00	Oct. 1969	23 807	7 835	2 958	2 927
1970-71	24 894	4 316	21 835	—	15.50	Oct. 1970	23 254	8 230	3 138	3 327
1971-72	25 668	4 498	25 543	—	16.00	Apr. 1971	—	—	—	—
1972-73	29 107	4 855	33 656	—	17.25	Oct. 1971	22 512	9 094	3 205	3 842
1973-74	31 904	5 087	43 032	—	18.25	May 1972	—	—	—	—
1974-75	34 269	5 460	60 118	—	20.00	Aug. 1972	21 905	9 857	3 600	5 136
1975-76	35 594	6 091	77 976	—	21.50	Mar. 1973	—	—	—	—
1976-77	36 954	6 612	91 788	—	23.00	Aug. 1973	21 987	11 176	3 932	6 582
1977-78	38 204	6 205	107 203	—	26.00	Apr. 1974	—	—	—	—
1978-79	38 885	6 427	117 678	—	31.00	Aug. 1974	21 474	13 697	4 103	8 521
1979-80	39 566	6 376	127 382	—	36.00	Apr. 1975	—	—	—	—
1980-81	40 000	6 487	142 519	—	38.75	Aug. 1975	20 778	14 827	4 209	11 221
1981-82	40 413	6 615	163 130	—	41.25	Apr. 1976	—	—	—	—
1982-83	40 838	6 767	176 095	—	43.50	Aug. 1976	20 082	16 637	4 572	12 455
1983-84	39 970	7 266	194 587	—	47.10	Apr. 1977	—	—	—	—
1984-85	39 162	7 614	209 200	—	49.30	Nov. 1977	18 844	18 676	5 001	14 660
1985-86	38 627	7 835	219 505	—	51.45	May 1978	—	—	—	—
1986-87	38 106	8 285	234 207	—	53.20	Nov. 1978	18 127	18 696	5 229	16 621
1987-88	37 777	8 607	260 330	—	57.90	Nov. 1979	17 502	19 389	5 358	18 884
1988-89	38 557	11 930	288 721	—	61.05	May 1980	16 944	21 918	5 230	21 003
1989-90	38 839	12 532	309 250	—	74.15	May 1982	16 681	22 965	5 153	23 160
1990-91	39 664	13 421	350 697	—	85.90	Nov. 1982	16 805	28 887	5 144	24 187
1991-92	41 288	15 421	384 952	—	91.90	Nov. 1984	16 783	33 968	5 009	25 885
1992-93	43 223	17 705	418 096	—	94.30	May 1985	16 743	38 882	4 979	27 699
1993-94	45 168	19 088	466 397	—	102.10	May 1986	16 774	31 855	4 897	28 992
					112.15	June 1987	15 337	31 844	4 723	29 762
					120.05	June 1988	15 121	35 220	4 556	31 983
					129.20	June 1989	15 164	36 387	n.a.	n.a.
					141.20	June 1990	15 771	39 954	n.a.	n.a.
					150.80	Mar. 1991	15 495	43 988	n.a.	n.a.
					153.05	Mar. 1992	15 455	44 500	n.a.	n.a.
					156.05	Mar. 1993	15 177	45 800	n.a.	n.a.
					159.05	June 1994	14 876	46 400	n.a.	n.a.

(a) Previously 'war pensions', excludes pensions in respect of the Boer War which are paid by the United Kingdom.

(b) Maximum single rate payable, subject to means test.

(c) Separate figures for age and invalid pensions not available from 1960-61.

(d) Prior to 1992, this pension was the Invalid Pension.

(e) Age/Disability Pensions include Wife/Carer Pensions.

## COMMONWEALTH ALLOWANCES AND BENEFITS: TASMANIA

## Chapter 13

Year	Family Allowance total amount paid (a)	Maternity Allowance		Job Search and Newstart Allowance (f)		Sickness Allowance (i)		Special Benefit (b)	
		Recipients	Amount paid	Recipients	Amount paid	Recipients	Amount paid	Recipients	Amount paid
1912-13	—	3 611	n.a.	—	—	—	—	—	—
1944 45	1 057	5 582	n.a.	—	—	—	—	—	—
1949-50	2 483	7 408	n.a.	151	4	2 840	74	126	8
1954 55	(c) 4 065	7 940	255	471	(d) 32	1 943	(d) 103	106	24
1959-60	4 719	8 985	285	3 186	242	1 883	135	130	39
1964-65	6 306	7 821	251	5 255	583	2 238	201	122	52
1965 66	6 318	7 578	243	2 742	275	2 040	174	122	57
1966-67	6 912	7 806	243	3 166	228	2 147	190	160	47
1967-68	6 612	7 939	254	3 746	264	1 952	165	99	42
1968 69	6 710	8 373	267	3 984	297	2 070	166	403	55
1969 70	7 416	8 130	259	3 825	360	2 194	199	429	68
1970-71	6 686	8 594	274	4 388	366	2 687	327	388	71
1971 72	7 196	8 211	260	8 974	966	2 964	497	418	79
1972-73	8 185	7 615	241	12 536	2 095	3 295	792	459	128
1973 74	7 212	7 296	230	11 642	3 175	3 975	1 247	574	224
1974-75	6 610	7 225	229	27 088	7 746	4 144	1 692	800	443
1975 76	7 766	7 210	215	30 930	15 256	5 018	2 409	1 760	811
1976-77	31 197	6 729	215	23 982	17 963	4 662	2 380	1 827	979
1977-78	30 968	6 836	213	27 337	23 398	4 284	2 385	1 792	804
1978-79 (e)	28 924	n.a.	91	26 294	28 609	3 881	2 024	2 071	1 299
1979-80	30 549	—	—	26 316	29 665	3 554	2 299	2 051	1 487
1980-81	27 765	—	—	28 234	34 658	3 626	2 901	3 453	2 372
1981 82	30 320	—	—	37 147	49 233	3 707	3 585	3 999	2 956
1982-83	39 146	—	—	31 686	78 302	3 750	4 618	3 632	3 428
1983-84	42 820	—	—	27 308	90 126	3 555	5 221	3 858	3 724
1984 85	42 799	—	—	25 719	96 926	3 411	5 459	3 565	3 425
1985-86	43 873	—	—	24 362	99 558	3 332	6 411	3 173	3 335
1986 87	39 463	—	—	24 276	109 459	2 552	7 497	2 822	3 946
1987-88	39 342	—	—	22 814	118 192	2 376	8 396	4 207	5 570
1988-89	38 216	—	—	17 463	122 901	2 316	9 431	5 230	6 071
1989 90	53 632	—	—	16 660	127 667	2 700	10 238	6 600	8 672
1990-91	36 117	—	—	19 357	168 852	1 329	11 345	3 112	3 863
1991 92	68 568	—	—	26 399	228 353	1 125	9 952	1 200	9 773
1992-93	60 777	—	—	29 836	248 400	891	8 422	742	9 950
1993 94	60 551	—	—	30 068	255 633	1 059	8 960	397	3 465

(a) Known as 'child endowment' up to 1975-76; replaced by increased 'family allowances' from 1 July 1976 in conjunction with abolition of tax rebates in respect of dependent children.

(b) Includes payments to migrants.

(c) Entitlement extended to first child from 20 June 1950.

(d) Rates payable were doubled from 27 September 1962.

(e) Maternity allowance ceased 1 November 1978.

(f) Prior to 1991-92, this benefit was the Unemployment Benefit. Job Search Allowance was introduced from 1 January 1988. Newstart Allowance started on 1 July 1991.

(g) Excludes Job Search Allowance (Special).

(h) Includes annual average number on benefits (was previously number of new grants).

(i) Prior to 1991-92, this allowance was the Sickness Benefit.

## PASSENGER ARRIVALS AND DEPARTURES, TASMANIA (a)

Chapter 14

Year	Arrivals	Departures	Year	Arrivals	Departures	Year	Arrivals	Departures
	no.	no.		no.	no.		no.	no.
1860	3 432	2 782	1960	182 537	183 513	1980	591 152	591 941
1865	3 597	3 691	1961	186 423	184 165	1981	591 699	593 780
1870	5 982	5 936	1962	185 268	186 023	1982	583 770	588 519
1875	6 535	8 083	1963	198 443	199 918	1983	563 666	563 554
1880	10 411	10 034	1964	219 930	223 380	1984	580 350	578 061
1885	14 822	15 225	1965	248 964	249 617	1985	627 577	631 514
1890	29 517	29 086	1966	257 463	256 068	1986	629 617	628 245
1895	18 767	19 357	1967	270 934	271 812	1987	624 306	626 297
1900	23 056	25 479	1968	276 798	276 856	1988	681 541	683 635
1905	31 116	33 311	1969	296 186	297 069	1989	676 616	691 157
1910	35 377	38 159						
1915	39 767	44 764	1970	320 867	323 449	1990	684 264	679 941
1920	34 829	35 648	1971	340 163	340 642	1991	762 638	764 731
1925	40 227	43 757	1972	356 561	355 224	1992	771 489	761 109
1930	40 291	41 110	1973	450 707	448 556	1993	814 769	814 835
1935	42 470	42 912	1974	508 449	502 488	1994	878 318	880 936
1940	(a) 51 672	(b) 53 644	1975	510 639	514 278			
1945	n.a.	n.a.	1976	509 356	507 384			
1950	127 709	122 333	1977	538 665	530 835			
1955	137 834	137 144	1978	557 275	559 293			
			1979	576 050	574 790			

(a) Series of recorded interstate arrivals and departures prepared by Department of Tourism, Sport and Recreation replaces ABS series from 1972.

(b) Excludes road movements.

## PASSENGER ARRIVALS AND DEPARTURES, TASMANIA (a)

Chapter 14

Period	Arrivals				Total departures	Cruise ships	
	By air		By sea	Total		Arrivals	Departures
	Interstate	International					
1984	512 267	7 054	61 039	580 360	578 061	n.a.	n.a.
1985	550 045	8 419	69 113	627 577	631 514	n.a.	n.a.
1986	524 342	10 136	95 139	629 617	628 245	n.a.	n.a.
1987	526 517	9 446	85 343	624 306	626 297	7 398	6 745
1988	571 344	8 625	101 572	681 541	683 635	5 497	6 161
1989	449 481	8 489	118 646	576 616	591 152	4 149	4 149
1990	555 632	8 629	120 004	684 264	679 941	3 255	3 255
1991	623 366	5 897	131 375	762 638	764 731	6 720	6 663
1992	652 092	4 428	114 969	771 489	761 109	4 608	4 608
1993	694 244	5 144	115 381	814 769	814 835	2 033	2 033
1994	745 508	4 166	128 644	878 318	880 936	6 597	6 592

(a) The following persons are not included in these statistics: passengers under three years of age accompanied by an adult; passengers travelling on chartered flights with minor carriers; passengers travelling on private or VIP flights; and passengers from or departing for overseas other than direct flights to New Zealand.

Source: Department of Tourism, Sport and Recreation.

## LAND SETTLEMENT AND LAND UTILISATION, TASMANIA ('000 ha)

## Chapter 15

Year (a)	Land settlement (b)				Land utilisation on rural establishments			Balance of area	Total area of rural estab.
	Land		Crown land		Area under				
	Alienated	In process of alienation	Leased or licensed (c)	Other	Year (d)	Crops (e)	Sown grasses (e)		
1860		1 242			1860-61	62			
1870		1 540			1870-71	64			
1880		1 713			1880-81	57			
1890		1 900	293	4 640	1890-91	64	81		
1900		1 957	513	4 364	1900-01	91	124	1 782	1 996
1910	1 996	447	591	3 799	1910-11	116	200	1 862	2 178
1920	2 121	390	920	3 402	1920-21	120	267	2 216	2 603
1930	2 315	219	1 122	3 177	1930-31	108	305	2 741	2 654
1940	2 392	171	1 098	3 172	1940 41	103	313	2 282	2 638
1950	2 486	148	1 134	3 065	1949-50	118	308	2 169	2 594
1951	2 496	145	1 080	3 112	1950-51	122	322	2 176	2 621
1952	2 514	142	1 108	3 069	1951-52	124	237	2 155	2 516
1953	2 525	139	1 111	3 058	1952-53	130	326	2 198	2 654
1954	2 534	137	1 055	3 107	1953-54	142	336	2 156	2 635
1955	2 516	134	1 018	3 136	1954-55	132	363	2 177	2 672
1956	2 554	126	1 010	3 143	1955-56	137	400	2 145	2 682
1957	2 561	127	655	3 490	1956-57	122	424	2 088	2 634
1958	2 568	84	623	3 558	1957-58	122	458	2 070	2 649
1959	2 575	81	615	3 562	1958-59	144	461	2 055	2 660
1960	2 584	77	618	3 554	1959-60	135	491	2 009	2 635
1961	2 591	86	626	3 531	1960-61	153	487	1 995	2 635
1962	2 597	80	606	3 551	1961-62	155	508	1 988	2 651
1963	2 602	80	586	3 565	1962-63	165	515	1 919	2 599
1964	2 670	89	628	3 446	1963-64	158	552	1 871	2 581
1965	2 679	83	595	3 476	1964-65	167	576	1 855	2 598
1966	2 677	84	540	3 531	1965-66	158	622	1 849	2 679
1967	2 692	100	535	3 506	1966-67	181	628	1 825	2 633
1968	2 692	93	478	3 571	1967-68	170	680	1 813	2 663
1969	2 693	96	465	3 579	1968-69	193	618	1 776	2 587
1970	2 697	100	442	3 594	1969-70	169	737	1 732	2 637
1971	2 702	99	381	3 651	1970-71	172	747	1 712	2 631
1972	2 697	100	274	3 760	1971-72	147	772	1 688	2 607
1973	2 729	133	248	3 723	1972-73 (g)	80	856	1 656	2 592
1974	2 731	135	236	3 728	1973-74	74	920	1 567	2 561
1975	2 755	159	223	3 693	1974-75	67	921	1 504	2 492
1976	2 751	154	229	3 696	1975-76 (h)	60	935	1 464	2 459
1977	2 743	146	163	3 778	1976-77 (h)	65	904	1 340	2 308
1978	2 517	120	165	4 028	1977-78	70	910	1 302	2 281
1979	2 494	96	148	4 092	1978-79	80	904	1 247	2 232
1980	2 487	90	n.a.	n.a.	1979-80	78	895	1 256	2 229
1981	2 486	90	n.a.	n.a.	1980-81	84	903	1 234	2 220
1982	2 590	—	4 235	n.a.	1981-82	90	910	1 168	2 168
1983	n.a.	n.a.	n.a.	n.a.	1982-83	98	903	1 167	2 166
1984	n.a.	n.a.	n.a.	n.a.	1983-84	101	905	1 155	2 162
1985	n.a.	n.a.	n.a.	n.a.	1984-85	99	918	1 103	2 120
1986	n.a.	n.a.	n.a.	n.a.	1985-86	88	916	1 082	2 087
1987	n.a.	n.a.	n.a.	n.a.	1986-87 (i)	78	832	963	1 873
1988	n.a.	n.a.	n.a.	n.a.	1987-88	85	832	954	1 871
1989	n.a.	n.a.	n.a.	n.a.	1988-89	82	853	949	1 883
1990	n.a.	n.a.	n.a.	n.a.	1989-90	83	856	995	1 933
1991	n.a.	n.a.	n.a.	n.a.	1990-91	75	852	943	1 870
1992	n.a.	n.a.	n.a.	n.a.	1991-92	76	830	939	1 845
1993	n.a.	n.a.	n.a.	n.a.	1992-93	73	830	942	1 845
1994	n.a.	n.a.	n.a.	n.a.	1993-94	78	859	1 032	1 969

(a) At 31 December until 1948; at 31 March for 1950 and subsequent years.

(b) Area of State, 66,300 square kilometres.

(c) Excludes areas under pulpwood concessions and exclusive forest permits.

(d) Year ended 31 March.

(e) Area of sown grasses cut for hay, seed and green fodder is included under 'crops'.

(f) Not available on a comparable basis.

(g) From 1972-73 area of sown grasses cut for hay, seed and green fodder is included under 'sown grasses'.

(h) Not strictly comparable with earlier years due to changes in definition of a 'rural establishment'.

(i) The scope of the census for 1986-87 differs from previous years.

## AREA AND PRODUCTION OF PRINCIPAL CROPS, TASMANIA

## Chapter 15

Year	Barley for grain			Oats for grain			Wheat for grain			Blue peas		
	Area	Total production	Yield per hectare	Area	Total production	Yield per hectare	Area	Total production	Yield per hectare	Area	Total production	Yield per hectare
		ha	t		t	ha		t	t		ha	t
1860-61	2 524	2 877	1.14	12 263	16 844	1.37	26 891	38 267	1.42			
1870-71	3 082	3 676	1.19	12 523	12 568	1.00	23 222	24 240	1.04			
1880-81	3 358	3 844	1.14	8 034	7 990	0.99	20 243	20 271	1.00			
1890-91	1 771	2 269	1.28	8 393	9 444	1.13	13 133	17 378	1.32	n.a.	n.a.	n.a.
1900-01	1 822	2 657	1.46	18 240	25 580	1.40	20 973	30 011	1.43			
1910-11	2 119	3 234	1.53	25 854	37 515	1.45	21 142	30 290	1.43			
1920-21	2 489	3 667	1.47	20 426	27 530	1.35	11 446	15 294	1.34	3 476	4 945	1.42
1930-31	2 506	3 832	1.53	14 536	19 141	1.32	7 732	10 581	1.37	2 859	4 060	1.42
1940-41	2 286	3 349	1.47	7 099	7 569	1.07	3 253	3 794	1.17	3 830	5 237	1.37
1941-42	2 153	2 672	1.24	11 043	15 248	1.38	2 596	3 924	1.51	7 485	8 452	1.13
1942-43	1 104	1 428	1.29	5 325	5 310	1.00	1 671	1 982	1.19	10 989	10 961	1.00
1943-44	1 391	2 150	1.55	3 943	5 438	1.38	1 958	3 301	1.69	15 176	15 785	1.04
1944-45	2 189	3 616	1.65	5 977	7 630	1.28	1 551	2 504	1.61	8 828	13 014	1.47
1945-46	2 730	2 803	1.03	5 656	5 120	0.91	2 016	1 801	0.89	9 420	7 922	0.84
1946-47	2 537	3 538	1.40	9 181	10 825	1.18	3 051	3 763	1.23	4 773	6 364	1.33
1947-48	3 298	4 961	1.50	6 910	6 548	0.95	3 147	3 195	1.02	2 783	3 938	1.42
1948-49	2 966	4 728	1.59	4 734	4 756	1.00	2 779	4 211	1.52	2 623	3 999	1.52
1949-50	1 759	2 975	1.69	9 232	10 499	1.14	2 215	3 440	1.55	3 101	3 955	1.28
1950-51	1 320	2 061	1.56	9 486	7 802	0.82	2 152	2 564	1.19	3 395	4 630	1.36
1951-52	1 716	3 400	1.98	10 740	10 803	1.01	1 458	2 541	1.74	3 078	5 338	1.73
1952-53	3 253	4 930	1.52	8 114	5 197	0.64	2 707	4 227	1.56	1 411	1 903	1.35
1953-54	3 819	6 738	1.76	8 141	8 381	1.03	3 921	7 116	1.81	2 159	3 096	1.43
1954-55	2 936	4 541	1.55	9 154	8 212	0.90	2 955	4 286	1.45	2 292	3 093	1.35
1955-56	2 558	4 339	1.70	11 604	9 964	0.86	2 519	3 478	1.38	2 334	3 690	1.58
1956-57	2 865	5 341	1.86	6 701	4 594	0.69	1 578	2 393	1.52	3 349	5 088	1.52
1957-58	3 393	6 140	1.81	8 381	8 762	1.05	2 381	4 148	1.74	2 923	3 854	1.32
1958-59	3 777	6 696	1.77	8 984	8 921	0.99	2 605	4 423	1.70	1 002	1 302	1.30
1959-60	5 016	9 511	1.90	8 910	9 305	1.04	3 344	4 912	1.47	1 285	2 148	1.67
1960-61	6 204	7 821	1.26	9 449	7 114	0.75	2 797	4 003	1.43	1 332	1 198	0.90
1961-62	7 579	13 794	1.82	10 908	10 676	0.98	6 300	9 327	1.48	1 566	2 814	1.80
1962-63	7 993	14 340	1.79	12 587	15 046	1.20	6 208	11 322	1.82	2 299	3 409	1.48
1963-64	5 581	9 414	1.69	12 280	15 339	1.25	7 107	13 047	1.84	2 087	2 693	1.29
1964-65	6 264	12 031	1.92	11 366	9 463	0.83	6 801	9 842	1.45	1 603	2 752	1.72
1965-66	8 056	15 541	1.93	11 449	12 304	1.07	5 709	9 955	1.74	2 223	2 779	1.25
1966-67	8 521	17 540	2.06	14 532	17 236	1.19	5 159	10 412	2.02	1 769	3 039	1.72
1967-68	9 733	20 096	2.06	14 314	18 430	1.29	4 864	8 548	1.76	1 725	2 540	1.47
1968-69	10 608	20 092	1.89	12 721	10 598	0.83	7 039	11 088	1.58	1 358	2 160	1.59
1969-70	12 016	24 896	2.07	8 971	8 272	0.92	5 962	9 831	1.60	1 577	3 224	2.04
1970-71	12 884	29 825	2.31	9 444	8 839	0.94	4 479	7 638	1.71	2 023	4 608	2.28
1971-72	12 576	27 753	2.21	6 432	7 065	1.10	4 570	8 299	1.82	1 025	1 650	1.61
1972-73	12 802	18 711	1.46	6 477	7 144	1.10	4 251	7 701	1.81	504	387	0.77
1973-74	11 121	23 790	2.13	9 173	8 247	0.89	2 521	3 510	1.39	587	1 027	1.74
1974-75	17 020	27 266	2.27	6 069	5 496	0.90	1 535	2 282	1.48	969	2 171	2.24
1975-76	11 475	18 389	1.60	3 924	3 497	0.89	1 644	1 728	1.05	209	261	1.25
1976-77	11 644	24 571	2.11	6 387	8 801	1.38	1 980	3 929	1.98	81	139	1.72
1977-78	11 444	19 403	1.70	4 616	4 279	0.93	1 257	1 545	1.23	326	417	1.28
1978-79	11 938	26 971	2.26	8 564	11 826	1.38	1 366	2 867	2.10	466	928	1.99
1979-80	20 558	17 304	1.60	7 489	7 937	1.10	1 972	3 727	1.90	548	684	1.20
1980-81	10 056	18 307	1.82	8 781	11 146	1.26	1 614	2 545	1.57	413	587	1.42
1981-82	12 108	23 267	1.92	9 923	13 381	1.35	1 293	2 342	1.81	459	740	1.61
1982-83	12 358	21 925	1.80	7 965	8 912	1.10	928	1 489	1.60	330	520	1.60
1983-84	15 059	34 119	2.30	13 978	24 729	1.80	1 142	2 841	2.50	388	981	2.50
1984-85	12 352	29 700	2.40	9 851	15 855	1.60	2 456	4 389	1.80	799	2 079	2.60
1985-86	12 209	27 727	2.27	10 264	16 530	1.61	1 837	4 014	2.18	1 042	2 133	2.05
1986-87	8 487	20 681	2.44	7 765	11 215	1.44	1 729	4 739	2.74	983	1 222	1.24
1987-88	8 024	21 549	2.69	9 560	15 552	1.63	1 179	3 815	3.24	297	593	2.00
1988-89	7 820	22 022	2.82	10 233	17 925	1.75	771	2 199	2.85	264	539	2.04
1989-90	7 983	19 320	2.42	7 568	12 824	1.69	792	2 687	3.39	105	130	1.24
1990-91	9 766	25 979	2.66	9 257	18 825	2.03	599	2 448	4.09	152	293	1.93
1991-92	11 344	31 793	2.80	9 146	18 576	2.03	1 167	3 249	2.78	185	404	2.18
1992-93	12 300	35 285	2.87	9 223	18 975	2.06	1 454	5 468	3.76	225	564	2.51
1993-94	15 204	40 755	2.68	6 651	12 744	1.92	1 602	5 321	3.32	237	575	2.43

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AREA AND PRODUCTION OF PRINCIPAL CROPS, TASMANIA — *continued*

## Chapter 15

Year	Potatoes			Hops			Pasture hay			Apples		
	Area	Total production	Yield per hectare	Bearing area	Total production	Yield per hectare	Area	Total production	Yield per hectare	Area	Total production	Yield
		ha	t		t	ha		t	t		ha	t
1860-61	3 054	34 128	11.07	n.a.	n.a.	n.a.	12 880	63 318	4.92		2 267	
1870-71	3 975	36 606	9.21	260	339	1.30	13 602	41 417	3.04		2 819	
1880-81	4 217	33 070	7.84	230	292	1.27	12 794	36 459	2.85	n.a.	2 953	n.a.
1890-91	8 147	74 332	9.12	151	196	1.30	18 365	52 856	2.88		7 030	
1900-01	9 335	95 368	10.22	253	316	1.25	24 868	95 710	3.85		10 497	
1910-11	10 615	71 215	6.71	420	805	1.92	29 539	117 039	3.96		25 681	
1920-21	12 950	90 102	6.96	516	845	1.64	45 980	179 636	3.91	10 364	44 941	4.34
1930-31	15 066	96 818	6.43	393	760	1.93	33 697	131 027	3.89	(a) 9 672	72 394	7.48
1940-41	15 121	115 871	7.66	369	1 351	3.66	30 789	96 708	3.14	8 808	113 277	12.86
1941-42	12 400	111 613	9.00	427	1 280	3.00	37 488	149 997	4.00	8 970	121 107	13.50
1942-43	16 359	138 112	8.44	448	1 183	2.64	33 209	111 721	3.36	8 889	109 410	12.31
1943-44	24 484	221 296	9.04	435	1 267	2.91	40 178	156 303	3.89	8 896	152 846	17.18
1944-45	32 817	350 773	4.55	441	1 102	2.50	38 855	148 253	3.82	8 723	125 165	14.35
1945-46	22 762	239 930	10.54	445	904	2.03	40 371	118 958	2.95	8 702	162 353	18.66
1946-47	17 493	173 359	9.91	490	1 005	2.05	42 093	172 103	4.09	8 544	80 548	9.43
1947-48	16 342	145 037	8.88	506	1 113	2.20	34 137	139 857	4.10	8 239	150 389	18.25
1948-49	13 079	133 915	10.24	508	694	1.37	36 656	133 118	4.18	7 826	48 828	6.24
1949-50	13 804	123 958	8.98	518	977	1.89	36 962	158 151	4.28	7 661	91 330	11.92
1950-51	12 780	125 990	9.86	518	1 125	2.17	39 007	163 301	4.19	7 378	92 359	12.52
1951-52	12 753	153 424	12.03	531	778	1.47	39 563	175 061	4.42	7 273	93 921	12.91
1952-53	14 304	116 338	8.13	524	1 367	2.61	44 534	195 289	4.39	7 200	71 575	9.94
1953-54	13 971	146 616	10.49	518	973	1.88	49 877	245 459	4.92	7 184	101 047	14.07
1954-55	10 606	102 621	9.68	539	1 353	2.51	39 051	160 495	4.11	6 890	95 426	13.85
1955-56	8 434	79 181	9.39	531	1 437	2.71	55 505	265 619	4.79	6 950	112 896	16.24
1956-57	7 740	91 140	11.78	569	974	1.71	49 837	242 209	4.86	6 754	64 792	9.59
1957-58	8 780	103 129	11.75	571	1 302	2.28	44 581	208 062	4.67	6 804	126 403	18.58
1958-59	6 550	87 279	13.32	579	1 535	2.65	62 250	306 923	4.93	6 651	94 931	14.27
1959-60	6 283	99 573	15.85	581	1 270	2.19	51 211	224 778	4.39	6 509	104 226	16.02
1960-61	4 401	39 677	9.02	569	1 279	2.25	69 206	331 206	4.79	6 404	106 571	16.64
1961-62	4 504	72 709	16.14	571	1 287	2.25	63 632	289 971	4.56	6 239	149 436	23.95
1962-63	5 600	83 870	14.98	588	1 298	2.21	66 952	318 028	4.75	6 268	119 297	19.03
1963-64	4 373	66 470	15.20	592	717	1.21	60 557	253 175	4.18	6 291	162 791	25.88
1964-65	3 801	57 978	15.25	597	947	1.59	72 947	370 204	5.07	6 286	118 250	18.81
1965-66	4 853	77 626	16.00	603	1 392	2.31	59 824	261 366	4.37	6 254	159 343	25.48
1966-67	4 559	74 476	17.97	594	948	1.60	82 225	443 919	5.40	6 165	120 040	19.47
1967-68	4 435	80 327	18.11	608	1 363	2.24	72 373	314 060	4.34	6 048	151 322	25.02
1968-69	4 638	73 278	15.80	616	1 582	2.57	85 212	502 159	5.89	5 863	135 986	23.19
1969-70	3 790	67 995	17.94	565	1 268	2.24	69 526	367 340	5.28	5 804	140 977	24.29
1970-71	3 640	72 591	19.94	452	1 077	2.38	85 565	447 766	5.23	5 715	140 463	24.58
1971-72	3 595	70 370	19.59	539	1 159	2.15	81 176	449 936	5.54	5 218	111 887	21.44
1972-73	3 330	78 286	23.51	616	1 450	2.35	53 937	215 580	4.00	4 980	133 449	26.80
1973-74	3 127	62 866	20.10	703	1 949	2.77	88 884	448 355	5.04	4 148	113 012	27.24
1974-75	4 143	95 610	23.07	662	1 439	2.17	78 557	375 969	4.79	3 335	95 247	28.56
1975-76	3 354	95 624	28.51	513	1 129	2.20	70 262	322 235	4.59	2 947	72 529	24.61
1976-77	3 705	112 269	30.30	587	1 330	2.27	69 730	334 961	4.80	2 741	71 781	26.19
1977-78	3 592	107 240	29.86	567	1 201	2.12	46 480	166 495	3.58	2 601	63 444	24.39
1978-79	3 646	124 385	34.12	578	1 457	2.52	65 835	295 464	4.49	2 693	85 230	31.65
1979-80	4 115	136 197	33.10	620	1 183	1.90	57 689	243 527	4.20	2 661	74 434	28.00
1980-81	4 335	155 965	35.97	672	1 558	2.32	61 555	241 817	3.93	(b) 2 758	76 033	27.57
1981-82	4 438	160 797	36.20	811	1 608	1.98	60 939	233 471	3.83	2 668	67 376	25.25
1982-83	4 749	173 147	36.50	889	1 589	1.80	48 588	157 117	3.20	2 545	69 421	27.30
1983-84	5 203	213 090	41.00	896	1 902	2.10	63 208	270 436	4.30	2 553	56 800	22.20
1984-85	5 209	203 472	39.10	869	1 341	1.54	51 667	212 544	4.10	2 588	61 624	23.81
1985-86	4 932	193 485	40.04	835	1 178	1.41	56 664	252 944	4.46	2 661	56 983	21.41
1986-87	5 744	223 245	38.87	651	1 165	1.79	45 116	195 081	4.32	2 612	48 088	18.41
1987-88	6 390	248 303	38.92	670	1 563	2.33	41 162	163 434	3.97	2 579	52 857	20.50
1988-89	6 001	256 846	42.80	709	1 752	2.47	56 752	272 893	4.81	2 654	52 637	19.83
1989-90	6 952	297 488	43.42	690	1 489	2.16	50 741	241 013	4.75	2 672	57 279	21.44
1990-91	5 727	235 465	41.11	713	2 001	2.80	53 228	245 620	4.63	897 817	45 287	50.44
1991-92	5 967	249 769	41.86	799	2 118	2.65	51 440	220 944	4.30	916 998	50 439	55.01
1992-93	6 116	269 907	44.13	816	2 314	2.83	60 782	299 984	4.94	933 287	56 213	60.23
1993-94	6 863	291 423	42.46	800	2 105	2.63	50 401	229 272	4.55	963 264	54 954	57.05

(a) Before 1980-81 bearing area (hectares). (b) From 1980-81 to 1989-90 total area. (c) From 1990-91 number of bearing trees 6 years and over. Yield is in tonnes per 1,000 bearing trees.

## LIVESTOCK NUMBERS, PRODUCTION OF WOOL AND LAMBING, TASMANIA

## Chapter 15

Year	Livestock (a)				Production of wool (a)			Lambing	
	Horses	Cattle	Sheep	Pigs	Number of sheep and lambs shorn	Average yield per sheep and lamb shorn (including crutchings)	Production of wool (including dead, fell-mongered & exported on skins)	Ewes mated	Lambs marked
	'000	'000	'000	'000		'000	kg	'000 kg	'000
1860	21	83	1 701	31	n.a.	n.a.	2 058	n.a.	n.a.
1870	23	101	1 350	49	n.a.	n.a.	1 881	n.a.	n.a.
1880	25	127	1 794	48	n.a.	n.a.	4 094	n.a.	n.a.
1890	31	162	1 619	82	n.a.	n.a.	4 075	n.a.	n.a.
1900	32	166	1 684	68	n.a.	n.a.	3 064	n.a.	n.a.
1910	41	202	1 788	64	n.a.	n.a.	6 050	n.a.	n.a.
1920-21	39	208	1 571	38	1 551	2.94	5 218	416	299
1930-31	33	230	2 120	55	1 961	3.11	6 713	695	547
1940-41	29	259	2 682	47	2 517	2.78	7 746	988	764
1950-51	20	272	2 182	45	2 245	2.99	7 824	774	637
1951-52	19	226	2 338	47	2 379	3.42	9 305	839	726
1952-53	18	275	2 422	39	2 502	3.19	8 984	894	768
1953-54	17	295	2 465	46	2 553	3.16	9 124	916	786
1954-55	16	319	2 595	58	2 715	3.53	10 794	968	884
1955-56	15	332	2 673	49	2 733	3.45	10 624	979	877
1956-57	14	354	2 943	52	3 082	3.78	13 009	1 150	1 056
1957-58	13	371	3 298	63	3 388	3.50	13 234	1 266	1 199
1958-59	12	374	3 536	69	3 673	3.57	14 803	1 381	1 269
1959-60	11	375	3 494	67	3 834	3.44	15 241	1 461	1 354
1960-61	9	394	3 439	71	3 678	3.44	14 456	1 378	1 267
1961-62	9	425	3 532	76	3 830	3.56	15 635	1 440	1 368
1962-63	8	444	3 570	70	3 783	3.64	15 677	1 419	1 310
1963-64	8	450	3 600	83	3 868	3.47	15 425	1 458	1 353
1964-65	7	451	3 792	92	3 978	4.06	17 994	1 478	1 374
1965-66	n.a.	492	4 127	96	4 318	3.88	16 986	1 651	1 594
1966-67	7	522	4 321	86	4 517	3.88	19 574	1 688	1 574
1967-68	n.a.	564	4 428	87	4 572	3.34	17 376	1 779	1 522
1968-69	n.a.	586	4 385	95	4 632	4.09	21 299	1 736	1 561
1969-70	n.a.	646	4 560	111	4 792	4.05	21 861	1 831	1 715
1970-71	n.a.	733	4 517	113	4 806	3.99	21 671	1 889	1 705
1971-72	n.a.	829	4 237	104	4 607	4.03	21 063	1 805	1 617
1972-73	n.a.	900	3 824	85	4 251	3.76	18 154	1 604	1 369
1973-74	n.a.	884	3 964	68	4 101	3.90	17 549	1 535	1 361
1974-75	n.a.	921	4 136	64	4 153	4.12	18 888	1 644	1 466
1975-76	n.a.	909	4 249	70	4 352	4.13	19 951	1 677	1 515
1976-77	n.a.	819	4 015	63	4 229	3.82	18 109	1 640	1 378
1977-78	n.a.	733	3 969	64	4 242	4.00	18 294	1 672	1 529
1978-79	n.a.	657	4 157	61	4 319	4.04	19 079	1 712	1 582
1979-80	n.a.	649	4 245	63	4 550	4.00	20 003	1 861	1 706
1980-81	n.a.	659	4 381	54	4 627	3.91	20 049	1 892	1 674
1981-82	n.a.	628	4 513	47	4 841	3.59	21 783	2 010	1 843
1982-83	7	559	4 451	51	4 901	3.65	21 680	2 035	1 853
1983-84	6	542	4 583	48	4 845	3.74	21 887	2 014	1 794
1984-85	6	554	4 780	47	5 000	3.74	21 935	2 100	1 908
1985-86	6	570	5 083	45	5 270	3.88	24 994	2 018	1 859
1986-87 (b)	4	535	4 954	46	(c) 5 234	(c) 3.91	26 341	1 982	1 710
1987-88	5	542	4 746	48	5 260	3.67	23 519	1 871	1 569
1988-89	5	560	4 933	45	5 139	3.65	22 315	2 016	1 826
1989-90	4	569	5 337	42	5 540	3.86	27 065	1 882	1 600
1990-91	4	584	4 804	38	5 401	3.78	23 270	1 660	1 240
1991-92	4	593	4 295	40	4 695	3.74	19 932	1 634	1 362
1992-93	4	605	4 264	38	4 511	3.89	(d) 17 590	1 634	1 362
1993-94	5	679	4 324	39	4 534	3.88	17 613	1 636	1 402

(a) Up to 1925-26 numbers recorded were at varying dates in the years shown; from 1926 to 1940 at 31 December; from 1941-42 at 31 March.

(b) The scope of the census for 1986-87 differs from previous years.

(c) Prior to 1986-87, this series was based on information from Brokers and Dealers. From 1986-87 the series is based on Agricultural Census data only.

(d) Prior to 1992-93, this series was based on information from Brokers and Dealers. From 1992-93 the series is based on Agricultural Census data only.

**LIVESTOCK SLAUGHTERED (a) FOR HUMAN CONSUMPTION, TASMANIA ('000)****Chapter 15**

Year	Cattle and calves				Sheep and lambs			Pigs
	Bulls, bullocks & steers	Cows and heifers	Calves	Total	Sheep	Lambs	Total	
1929-30	20.4	13.0	1.8	35.3	228.1	113.4	341.5	64.3
1939-40	32.7	12.1	3.6	48.4	248.4	212.6	461.0	73.4
1949-50	29.3	23.7	4.6	57.6	245.7	262.4	508.1	50.9
1959-60	47.1	56.9	40.5	144.6	505.0	661.5	1 166.4	114.5
1969-70	78.6	66.5	32.8	177.9	608.3	688.7	1 297.0	160.1
1970-71	78.9	61.1	22.0	162.1	713.2	680.7	1 393.9	170.6
1971-72	96.3	69.2	19.3	184.8	813.0	662.2	1 475.2	165.0
1972-73	124.7	110.2	25.9	260.8	636.5	641.7	1 278.2	152.0
1973-74	126.3	103.6	29.6	259.4	335.6	489.7	825.3	115.6
1974-75	149.3	75.4	37.5	262.1	402.8	577.1	979.9	101.4
1975-76	164.1	119.4	64.5	348.0	454.9	613.6	1 068.5	94.1
1976-77	144.9	139.9	72.9	357.7	469.1	523.5	992.6	99.6
1977-78	161.0	132.8	68.7	362.5	386.8	650.1	1 036.8	92.5
1978-79	123.6	103.2	54.5	281.2	345.4	502.9	848.3	90.5
1979-80	95.6	83.0	39.5	218.1	316.9	613.2	930.1	88.7
1980-81	95.9	86.1	42.2	224.1	403.3	646.9	1 050.2	88.6
1981-82	106.6	91.5	53.8	251.9	452.0	690.7	1 142.7	77.2
1982-83	109.4	106.5	59.6	275.5	563.3	764.4	1 327.7	77.3
1983-84	80.4	73.2	46.4	200.0	418.9	756.9	1 175.9	80.2
1984-85	83.4	63.7	38.2	185.3	427.3	683.9	1 111.3	83.1
1985-86	85.5	57.7	32.2	175.4	466.6	665.7	1 132.3	84.4
1986-87	103.9	68.9	32.2	204.9	509.7	670.6	1 180.3	89.6
1987-88	104.0	75.7	35.6	215.2	630.0	656.0	1 286.1	97.5
1988-89	97.2	63.9	40.5	201.6	412.4	595.0	1 007.5	95.5
1989-90	117.0	74.7	34.9	226.6	532.3	588.8	1 121.1	86.7
1990-91	111.9	79.4	30.6	221.9	448.3	555.9	1 004.2	79.9
1991-92	104.7	93.6	32.3	230.6	446.7	489.8	936.5	84.8
1992-93	99.0	90.4	32.7	222.1	473.4	456.5	929.9	92.5
1993-94	101.8	85.2	23.2	210.2	526.1	437.8	963.9	95.8

(a) Including livestock slaughtered on farms.

**VALUE OF AGRICULTURAL COMMODITIES PRODUCED, TASMANIA (\$ million)****Chapter 15**

Year	Crops (a)		Livestock slaughterings and other disposals		Livestock products		Total agriculture	
	Gross	Local	Gross	Local	Gross	Local	Gross	Local
1970-71	40.1	29.2	28.1	25.9	41.9	40.2	110.2	95.3
1971-72	33.7	24.0	31.5	29.0	47.0	45.1	112.2	98.1
1972-73	40.0	28.3	43.6	40.4	64.8	61.7	148.4	130.3
1973-74	46.6	37.0	58.0	54.0	60.0	57.3	164.7	148.2
1974-75	49.4	39.7	31.7	29.1	56.5	53.1	137.6	121.9
1975-76	43.0	35.2	34.1	31.0	60.7	57.0	137.7	123.3
1976-77	55.7	48.7	46.1	42.2	72.1	68.2	173.9	159.1
1977-78	54.0	47.8	54.8	47.9	76.1	72.2	184.8	167.9
1978-79	76.9	68.8	91.7	80.2	86.7	82.7	255.4	231.6
1979-80	70.4	61.7	100.3	87.4	93.7	89.0	264.4	238.0
1980-81	80.3	71.1	94.1	82.4	100.2	95.1	274.6	248.6
1981-82	92.3	81.4	90.2	78.8	117.7	112.7	300.2	272.9
1982-83	108.2	95.2	100.7	87.9	131.5	126.3	340.4	309.4
1983-84	134.4	121.7	95.6	83.2	126.9	121.0	356.8	326.0
1984-85	132.3	116.6	115.3	106.6	135.1	130.2	382.8	353.4
1985-86	148.1	129.9	95.1	88.6	147.3	140.5	390.5	359.0
1986-87	145.6	129.5	111.5	104.5	180.4	170.5	437.5	404.5
1987-88	189.4	169.2	120.0	112.6	239.1	230.0	548.4	511.9
1988-89	233.4	213.0	122.1	114.0	247.6	235.5	603.1	562.8
1989-90	221.9	200.1	140.8	135.1	261.0	248.1	623.7	579.9
1990-91	204.1	192.8	125.2	116.7	214.9	202.9	549.3	512.4
1991-92	227.4	204.0	125.7	117.0	180.4	170.2	533.5	491.2
1992-93	245.4	220.0	136.0	125.9	187.3	177.6	568.7	523.5
1993-94	252.9	229.4	157.9	126.4	209.6	199.0	620.3	554.9

(a) Excludes crops and pasture harvested for green feed or silage.

## PRODUCTION OF MEAT, TASMANIA (Tonnes: Carcass weight)

## Chapter 15

Year	Beef and veal			Mutton and lamb			Pigmeat (a)	Total
	Beef	Veal	Total	Mutton	Lamb	Total		
1929-30		8 153	8 153	4 448	1 595	6 043	2 848	17 044
1939-40	10 626	165	10 791	4 845	2 989	7 834	3 560	22 185
1949-50	12 299	169	12 468	4 896	4 173	9 069	2 597	24 134
1959-60	22 610	906	23 516	10 267	10 846	21 113	5 438	50 067
1969-70	30 909	599	31 509	12 767	11 282	24 049	8 007	63 564
1970-71	29 481	398	29 879	14 755	11 318	26 073	8 530	64 482
1971-72	34 422	374	34 796	16 314	10 875	27 189	8 266	70 251
1972-73	46 946	525	47 471	12 201	10 327	22 528	7 389	77 388
1973-74	45 669	613	46 282	6 672	8 096	14 768	5 477	66 527
1974-75	47 592	721	48 313	7 984	9 508	17 492	4 872	70 877
1975-76	57 924	1 242	59 166	8 997	9 849	18 846	4 516	82 529
1976-77	55 790	1 613	57 403	8 494	8 189	16 683	4 946	79 032
1977-78	59 779	1 556	61 335	7 035	9 849	16 884	4 785	83 004
1978-79	46 269	1 152	47 421	6 833	7 883	14 716	4 834	66 971
1979-80	36 561	835	37 396	5 656	9 017	14 673	4 862	56 931
1980-81	36 812	924	37 736	7 420	9 976	17 396	4 767	59 899
1981-82	40 561	1 266	41 827	8 492	10 647	19 139	4 262	65 228
1982-83	43 518	1 376	44 894	10 364	11 840	22 204	4 196	71 294
1983-84	31 374	960	32 334	8 177	11 745	19 922	4 315	56 572
1984-85	30 821	880	31 701	8 297	10 701	18 998	4 752	55 451
1985-86	30 843	914	31 757	9 382	10 298	19 680	4 665	56 477
1986-87	37 780	1 379	39 159	9 957	10 423	20 380	5 491	65 030
1987-88	39 479	1 791	41 270	11 645	10 213	21 858	5 974	69 102
1988-89	36 178	2 083	38 261	8 059	9 522	17 581	5 810	61 661
1989-90	45 467	2 093	47 560	10 254	9 576	19 830	5 320	72 710
1990-91	43 506	776	44 282	8 455	9 117	17 573	4 795	66 650
1991-92	45 266	665	45 931	8 355	8 070	16 425	5 168	67 524
1992-93	44 925	692	45 617	8 949	7 456	16 405	5 749	67 771
1993-94	47 458	515	47 973	9 992	7 047	17 039	6 019	71 031

(a) Includes pork for manufacture into bacon and ham.

## WEIGHTED AVERAGE PRICES PAID TO FARMERS PER UNIT OF SELECTED FARM PRODUCTS, TASMANIA (\$ per tonne)

## Chapter 15

Year	Cereal for grain			Orchard fruit		Small fruit		Vegetables		Wool, greasy
	Wheat	Barley	Hops	Apples	Pears	Currants	Raspberries	Potatoes	Peas	
1929-30	18	15	198	17	23	40	40	13	n.a.	220
1939-40	12	17	331	23	25	70	70	18	n.a.	260
1949-50	50	32	777	64	73	130	130	30	n.a.	1 320
1959-60	51	59	1 389	99	100	220	200	39	28	1 150
1969-70	53	52	1 698	110	136	310	330	46	99	880
1970-71	48	51	1 698	103	134	330	350	42	119	740
1971-72	54	47	1 874	103	117	330	350	37	115	1 900
1972-73	52	52	1 961	121	174	350	350	57	106	2 290
1973-74	104	77	1 649	121	117	390	410	87	116	1 920
1974-75	104	92	860	149	181	470	530	59	131	1 370
1975-76	97	99	1 395	173	171	500	500	77	147	1 570
1976-77	82	111	1 695	165	195	550	580	83	156	2 100
1977-78	86	121	1 957	202	261	700	740	83	158	2 090
1978-79	109	122	2 202	195	248	720	870	102	158	2 340
1979-80	128	124	2 553	223	284	780	950	104	159	2 700
1980-81	139	150	3 002	220	352	800	1 080	110	177	2 770
1981-82	136	162	3 183	281	331	666	1 173	116	223	2 820
1982-83	139	182	4 355	369	446	549	915	119	243	2 717
1983-84	159	171	4 980	401	503	654	1 887	141	245	2 958
1984-85	162	169	5 157	439	536	574	3 254	135	263	3 343
1985-86	159	145	n.p.	596	572	700	2 721	143	208	3 420
1986-87	145	150	n.p.	579	663	721	4 137	151	215	4 128
1987-88	165	157	n.p.	666	652	737	5 241	167	251	6 904
1988-89	188	181	n.p.	575	687	898	4 467	198	331	6 931
1989-90	177	206	n.p.	548	685	901	2 537	202	328	5 906
1990-91	147	189	n.p.	525	770	1 150	1 2623	216	371	5 163
1991-92	170	160	n.p.	734	870	1 150	1 3631	207	321	3 479
1992-93	158	158	n.p.	730	732	1 150	2 805	199	309	n.a.

Source: ABS catalogue no. 7503.6

**ASSAYED CONTENTS OF METALLIC MINERALS PRODUCED AND  
COAL PRODUCTION, TASMANIA**

Chapter 16

Year	Copper	Gold	Iron	Lead	Molybdenum
	tonnes	kg	'000 tonnes	tonnes	kg
1961	12 947	836	—	12 450	—
1962	14 748	999	—	14 991	—
1963	17 075	1 133	—	15 222	—
1964	15 118	1 069	—	15 594	—
1965	15 411	1 023	—	14 466	—
1966	17 278	1 135	—	15 828	—
1967	17 540	1 167	—	15 375	—
1968	16 867	1 135	502	15 152	—
1969	18 983	1 252	1 388	15 145	—
1970	23 934	1 335	1 346	13 934	—
1970-71	23 846	1 313	1 413	12 516	—
1971-72	26 597	1 983	1 506	22 708	—
1972-73	26 751	1 769	1 696	23 064	—
1973-74	27 826	1 692	1 560	21 626	—
1974-75	29 380	1 569	1 426	18 062	—
1975-76	25 061	1 598	1 463	19 542	—
1976-77	22 810	1 691	1 601	20 417	—
1977-78	23 024	1 934	1 292	23 587	—
1978-79	24 471	1 763	1 570	21 172	—
1979-80	20 960	1 666	1 461	21 212	25 209
1980-81	24 532	1 445	1 480	16 775	19 863
1981-82	23 033	2 000	1 332	30 820	16 873
1982-83	22 007	1 956	1 530	34 296	10 215
1983-84	26 748	1 853	1 412	30 907	8 606
1984-85	26 580	2 182	1 504	35 995	8 271
1985-86	27 461	2 550	1 487	38 958	7 828
1986-87	27 313	2 399	1 218	35 226	8 814
1987-88	25 915	2 227	1 499	43 944	6 774
1988-89	22 287	1 926	1 518	42 915	11 029
1989-90	20 313	1 638	1 494	62 502	11 476
1990-91	24 337	1 691	987	60 901	3 430
1991-92	27 152	1 362	960	71 738	—
1992-93	28 396	1 128	1 118	65 352	—
1993-94	32 822	1 135	1 126	53 649	—

Year	Silver	Tin	Tungsten	Zinc	Coal
	kg	tonnes	tonnes	tonnes	'000 tonnes
1961	45 162	893	1 543	40 735	260
1962	52 876	1 075	1 052	48 687	277
1963	52 969	1 021	975	49 267	210
1964	55 364	1 006	1 009	50 960	154
1965	52 192	1 043	1 196	47 053	104
1966	57 013	1 047	1 327	50 651	84
1967	55 955	1 553	1 202	49 641	78
1968	54 400	3 154	1 425	48 919	92
1969	54 213	4 853	1 524	50 898	118
1970	53 343	5 018	1 434	46 922	114
1970-71	49 363	5 322	1 548	40 694	125
1971-72	83 138	8 469	1 916	72 141	121
1972-73	86 749	6 418	1 794	72 653	128
1973-74	87 918	6 038	1 305	71 961	123
1974-75	73 287	5 936	1 437	61 457	138
1975-76	75 515	5 870	1 876	67 318	176
1976-77	79 047	6 832	2 557	69 967	194
1977-78	87 397	6 992	2 589	79 936	195
1978-79	80 917	6 960	2 419	73 074	253
1979-80	70 645	6 800	2 843	73 247	221
1980-81	58 337	7 059	2 960	53 500	199
1981-82	89 821	7 197	2 463	84 214	265
1982-83	85 596	6 501	1 533	84 739	320
1983-84	91 079	4 855	1 195	75 476	276
1984-85	106 484	3 474	1 430	94 621	297
1985-86	104 281	4 396	1 439	98 427	330
1986-87	102 264	6 864	1 272	88 026	375
1987-88	128 930	6 234	1 491	105 191	405
1988-89	110 950	6 820	1 758	107 439	356
1989-90	144 080	7 906	1 328	158 183	388
1990-91	142 133	5 387	870	177 525	339
1991-92	156 832	5 725	234	204 412	300
1992-93	140 060	6 757	154	177 705	251
1993-94	140 422	7 416	—	165 935	316

Source: Tasmania—Development and Resources

## HYDRO-ELECTRIC COMMISSION, TASMANIA (a)

## CHAPTER 19

Year	Installed generator capacity (a)	Number of retail consumers	Gross revenue	Operating expenses and other charges
	MW	no.	\$'000	\$'000
1929-30	49	n.a.	692	636
1939-40	105	n.a.	1 212	1 172
1949-50	185	75 927	2 938	2 926
1959-60	541	117 266	14 570	14 932
1969-70	1 032	146 958	37 296	35 095
1979-80	1 780	183 607	120 505	119 993
1980-81	1 780	187 072	139 107	136 712
1981-82	1 860	189 723	165 236	159 270
1982-83	1 860	192 034	181 741	185 811
1983-84	1 940	195 370	215 628	218 674
1984-85	1 940	199 180	238 160	233 685
1985-86	2 056	203 472	256 174	246 195
1986-87	2 171	207 481	292 377	296 687
1987-88	2 315	211 527	322 885	328 398
1988-89	2 315	215 744	374 696	364 362
1989-90	2 315	219 169	401 551	400 083
1990-91	2 315	224 283	428 982	444 169
1991-92	2 460	228 348	458 741	444 366
1992-93	2 435	232 662	457 575	464 063
1993-94	2 518	237 399	470 652	480 076

(a) Excludes King and Flinders islands.

## PRINCIPAL ARTICLES PRODUCED IN FACTORIES, TASMANIA

## Chapter 19

Year	Foodstuffs					
	Whole milk (a)	Butter (a) (b)	Cheese (a) (c)	Bacon and ham (cured weight) (d)	Aerated waters	Refined zinc
	million litres	tonnes	tonnes	tonnes	'000 litres	tonnes
1939-40	n.a.	5 380	1 470	1 313	1 650	74 012
1949-50	182.9	5 614	428	1 007	4 510	85 122
1959-60	319.3	12 079	372	1 162	8 356	119 785
1969-70	469.2	16 343	5 407	1 403	13 354	170 931
1970-71	449.8	15 273	5 556	1 803	14 049	162 271
1971-72	458.7	15 318	5 923	1 984	14 402	175 798
1972-73	423.8	12 947	7 218	1 902	15 236	193 782
1973-74	421.8	12 398	8 475	1 931	15 751	182 749
1974-75	438.3	12 196	12 387	2 169	14 845	152 749
1975-76	415.5	10 762	13 332	2 356	16 219	137 637
1976-77	405.0	9 707	13 156	2 434	18 786	170 685
1977-78	366.4	7 910	13 903	2 505	20 082	161 173
1978-79	364.9	7 075	17 494	2 457	19 834	204 623
1979-80	315.6	5 490	15 328	2 094	18 361	191 683
1980-81	288.0	4 234	14 147	2 375	19 397	188 471
1981-82	295.2	3 964	15 167	2 634	19 108	193 714
1982-83	322.7	5 768	14 100	2 661	n.p.	185 482
1983-84	339.2	6 191	14 080	2 519	16 623	187 399
1984-85	346.7	7 690	12 567	2 963	16 755	196 576
1985-86	351.1	6 180	16 695	3 258	17 537	195 916
1986-87	352.3	5 839	17 183	3 164	18 189	189 345
1987-88	306.0	3 885	16 255	3 066	21 136	186 563
1988-89	334.1	4 276	18 671	2 876	22 076	199 142
1989-90	345.0	5 051	18 172	n.a.	22 233	178 093
1990-91	363.3	5 381	19 413	n.a.	20 147	205 452
1991-92	371.9	5 589	20 022	n.a.	n.a.	205 980
1992-93	412.9	6 287	20 043	n.a.	n.a.	211 990
1993-94	247.3	7 846	22 461	n.a.	n.a.	193 763

## PRINCIPAL ARTICLES PRODUCED IN FACTORIES, TASMANIA—continued

Year	Chemicals, fertilisers, etc.					
	Sulphuric acid	Super phosphate	Sulphate of ammonia	Sawn, peeled and sliced timber (e)	Newsprint	Electricity
	tonnes	tonnes	tonnes	'000 m <sup>3</sup>	tonnes	GWh
1939-40	14 552	33 337	—	189.7	—	612
1949-50	42 747	69 943	—	298.2	30 961	1 062
1959-60	129 077	104 260	58 525	400.4	89 931	2 532
1969-70	266 449	133 245	40 563	413.7	173 314	5 140
1970-71	387 193	105 323	40 252	406.1	178 683	5 461
1971-72	558 658	104 763	41 358	412.8	181 477	5 778
1972-73	652 513	177 192	48 654	416.3	199 053	5 902
1973-74	570 156	180 458	33 191	414.3	200 852	6 010
1974-75	517 052	103 253	54 701	410.2	196 240	6 095
1975-76	466 817	57 896	23 040	373.5	206 228	6 008
1976-77	506 338	101 281	12 291	368.1	206 590	6 842
1977-78	522 154	97 012	5 292	338.5	207 621	7 179
1978-79	414 644	151 489	6 045	320.6	208 143	7 748
1979-80	302 550	132 783	1 213	355.2	221 460	7 903
1980-81	253 547	139 869	969	373.9	214 400	8 044
1981-82	335 507	126 416	—	327.7	219 429	8 122
1982-83	292 323	104 374	913	248.1	222 934	7 978
1983-84	318 492	108 216	7 643	290.1	209 412	8 144
1984-85	351 153	127 047	2 065	314.5	199 245	8 279
1985-86	363 273	98 435	2 125	311.6	189 634	8 413
1986-87	333 695	98 110	—	324.9	203 072	8 416
1987-88	309 744	105 534	—	327.7	213 670	8 865
1988-89	275 574	102 837	—	343.8	215 336	8 993
1989-90	309 774	103 454	—	337.1	201 634	9 097
1990-91	318 666	72 437	—	297.3	201 892	9 110
1991-92	359 110	75 925	—	297.1	202 818	8 968
1992-93	355 517	74 640	—	324.1	228 443	8 864
1993-94	361 959	74 383	—	344.8	208 860	8 855

(a) Source: Tasmanian Department of Agriculture up to 1978-79; Australian Dairy Corporation from 1979-80.

(b) Includes butter equivalent of butter oil and from 1965-66 excludes farm production.

(c) Excludes farm production from 1965-66.

(d) Includes non-factory production. From July 1970 all weights are on a bone-in basis; earlier figures include an element of unconverted bone-out weights.

(e) Includes hardwood and softwood.

(NOTE: Details of production of a number of important articles cannot be published because of confidentiality.)

## MANUFACTURING, 1910 TO 1967-68, TASMANIA

## Chapter 19

Year	Factories at end of year	Employment (a)			Salaries and wages paid (b)	Value of materials used	Value of output (c)	Value of production (d)	Land and buildings	Plant and machinery
		Males	Females	Persons						
		no.	no.	no.						
1910	635	8 277	1 703	9 980	n.a.	n.a.	n.a.	2.0	2.1	
1915	589	7 161	1 259	8 420	1.6	4.4	8.4	3.8	2.3	
1920	616	8 746	1 479	10 225	3.0	8.5	14.3	5.5	2.0	
1924-25	675	9 016	1 982	10 998	3.8	6.9	15.7	7.3	4.2	
1929-30	845	8 547	2 273	10 820	4.1	8.0	17.1	7.1	6.0	
1934-35	926	8 321	2 234	10 555	3.2	6.3	14.4	6.3	5.4	
1939-40	980	11 754	2 916	14 670	5.4	10.8	26.0	12.5	7.6	
1940-41	1 002	12 341	3 498	15 839	6.1	12.4	27.7	12.6	8.5	
1945-46	1 082	15 105	4 130	19 235	10.0	20.6	44.2	18.4	10.6	
1946-47	1 169	16 186	3 751	19 937	11.3	22.7	49.1	21.3	11.4	
1947-48	1 225	17 208	3 965	21 173	13.7	27.3	57.6	24.5	12.5	
1948-49	1 346	18 508	4 094	22 602	16.9	34.3	73.3	32.1	14.7	
1949-50	1 456	19 302	4 204	23 506	19.3	43.5	90.2	38.7	17.3	
1950-51	1 486	19 454	4 373	23 827	23.5	58.3	117.2	49.2	20.7	
1951-52	1 512	19 934	4 093	24 027	29.4	71.8	143.9	59.6	25.0	
1952-53	1 504	19 621	3 874	23 495	32.0	67.3	142.0	61.0	29.9	
1953-54	1 545	20 249	4 340	24 589	34.8	74.9	155.8	66.1	54.0	
1954-55	1 597	21 045	4 407	25 452	37.7	84.9	177.2	76.2	59.2	
1955-56	1 594	22 128	4 934	27 062	43.2	95.9	207.6	91.9	93.2	
1956-57	1 585	22 482	5 188	27 670	47.3	101.3	220.8	97.4	112.9	
1957-58	1 655	23 081	5 003	28 084	50.6	100.6	227.7	103.7	118.9	
1958-59	1 666	23 504	4 920	28 424	51.7	103.1	236.6	108.6	123.7	
1959-60	1 683	24 408	5 254	29 662	57.6	119.8	268.1	120.4	144.0	
1960-61	1 766	24 811	5 347	30 158	60.7	122.5	275.9	124.9	147.1	
1961-62	1 760	24 742	5 328	30 070	61.4	126.1	283.5	127.9	159.1	
1962-63	1 764	25 453	5 302	30 755	64.8	132.1	303.9	142.0	163.9	
1963-64	1 746	26 221	5 612	31 833	70.6	154.6	341.1	152.6	168.4	
1964-65	1 805	26 768	5 817	32 580	76.5	175.9	381.5	167.3	209.0	
1965-66	1 792	28 041	6 274	34 315	83.0	188.7	404.6	175.6	211.9	
1966-67	1 771	28 364	6 515	34 879	90.8	201.0	438.0	194.6	234.0	
1967-68	1 797	28 550	6 628	35 178	96.2	203.1	445.1	198.0	263.4	

(a) Commencing with 1927-28, the number of persons employed is the average over the whole year; prior to the date the number represents the average over the period of operation. (b) Excludes amounts drawn by working proprietors. (c) Value of goods manufactured and work done. (d) Value of output less recorded costs of manufacture other than labour.

## MANUFACTURING, TASMANIA (a)

## Chapter 19

Year (b)	Establish- ments operating at 30 June	Employment at 30 June (c)			Wages and salaries (d)	Turnover (e)	Purchases, transfer in and selected expenses (f)	Value added (g)	Fixed capital expenditure (h)
		Males	Females	Persons					
		no.	no.	no.					
1968-69	951	25 346	6 743	32 089	95.1	487.1	301.7	197.5	35.1
1969-70	945	25 523	6 891	32 414	102.1	541.6	317.5	226.1	49.4
1971-72	933	24 891	6 253	31 144	119.4	595.6	359.3	245.1	25.9
1972-73	912	25 077	6 427	31 504	130.7	678.8	394.6	283.4	24.9
1973-74	935	25 708	6 651	32 359	161.4	818.0	494.8	340.3	24.8
1974-75	628	23 430	5 278	28 708	194.9	905.7	558.6	402.3	53.1
1975-76	667	23 243	5 135	28 378	211.3	1 029.6	577.4	456.0	43.9
1976-77	617	23 335	4 973	28 308	246.0	1 199.3	694.4	533.3	34.5
1977-78	599	21 907	5 130	27 037	258.3	1 246.0	742.2	498.0	47.2
1978-79	552	21 397	4 932	26 329	266.1	1 401.5	862.7	549.4	77.1
1979-80	543	21 572	4 857	26 429	298.2	1 656.1	1 045.9	653.8	55.9
1980-81	558	21 783	4 665	26 448	346.6	1 867.1	1 175.5	713.4	60.2
1981-82	555	20 626	4 630	25 256	370.2	1 898.0	1 237.5	713.1	84.4
1982-83	528	19 302	4 551	23 853	387.7	1 968.5	1 260.4	695.1	45.0
1983-84	558	19 695	4 556	24 251	414.3	2 220.5	1 388.7	837.7	61.2
1984-85	575	19 934	4 639	24 573	443.0	2 422.9	1 548.9	937.9	52.3
1986-87	633	19 496	4 875	24 371	526.4	3 050.2	1 838.9	1 236.5	n.a.
1987-88	686	19 832	4 996	24 828	562.6	3 242.6	n.a.	n.a.	n.a.
1988-89	676	21 319	5 614	26 933	648.2	3 834.7	n.a.	n.a.	n.a.
1989-90	662	n.a.	n.a.	25 600	683.5	4 055.4	2 457.3	1 738.7	n.a.
1990-91 (i)	851	n.a.	n.a.	24 500	716.9	4 124.2	n.a.	n.a.	n.a.
1991-92	857	n.a.	n.a.	24 300	714.9	3903.7	n.a.	n.a.	n.a.

(a) Details are not comparable with those contained in the table 'Manufacturing, 1910-1967-68, Tasmania'. (b) No census was conducted in 1970-71 and 1985-86. From 1974-75 figures exclude details for single establishment enterprises with less than four persons employed. (c) Includes working proprietors and employees at separately located administrative and ancillary units. (d) Excludes drawings by working proprietors and partners. (e) Turnover plus increase (or less decrease) in the value of stocks less purchases, transfers in and selected expenses. (f) Includes transfers in of goods from other establishments of the enterprise, charges for commission and sub-contract work, repair and maintenance expenses, outward freight and cartage, motor vehicle running expenses and sales commission payments. (g) Comprises sales of goods, transfers out of goods to establishments of the same enterprise, bounties and subsidies on production, all other operating revenue from outside the enterprise and capital work done for own use, rental or lease. (h) Outlay on fixed tangible assets less disposals. (i) Includes details for single establishment enterprises with less than four employed persons.

**BUILDING APPROVALS, TASMANIA****Chapter 20**

Year	New houses		Other new dwellings		Total new dwellings		Alterations & additions to dwellings	Other building	Total all building
	No.	Value (\$'000)	No.	Value (\$'000)	No.	Value (\$'000)	Value (\$'000)	Value (\$'000)	Value (\$'000)
1959-60	2 546	16 134	187	926	2 733	17 060	n.a.	22 099	39 159
1969-70	2 656	26 631	781	5 545	3 437	32 176	n.a.	30 096	62 272
1970-71	2 581	26 618	610	4 036	3 191	30 654	n.a.	40 392	71 046
1971-72	2 484	28 430	909	6 773	3 393	35 203	n.a.	38 623	73 827
1972-73	3 058	39 454	758	6 393	3 826	45 847	n.a.	46 446	92 293
1973-74 (a)	3 282	51 798	893	8 771	4 175	60 569	797	44 051	105 417
1974-75	2 627	51 460	732	9 678	3 359	61 138	1 163	50 433	112 736
1975-76	3 380	82 908	1 056	18 715	4 436	101 623	2 326	56 441	160 390
1976-77	3 314	89 367	1 088	21 159	4 402	110 526	3 877	86 160	200 562
1977-78	2 778	78 138	911	17 959	3 689	96 097	4 817	86 816	187 729
1978-79	2 834	83 429	810	17 779	3 644	101 208	5 089	77 119	183 416
1979-80	2 511	81 479	804	17 165	3 315	98 644	5 828	91 442	195 912
1980-81	2 327	81 713	873	19 992	3 200	101 705	6 950	73 190	181 845
1981-82	1 989	72 285	741	18 051	2 730	90 336	7 786	90 371	188 493
1982-83	2 057	76 438	670	17 111	2 727	93 549	7 653	62 242	163 444
1983-84	2 918	117 045	769	22 215	3 687	139 260	10 268	80 150	229 678
1984-85	3 415	155 001	955	31 252	4 370	186 253	13 191	141 816	341 260
1985-86	3 070	152 728	1 088	42 025	4 108	194 753	16 337	149 411	360 500
1986-87	2 647	144 937	991	38 085	3 638	183 022	19 513	179 215	381 750
1987-88	2 672	157 965	826	34 816	3 498	192 782	23 537	172 380	388 699
1988-89 (b)	2 890	189 436	1 024	46 410	3 914	235 846	27 892	197 920	461 657
1989-90	2 663	192 287	856	45 098	3 519	237 385	30 264	130 379	398 028
1990-91	2 555	192 760	928	49 516	3 483	242 276	28 565	135 837	406 678
1991-92 (c)	2 869	208 378	1 034	51 917	3 903	260 296	32 637	105 941	398 873
1992-93	2 956	216 989	1 138	58 273	4 094	275 262	33 050	103 107	411 419
1993-94	3 123	242 071	1 034	59 892	4 147	301 963	39 522	145 922	487 407

(a) Prior to 1973-74 'Alterations and Additions' valued at \$10,000 or more to dwellings were included with the number and value of dwellings; other 'Alterations and Additions' are included with 'other building'.

(b) All approved new residential building jobs are included up to 1987-88; from 1988-89 only approved new residential building jobs valued at \$5,000 or more are included. All approved non-residential building jobs valued at \$10,000 or more are included up to 1987-88; from 1988-89 only approved non-residential building jobs valued at \$30,000 or more are included.

(c) From July 1990 all residential approvals valued at less than \$10,000 are excluded and all non-residential approvals valued at less than \$50,000 are excluded.

Source: ABS catalogue no. 8731.2

**DWELLINGS AT CENSUS DATES, TASMANIA****Chapter 20**

Particulars	April 1921	June 1933	June 1947	June 1954	June 1961	June 1971	June 1981	June 1986	August 1991
Dwellings (a):									
Occupied	no. 45 818	52 484	62 484	78 789	91 528	110 483	136 269	150 142	164 272
Unoccupied	no. 2 934	2 421	2 351	3 268	8 582	13 307	17 765	19 470	21 764
<b>Total</b>	<b>no. 48 752</b>	<b>54 905</b>	<b>64 835</b>	<b>84 077</b>	<b>99 840</b>	<b>123 785</b>	<b>154 034</b>	<b>169 612</b>	<b>186 036</b>
Average persons per occupied private dwelling	no. 4.67	4.34	4.11	3.92	3.84	3.53	3.07	2.91	2.69
Occupied private dwellings (b):									
Private house	no. 42 028	48 479	58 937	74 244	83 736	99 401	119 573	130 328	148 902
Flat (incl. apartment)	no. 2 404	2 831	2 604	2 534	5 574	8 417	16 025	19 130	14 063
Other	no. 420	461	461	869	888	1 785			
<b>Total</b>	<b>no. 44 432</b>	<b>51 310</b>	<b>61 462</b>	<b>77 647</b>	<b>90 198</b>	<b>109 603</b>	<b>135 598</b>	<b>149 458</b>	<b>162 965</b>
Nature of occupancy:									
Owner	no. 16 851	20 404	28 377	38 436	42 896	73 267	44 740	58 157	67 915
Purchase by instalments	no. 4 364	3 986	4 140	9 810	19 006		44 977	47 588	44 963
Tenant	no. 19 037	22 734	26 077	26 991	25 938	30 583	33 909	36 748	40 931
Other methods of occupancy (incl. not stated)	no. 4 180	4 186	2 868	2 410	2 358	6 753	11 972	6 307	8 512

(a) including hotels, boarding houses, flats, etc.

(b) According to class of dwelling. The dwelling classification can vary from one Census to the next.

## VALUE OF BUILDING, TASMANIA (\$'000)

## Chapter 20

Year	Building construction									
	Commenced				Completed			Under construction at 30 June		
	All building approvals	New dwellings	Other building	Total all building	New dwellings	Other building	Total all building	New dwellings	Other building	Total all building
1946-47	6 726	3 728	1 708	5 436	2 308	526	2 834	3 614	1 904	5 518
1947-48	8 358	5 256	1 958	7 214	3 492	1 066	4 558	5 532	2 760	8 292
1948-49	11 747	7 960	2 782	10 742	6 042	1 578	7 620	7 670	4 074	11 744
1949-50	16 740	11 702	5 056	16 758	8 426	2 258	10 684	11 368	6 617	17 980
1950-51	21 694	15 000	5 672	20 672	13 508	3 798	16 806	14 250	10 106	24 356
1951-52	20 042	15 360	6 766	22 126	16 414	4 608	21 022	14 504	13 036	27 540
1952-53	15 984	10 664	2 558	13 222	15 252	6 078	21 330	10 608	10 380	20 988
1953-54	21 646	13 552	4 896	18 448	13 520	5 864	19 384	11 532	12 032	23 564
1954-55	25 612	15 244	6 428	21 672	13 092	8 206	21 298	13 992	10 806	24 798
1955-56	25 074	13 842	5 936	19 778	15 138	10 458	25 596	13 230	6 498	19 728
1956-57	30 964	15 138	13 138	28 276	16 434	8 784	25 218	12 420	11 750	24 170
1957-58	27 232	14 980	10 486	25 466	15 844	9 836	25 680	11 866	12 076	23 892
1958-59	27 592	16 662	12 156	28 818	15 986	10 914	26 900	12 742	13 364	26 106
1959-60	39 159	15 834	20 652	36 486	16 570	15 036	31 606	12 026	19 156	31 182
1960-61	30 539	15 936	12 344	28 280	17 206	16 822	34 028	10 912	15 016	25 928
1961-62	37 804	17 076	18 360	35 386	16 630	16 824	33 454	11 136	16 640	27 776
1962-63	37 416	16 668	17 944	34 612	16 892	17 240	34 128	10 912	17 500	28 412
1963-64	34 521	18 944	15 720	34 664	18 070	15 906	33 976	11 764	17 330	29 094
1964-65	44 872	20 922	21 118	42 040	20 060	17 684	37 744	12 628	20 738	33 366
1965-66	48 870	19 200	24 589	43 789	19 010	20 670	39 680	12 761	24 651	37 412
1966-67	56 012	25 859	36 208	62 070	23 230	24 986	48 216	15 394	35 875	51 269
1967-68	74 412	29 791	33 359	63 153	30 078	31 805	61 881	15 095	37 411	52 504
1968-69	54 721	28 011	28 191	56 202	28 142	28 807	56 947	14 634	37 262	51 896
1969-70	62 272	32 326	29 805	62 131	32 170	34 282	66 452	14 675	36 347	51 022
1970-71	71 046	32 233	37 956	70 189	29 275	30 409	59 684	17 906	45 559	63 465
1971-72	73 827	32 219	32 100	64 319	31 699	38 018	69 717	19 262	42 374	61 636
1972-73	94 293	43 328	47 279	90 607	36 190	41 915	78 105	27 418	49 104	76 522
1973-74 (a)	105 417	57 579	49 546	107 125	48 259	40 687	88 946	38 416	56 947	97 363
1974-75	112 736	59 641	53 539	113 180	58 182	41 311	99 493	42 436	73 883	116 319
1975-76	160 390	94 481	62 360	156 840	77 130	67 979	145 109	65 067	75 427	140 494
1976-77	200 562	100 636	77 936	178 574	102 888	71 674	174 563	67 915	85 758	153 674
1977-78	187 729	95 941	96 314	192 255	105 701	87 319	193 019	61 583	99 732	161 316
1978-79	183 416	105 265	106 141	211 406	99 460	74 968	174 427	73 161	133 694	206 854
1979-80	195 912	95 771	82 821	178 591	106 452	111 180	217 633	62 278	117 250	179 529
1980-81	181 845	109 700	99 727	209 400	111 600	122 800	234 400	56 800	109 900	166 700
1981-82	186 493	88 800	92 800	181 600	93 500	98 000	191 500	48 500	106 100	154 600
1982-83	163 444	80 900	78 500	159 500	79 000	111 100	190 100	49 500	71 300	120 800
1983-84	229 678	122 000	80 000	202 000	107 300	105 500	212 800	63 600	46 400	110 000
1984-85	341 260	171 700	130 200	301 900	150 300	85 000	235 300	85 600	96 600	182 200
1985-86	360 500	182 600	196 900	379 600	166 000	118 200	284 200	103 000	178 400	281 400
1986-87	381 750	170 600	198 800	369 400	166 300	174 100	340 400	111 700	205 600	317 300
1987-88	398 699	180 500	193 700	374 200	174 200	225 300	399 500	118 500	181 300	299 800
1988-89 (b)(c)	461 657	222 500	257 400	479 900	182 200	217 600	399 700	154 300	232 300	396 600
1989-90	398 028	224 400	176 700	401 100	229 800	232 000	461 800	164 000	198 400	362 400
1990-91 (d)	406 678	232 000	180 100	412 000	219 400	249 200	468 600	180 800	132 700	313 500
1991-92	398 873	253 700	144 900	398 600	246 600	182 700	429 300	186 300	101 500	287 800
1992-93	411 419	281 700	139 600	421 300	289 100	172 000	461 000	183 200	77 400	260 600
1993-94	487 407	309 500	199 700	509 300	284 400	170 100	454 000	212 500	102 200	314 700

(a) Alterations and additions to dwellings valued at \$10,000 and over are included with the value of dwellings up to 1972-73 but excluded thereafter; from 1973-74 the value of alterations and additions to dwellings valued at \$10,000 and over is included with 'other building'.

(b) All approved new residential building jobs are included up to 1987-88; from 1988-89 only approved new residential building jobs valued at \$5,000 or more are included. For building construction, new residential building jobs have a minimum value of \$10,000.

(c) All approved non-residential building jobs valued at \$10,000 or more are included up to 1987-88; from 1988-89 only approved non-residential building jobs valued at \$30,000 or more are included.

(d) From July 1990 only residential building valued at \$10,000 or more and other building valued at \$50,000 or more are included.

Source: ABS catalogue nos. 8731.6 and 8752.6

## POSTAL SERVICES, TASMANIA

## Chapter 21

Year	Mail posted in Tasmania or received from overseas			
	Letters and postcards ('000)	Newspapers and packets ('000)	Parcels ('000)	Security services (registered articles) ('000)
1929-30	39 956	7 128	198	307
1939-40	33 874	5 525	132	314
1949-50	50 038	8 440	368	674
1959-60	43 020	9 629	233	456
1969-70	58 824	8 953	300	312
1979-80	53 902	10 962	444	119
1980-81	57 204	6 628	544	127
1981-82	51 503	5 773	543	125
1982-83	49 603	5 986	548	116
1983-84	50 669	6 459	550	108
1984-85	53 684	6 736	629	110
1985-86	53 995	6 511	568	113
1986-87	55 128	7 172	535	93
1987-88	61 774	n.a.	586	82
1988-89	63 006	n.a.	558	65
1989-90	65 116	n.a.	584	57
1990-91	66 426	n.a.	(a) 1 537	54
1991-92	68 332	n.a.	2 052	50

(a) Change in parcel category to include small packets less than 500 grams as parcels.  
Source: *Australia Post*

## ELECTRONIC COMMUNICATION, TASMANIA

## Chapter 21

Year	Telegrams		Telephones		Radiocommunication, broadcasting and television stations			
	Despatched to and received from other countries ('000)	Despatched to places within Australia ('000)	Telephone exchanges (no.)	Telephone services connected at end of period		Radio communication (no.)	Broadcasting (no.)	Television (no.)
				Lines ('000)	Instruments ('000)			
1929-30	19	455	360	12	15	20	3	..
1939-40	16	471	357	15	19	25	11	..
1949-50	36	952	370	23	31	198	11	..
1959-60	43	537	391	47	63	882	12	2
1969-70	24	542	273	75	105	4 994	12	4
1970-71	36	499	257	78	114	5 499	12	4
1971-72	36	458	238	80	113	5 892	12	5
1972-73	..	473	230	85	118	6 390	12	5
1973-74	..	472	224	90	127	6 570	12	5
1974-75	..	424	212	96	133	7 347	12	5
1975-76	..	356	206	100	140	7 915	12	5
1976-77	..	298	198	105	146	8 687	15	5
1977-78	..	242	197	112	155	(b) 15 612	15	5
1978-79	..	178	196	118	164	15 008	15	5
1979-80	..	135	196	125	174	15 383	16	5
1980-81	..	122	197	133	202	13 746	18	5
1981-82	..	107	197	139	192	13 413	18	5
1982-83	..	91	197	145	212	21 204	18	5
1983-84	..	74	197	151	231	21 609	19	5
1984-85	..	62	197	162	247	23 262	19	5
1985-86	..	56	197	169	n.a.	21 906	20	6
1986-87	..	44	200	177	n.a.	25 181	21	6
1987-88	..	(c) —	201	182	n.a.	26 388	23	5
1988-89	..	..	203	190	n.a.	(d) 28 455	25	5
1989-90	..	..	204	192	n.a.	n.a.	25	5
1990-91	..	..	204	207	n.a.	n.a.	25	5
1991-92	..	..	204	215	n.a.	n.a.	25	5
1992-93	..	..	204	223	n.a.	n.a.	26	5
1993-94	..	..	191	245	n.a.	n.a.	27	5

(a) From 1967-68 excludes telegrams received, details of which are no longer available.

(b) Includes licensed Citizens Band Radio Service operators from 1977-78.

(c) Telegrams were replaced by services such as lettergrams and Faxpool during the 1987-88 financial year.

(d) Mobile Phone Service introduced.

Sources: *Telecom, Australia Post and Department Transport and Communications*

## MOTOR VEHICLE REGISTRATIONS, TASMANIA (a)

## Chapter 21

Year	Motor vehicles on the register at end of period					New motor vehicles registered during period			
	Motor cars and station wagons	Persons per vehicle registered	Commercial vehicles ('000)	Motor cycles ('000)	Total ('000)	Motor cars and station wagons	Commercial vehicles	Motor cycles	Total
1924-25	5.8	36.9	(b) 0.8	2.7	9.3				
1925-26	7.1	30.4	1.0	3.0	11.1				
1926-27	8.4	25.1	1.2	3.5	13.1				
1927-28	9.7	22.0	1.6	3.9	15.2	n.a.	n.a.	n.a.	n.a.
1928-29	11.4	19.0	1.9	4.4	17.6				
1929-30	12.5	17.6	(c) 2.2	4.8	19.5	1 627	(c) 552	939	3 118
1930-31	12.0	18.3	2.2	4.3	18.5				
1931-32	11.3	20.0	2.2	3.7	17.2				
1932-33	11.6	19.6	2.5	3.7	17.8	n.a.	n.a.	n.a.	n.a.
1933-34	12.0	19.0	2.7	3.8	18.5				
1934-35	12.9	17.8	3.0	3.9	19.8	982	422	171	1 575
1935-36	14.0	16.4	3.6	3.9	21.6	n.a.	n.a.	n.a.	n.a.
1936-37	15.1	15.4	4.0	3.6	22.7	1 572	620	281	2 473
1937-38	16.6	14.1	4.5	3.6	24.8	1 802	707	287	2 796
1938-39	17.7	13.4	5.0	3.7	26.4	2 010	700	350	3 060
1939-40	17.6	13.6	5.2	3.4	26.2	1 400	540	176	2 116
1940-41	17.3	13.9	5.5	3.2	26.1	553	359	90	1 002
1941-42	14.2	17.0	5.4	2.2	21.9	127	156	13	296
1942-43	15.8	15.4	5.6	2.5	23.9	69	91	3	163
1943-44	16.7	14.7	6.3	2.6	25.6	29	523	...	552
1944-45	17.1	14.5	7.0	2.8	26.8	26	331	1	358
1945-46	17.4	14.5	7.8	3.2	28.4	43	351	73	467
1946-47	18.5	13.9	9.0	3.6	31.2	741	667	472	1 880
1947-48	19.9	13.1	10.2	4.1	34.2	1 541	1 084	621	3 246
1948-49	22.5	11.9	11.7	4.7	38.9	2 611	1 202	812	4 625
1949-50	25.3	10.9	12.9	4.9	43.2	3 311	1 565	886	5 762
1950-51	28.8	9.9	15.1	5.3	49.2	4 187	2 319	960	7 466
1951-52	32.5	9.1	18.8	5.7	55.1	4 267	2 073	938	7 278
1952-53	35.4	8.6	19.4	5.7	60.5	3 368	1 724	474	5 566
1953-54	40.0	7.7	19.7	5.6	65.4	4 718	1 896	450	7 064
1954-55	44.9	7.0	21.5	5.3	71.7	5 738	2 285	417	8 440
1955-56	48.0	6.6	21.9	4.8	74.7	5 457	2 179	332	7 968
1956-57	51.7	6.3	22.6	4.4	78.6	5 309	1 988	340	7 637
1957-58	55.9	6.0	23.9	4.0	83.8	5 337	1 944	225	7 506
1958-59	59.1	5.7	25.0	3.6	87.7	5 362	2 113	176	7 651
1959-60	63.7	5.4	26.4	3.1	93.2	6 527	2 115	96	8 738
1960-61	68.1	5.1	26.7	2.6	97.4	6 773	2 058	61	8 842
1961-62	72.8	4.9	27.4	2.4	102.6	6 931	1 778	59	8 768
1962-63	77.9	4.6	27.5	1.9	107.3	9 003	1 986	52	11 041
1963-64	84.4	4.3	28.0	1.7	114.1	10 268	2 343	53	12 664
1964-65	91.3	4.0	28.9	1.5	121.7	10 522	2 389	69	12 980
1965-66	96.8	3.8	29.7	1.5	128.0	10 133	2 878	207	13 218
1966-67	102.7	3.7	30.2	1.6	133.5	10 390	2 611	380	13 381
1967-68	107.7	3.5	31.1	2.2	141.0	11 738	2 412	751	14 901
1968-69	113.7	3.4	32.2	2.8	148.7	10 845	2 529	781	14 155
1969-70	118.6	3.3	32.6	3.1	154.3	11 399	2 456	799	14 654
1970-71	124.9	3.1	32.9	3.5	161.3	11 792	2 550	794	15 136
1971-72	130.2	3.0	33.8	3.8	167.8	11 961	2 492	978	15 431
1972-73	135.4	2.9	34.6	4.5	174.5	12 970	2 813	1 343	17 126
1973-74	141.2	2.8	35.3	6.1	182.6	13 674	2 846	2 600	19 120
1974-75	150.3	2.7	36.6	7.4	194.3	16 097	3 980	2 749	22 826
1975-76	156.9	2.6	39.1	6.8	202.8	14 410	3 971	1 831	20 212
1976-77	162.7	2.5	40.5	6.2	209.4	14 520	4 260	1 428	20 208
1977-78	171.9	2.4	41.2	5.0	218.1	13 884	4 170	972	19 026
1978-79	178.8	2.4	42.9	4.8	226.6	13 928	3 401	892	18 221
1979-80	177.2	2.4	47.5	4.7	229.5	13 333	3 454	1 089	17 876
1980-81	183.5	2.3	49.0	4.9	237.4	13 563	3 444	1 778	18 285
1981-82	186.5	2.3	50.5	5.1	242.1	12 210	3 302	1 110	16 622
1982-83	191.0	2.3	52.5	5.8	249.3	11 279	3 209	990	15 478
1983-84	195.0	2.2	54.8	6.1	255.9	13 214	3 791	1 027	18 032
1984-85	201.7	2.2	58.3	6.4	266.4	13 840	4 731	991	19 562
1985-86	206.2	2.2	60.5	6.5	273.2	12 811	3 969	752	17 532
1986-87	207.0	2.2	61.6	6.3	274.9	9 206	2 667	526	12 399
1987-88	209.4	2.2	62.7	6.0	278.1	8 597	2 106	279	10 982
1988-89	213.5	2.1	64.7	6.2	284.4	10 009	2 906	369	13 284
1989-90	220.4	2.1	67.6	6.2	294.3	10 718	3 225	473	14 416
1990-91	221.9	2.1	70.1	6.2	298.2	9 968	2 749	446	13 163
1991-92	227.9	2.1	70.5	6.3	304.7	9 986	2 471	356	12 613
1992-93	231.8	2.0	72.4	6.6	310.8	10 039	2 569	385	12 993
1993-94	235.1	2.0	74.0	7.0	316.1	10 032	2 608	420	13 061

(a) Includes State Government and Commonwealth Government-owned vehicles but excludes those belonging to the Defence Services.

(b) Trucks only.

(c) From 1929-30 includes trucks, utilities, panel vans and omnibuses.

**MOTOR VEHICLES AND TRAFFIC ACCIDENTS, TASMANIA****Chapter 21**

Year	Motor vehicles on the register at end of year (a)		Traffic accidents involving casualties					
	Number ('000)	Persons per vehicle registered	Accidents		Persons killed		Persons injured	
			Number	Per 10 000 vehicles registered (b)	Number	Per 10 000 vehicles registered (b)	Number	Per 10 000 vehicles registered (b)
1949-50	43.2	6.4	969	242	64	16.0	1 154	288
1959-60	93.2	3.7	743	82	79	8.7	1 004	111
1969-70	154.3	2.5	1 413	93	122	8.0	2 268	150
1979-80	229.5	1.8	1 510	66	77	3.4	2 140	94
1980-81	237.4	1.8	1 634	70	120	5.1	2 186	94
1981-82	242.1	1.8	1 532	64	114	4.8	2 209	92
1982-83 (c)	249.3	1.7	1 114	46	73	3.0	1 524	62
1983-84	255.9	1.7	1 333	52	76	3.0	1 856	73
1984-85	266.4	1.7	1 435	54	85	3.2	1 952	73
1985-86	273.2	1.6	1 514	55	76	2.8	2 152	79
1986-87	274.9	1.6	1 385	50	90	3.3	1 906	69
1987-88	278.1	1.6	1 453	53	75	2.7	1 958	71
1988-89	284.4	1.6	1 522	54	90	3.2	2 032	71
1989-90	294.3	1.6	1 412	48	66	2.2	1 910	65
1990-91	298.2	1.6	1 322	43	77	2.6	1 788	60
1991-92	304.7	1.6	1 297	43	74	2.4	1 712	56
1992-93	310.8	1.5	1 191	38	58	1.8	1 687	54
1993-94	316.1	1.5	1 223	39	58	1.8	1 739	54

(a) Includes cars, commercial vehicles, motor cycles and Commonwealth-owned vehicles other than Defence Services vehicles.

(b) Based on average number of motor vehicles (including motor cycles) on the register.

(c) Random breath tests introduced.

**METROPOLITAN TRANSPORT TRUST (MTT), TASMANIA (a) (b)****Chapter 21**

Year	Route kilometres open for traffic	Hobart		Launceston		Revenue (\$'000)	Expenditure (c) (\$'000)
		Vehicle kilometres (daily average)	Passenger journeys (daily average)	Vehicle kilometres (daily average)	Passenger journeys (daily average)		
1955-56	93	10 602	50 028	4 060	18 006	1 304	1 690
1969-70	382	17 886	39 932	4 801	13 018	2 332	3 358
1979-80	464	20 333	34 384	4 345	9 515	4 164	11 280
1980-81	464	21 551	34 161	4 306	9 368	4 896	13 458
1981-82 (d)	450	20 927	28 803	4 175	7 836	5 625	14 524
1982-83	455	20 871	29 107	4 015	7 762	5 710	15 453
1983-84	476	20 630	28 121	4 002	7 381	5 642	16 715
1984-85	479	20 991	27 997	3 999	7 414	5 646	17 573
1985-86	484	21 261	26 721	4 069	7 508	6 664	19 880
1986-87	387	21 221	25 921	4 106	7 025	7 806	21 387
1987-88	486	21 404	25 562	4 138	6 945	8 372	22 647
1988-89 (e)	500	21 255	26 512	3 882	6 436	9 023	24 575
1989-90	506	20 438	25 868	3 887	6 254	9 486	25 747
1990-91	506	20 246	25 167	3 857	6 027	10 370	27 094
1991-92	516	22 984	24 907	3 997	6 329	15 271	32 266
1992-93	524	23 414	24 468	4 112	6 194	15 614	31 252
1993-94	n.a.	23 181	23 863	4 353	6 263	17 711	31 167

(a) Includes tram, omnibus and trolley-bus services originally under municipal control but taken over by Metropolitan Transport Trust on 1/7/55. Trams ceased operating: Hobart 21/10/60; Launceston 13/12/52. Trolley buses ceased operation in Hobart 24/11/68; Launceston 26/7/68.

(b) MTT operates bus services in the urban areas of Hobart, Launceston and Burnie.

(c) Includes interest, redemption and depreciation.

(d) The method used for calculating passengers changed after a change in ticketing procedures revealed inaccuracies.

(e) Since the introduction of Metrofare in February 1988 passenger transfers at Springfield Interchange have been included as passenger trips.

Source: MTT Annual Review

**VALUE OF TRADE BY SEA AND AIR AND VESSELS ENTERED AND CLEARED,  
TASMANIAN PORTS**

Chapter 22

Year	Imports								Exports			Vessels entered Tasmanian ports	
	Overseas		Interstate		Overseas (b)		Interstate (b)		Total	Overseas and Interstate (c)			
	By sea and air	By sea (a)	By air	Total (a)	By sea and air	By sea	By air	Total		no.	'000 net tons (f)		
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000						
1830	n.a.	n.a.	n.a.	510	n.a.	n.a.	n.a.	292	101	27			
1840	n.a.	n.a.	n.a.	1 976	n.a.	n.a.	n.a.	1 734	492	85			
1850	n.a.	n.a.	n.a.	1 318	n.a.	n.a.	n.a.	1 288	674	104			
1860	1 686	450	n.a.	2 136	1 544	380	n.a.	1 924	806	116			
1870	698	888	n.a.	1 586	562	736	n.a.	1 298	613	106			
1880	738	2 000	n.a.	2 738	1 568	1 456	n.a.	3 024	654	205			
1890	1 594	2 202	n.a.	3 796	797	2 182	n.a.	2 974	746	476			
1900	1 402	2 746	n.a.	4 148	3 078	2 144	n.a.	5 222	741	619			
1910	1 652	(d)	n.a.	n.a.	1 040	(d)	n.a.	n.a.	979	1 211			
1919-20	1 626	(d)	n.a.	n.a.	4 022	(d)	n.a.	n.a.	841	632			
1929-30	3 666	16 028	n.a.	19 696	4 978	13 198	n.a.	18 176	1 076	1 390			
1939 40	3 188	21 780	n.a.	24 968	4 852	20 954	n.a.	25 806	1 243	1 512			
1949-50	18 704	51 218	(e) 10 670	80 592	29 936	42 672	(e) 3 996	76 604	862	1 183			
1959 60	27 606	130 014	19 210	176 830	47 730	137 530	20 818	206 078	1 308	2 287			
1960 61	37 208	141 086	19 356	197 650	42 588	143 036	21 944	207 568	1 354	2 546			
1961-62	26 788	141 776	18 000	186 564	57 196	140 794	23 298	221 288	1 533	3 042			
1962-63	35 746	150 620	18 158	204 524	66 792	146 454	21 602	234 848	1 614	3 474			
1963 64	35 032	167 964	19 840	222 836	73 318	173 590	23 424	275 332	1 508	3 346			
1964-65	35 717	170 963	20 819	227 449	87 315	193 371	25 770	306 456	1 472	3 412			
1965-66	43 585	192 732	21 123	257 441	92 007	212 785	25 575	330 367	(f) 1 645	(f) 3 887			
1966 67	51 376	209 456	20 311	281 143	88 834	224 975	25 680	339 490	1 684	4 085			
1967-68	45 024	220 065	20 590	285 679	76 888	233 694	26 941	337 524	1 676	4 102			
1968-69	37 509	241 398	21 051	299 958	102 061	265 476	25 825	393 362	1 795	4 645			
1969 70	46 998	257 441	20 551	324 989	143 470	286 083	26 287	455 840	1 759	5 574			
1970 71	45 719	269 022	19 777	334 519	143 198	277 669	27 103	447 970	1 639	5 338			
1971-72	39 749	281 576	20 622	341 947	178 950	302 608	29 374	510 932	1 754	5 937			
1972-73	45 045	289 862	21 238	356 145	218 712	320 910	30 626	570 247	1 788	7 239			
1973 74	69 277	357 805	24 760	451 843	259 145	404 382	34 566	698 692	1 631	7 223			
1974-75	100 616	402 081	26 850	529 547	226 154	379 933	31 699	637 786	1 611	6 820			
1975 76	76 262	503 497	27 882	607 641	250 580	441 391	36 280	728 251	1 536	6 733			
1976-77	94 622	364 231	30 909	689 762	338 657	485 850	35 160	859 667	1 592	7 258			
1977 78	115 778	594 793	39 388	748 960	381 942	594 441	38 206	1 014 589	1 528	6 992			
1978 79	140 652	621 548	74 578	836 829	513 286	627 186	39 727	1 180 199	n.a.	n.a.			
1979-80	179 780	936 584	53 481	1 168 845	646 827	772 531	32 141	1 451 499	n.a.	n.a.			
1980 81	172 456	973 685	60 922	1 207 063	658 013	837 042	45 171	1 540 226	n.a.	n.a.			
1981-82	166 032	1 031 330	61 187	1 258 548	647 617	879 421	47 525	1 574 562	n.a.	n.a.			
1982 83	179 819	1 084 743	74 552	1 339 113	773 133	904 983	50 833	1 728 949	n.a.	n.a.			
1983-84	202 786	1 189 170	69 735	1 461 691	774 308	1 075 077	57 768	1 907 153	n.a.	n.a.			
1984-85	389 613	1 414 304	91 352	1 895 269	841 312	1 184 681	67 084	2 093 077	(h) 1 739	(i) 13 734			
1985 86	299 398	(g) n.a.	(g) n.a.	(g) n.a.	900 011	1 182 102	74 755	2 156 868	2 087	15 403			
1986-87	289 374	n.a.	n.a.	n.a.	1 094 664	1 322 047	84 175	2 500 886	1 960	18 810			
1987 88	282 415	n.a.	n.a.	n.a.	1 221 955	1 312 699	93 523	2 628 177	1 858	18 317			
1988-89	348 647	n.a.	n.a.	n.a.	1 356 594	n.a.	149 225	n.a.	1 939	18 706			
1989 90	352 915	n.a.	n.a.	n.a.	1 474 335	n.a.	112 212	n.a.	n.a.	n.a.			
1990-91	299 069	n.a.	n.a.	n.a.	1 344 606	n.a.	95 641	n.a.	n.a.	n.a.			
1991 92	287 155	n.a.	n.a.	n.a.	1 439 275	n.a.	98 304	n.a.	n.a.	n.a.			
1992 93	334 199	n.a.	n.a.	n.a.	1 521 021	n.a.	n.a.	n.a.	n.a.	n.a.			
1993-94	447 410	n.a.	n.a.	n.a.	1 558 139	n.a.	n.a.	n.a.	n.a.	n.a.			

- (a) Data for 1979-80 onwards are not directly comparable with data for previous years because of revisions to estimating procedures to take account of inadequate documentation available for interstate imports by sea.
- (b) Data for 1978-79 onwards are not directly comparable with data for previous years. From 1 July 1978 overseas export figures relate to all goods leaving Tasmania for overseas countries. Prior to that date export figures relate to only goods leaving Tasmania for overseas countries for which documents had been lodged with customs in Tasmania.
- (c) In this section each vessel is recorded as an entry at the first Tasmanian port of call only; intrastate movements are excluded.
- (d) Collector discontinued until 1922-23.
- (e) Not collected before 1949-50.
- (f) From 1966-67 not comparable with previous years; details are now confined to vessels of over 200 registered net tons engaged solely in trade.
- (g) Figures no longer available, due to discontinuation of the Interstate Imports Collection.
- (h) Overseas only.
- (i) Deadweight tonnes used from 1984-85.

## OVERSEAS AND INTERSTATE EXPORTS OF SELECTED COMMODITIES, TASMANIA

## Chapter 22

Year	Sheep skins (with and without wool)		Textile yarn and fabrics	Refined zinc	Ores and concentrates	Timber (dressed and undressed)		
	Quantity	Value	Value	Quantity	Value	Value	Quantity	Value
	tonnes	\$'000	\$'000	tonnes	\$'000	\$'000	m <sup>3</sup>	\$'000
1945-46	1 890	326	4 599	75 454	4 214	1 668	73 206	1 132
1950-51	1 014	1 688	9 266	80 836	15 054	5 704	135 668	3 230
1955-56	1 873	1 356	14 674	100 611	19 888	10 836	140 938	6 570
1956-57	2 122	1 796	15 766	105 314	19 662	10 700	146 502	6 874
1957-58	2 138	1 674	16 112	105 541	18 190	8 088	132 242	4 616
1958-59	2 565	1 288	14 166	116 271	20 054	4 824	153 378	6 844
1959-60	3 216	2 078	17 524	115 680	22 922	5 952	177 931	8 952
1960-61	3 071	1 786	19 188	109 664	21 020	6 760	149 657	9 554
1961-62	3 050	1 892	21 278	133 012	23 680	6 030	134 033	8 588
1962-63	2 885	1 904	19 842	136 302	23 778	6 338	142 979	9 858
1963-64	3 359	2 844	21 918	134 201	27 910	9 102	168 480	11 176
1964-65	2 676	1 953	24 139	141 263	37 327	9 570	169 832	12 811
1965-66	3 268	2 485	24 077	137 257	38 331	11 302	174 297	12 145
1966-67	3 402	2 456	24 102	155 273	41 249	12 560	187 474	13 672
1967-68	2 722	1 369	25 487	120 312	33 106	17 816	183 817	13 492
1968-69	3 988	2 148	27 563	139 479	34 006	44 018	194 936	15 329
1969-70	3 236	1 790	27 784	163 847	42 625	63 478	207 242	16 238
1970-71	3 710	1 684	28 425	142 755	38 163	81 604	200 583	17 201
1971-72	3 765	1 799	29 938	194 259	55 149	88 777	202 331	17 385
1972-73	3 618	3 280	31 680	208 349	63 707	87 543	224 828	21 970
1973-74	2 303	2 926	41 174	190 293	77 143	94 381	270 248	22 556
1974-75	2 816	2 258	31 454	139 253	74 298	91 240	213 428	30 636
1975-76	2 943	2 413	41 656	138 243	74 926	92 588	238 440	25 867
1976-77	2 334	2 765	35 811	162 001	98 318	144 947	313 227	37 083
1977-78	2 565	3 965	33 285	167 870	87 129	164 014	260 738	38 282
1978-79	2 504	3 708	43 815	214 242	122 263	202 415	238 145	38 609
1979-80	2 683	5 417	37 184	185 327	127 264	248 942	291 453	88 238
1980-81	2 330	3 231	45 047	194 115	135 276	n.p.	265 488	85 754
1981-82	2 713	3 395	46 095	199 774	162 700	n.p.	255 366	82 206
1982-83	2 239	2 841	50 073	203 759	164 424	n.p.	267 441	70 031
1983-84	2 557	3 629	52 620	199 820	201 478	n.p.	234 789	84 958
1984-85	2 615	4 718	57 917	198 988	233 810	n.p.	228 837	91 223
1985-86	3 592	8 065	56 835	187 518	197 594	n.p.	224 432	97 470

Year	Butter (incl. butter oil)		Fresh fruit apples and pears		Meat		Cheese		Wool, greasy (a)	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
	tonnes	\$'000	tonnes	\$'000	tonnes	\$'000	tonnes	\$'000	tonnes	\$'000
1945-46	1 293	406	66 820	1 894	186	34	612	112	4 113	1 438
1950-51	1 968	1 173	62 841	6 828	915	302	63	17	5 446	18 688
1955-56	4 988	3 483	92 569	11 498	2 470	1 076	36	23	8 387	11 140
1956-57	6 101	3 457	58 836	7 936	2 074	883	102	73	9 392	16 198
1957-58	5 939	3 420	96 260	14 664	2 996	1 290	101	45	10 731	14 260
1958-59	7 065	4 878	87 781	11 338	5 469	2 415	69	51	11 415	12 106
1959-60	7 864	5 990	80 683	9 490	9 225	3 801	90	64	12 689	15 254
1960-61	5 419	3 298	92 730	11 226	6 896	3 212	60	47	11 068	12 560
1961-62	7 572	3 942	122 417	15 572	7 754	3 250	121	50	12 341	14 206
1962-63	8 597	4 368	108 438	17 508	9 933	4 737	578	269	11 919	15 338
1963-64	8 325	4 372	135 205	19 454	11 018	5 505	895	328	11 378	17 604
1964-65	10 374	5 914	99 410	14 260	12 881	6 645	1 707	761	13 756	16 593
1965-66	8 878	5 214	134 482	20 651	12 749	7 038	2 887	1 493	15 442	20 155
1966-67	9 140	5 259	96 085	11 872	13 727	7 939	3 530	1 642	16 238	20 373
1967-68	8 892	5 107	115 873	14 647	11 345	7 042	4 190	1 854	13 994	15 041
1968-69	9 243	5 129	96 242	13 154	12 910	7 989	1 930	884	15 798	18 592
1969-70	12 611	6 950	109 382	14 905	17 084	11 774	7 267	2 957	16 512	17 821
1970-71	10 664	5 954	96 670	13 474	15 755	10 706	6 259	2 589	17 145	14 350
1971-72	9 829	8 067	74 948	11 092	21 463	14 161	6 816	3 875	20 413	17 180
1972-73	7 437	6 104	84 066	11 566	23 061	20 368	6 656	4 085	17 735	34 579
1973-74	8 269	6 441	92 116	16 458	22 167	22 507	7 730	5 930	16 963	38 319
1974-75	5 012	4 460	57 473	10 261	18 456	12 237	10 386	7 922	15 927	26 640
1975-76	9 720	7 527	47 114	8 756	20 883	17 192	9 026	7 633	17 435	31 232
1976-77	4 363	3 851	24 847	5 732	22 951	20 281	14 352	12 317	16 204	33 885
1977-78	6 248	5 941	42 257	11 092	20 984	21 557	15 222	14 409	16 390	36 503
1978-79	2 561	3 146	40 405	11 794	24 569	37 240	7 516	18 247	16 306	38 756
1979-80	2 871	4 343	45 467	13 826	21 104	41 670	12 188	17 127	13 213	36 630
1980-81	1 510	2 703	39 932	12 467	19 718	35 890	13 302	22 414	16 356	48 422
1981-82	413	867	49 941	19 300	23 688	37 544	13 782	25 827	15 698	48 000
1982-83	1 265	3 725	39 184	22 507	30 392	53 285	11 029	23 410	15 293	48 161
1983-84	2 303	5 384	46 543	21 594	17 432	33 667	10 001	21 235	16 189	55 513
1984-85	2 692	6 552	37 662	23 729	14 164	30 249	11 750	26 227	17 129	66 856
1985-86	2 389	7 827	42 667	33 084	16 356	37 697	11 064	27 202	17 550	63 853

(a) Excludes greasy wool or exported skins.

## CONSUMER PRICE INDEX NUMBERS, HOBART (a)

## Chapter 23

Year	Food	Clothing	Housing	Household equipment and operation		Tobacco and alcohol	Health and personal care		Recreation and education	All groups	
				Transportation						Index no.	Increase % (b)
1949-50	6.9	9.6	6.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	7.5	6.5
1959-60	13.8	15.7	12.3	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	13.9	1.8
1969-70	17.7	18.5	17.8	19.6	16.5	14.2	16.2	n.a.	n.a.	17.6	2.3
1970-71	18.2	19.1	18.6	20.2	17.2	15.3	16.3	n.a.	n.a.	18.3	4.0
1971-72	18.8	20.3	19.7	21.8	18.8	16.5	18.9	n.a.	n.a.	19.5	6.6
1972-73	19.9	21.5	20.9	22.6	19.6	17.9	19.8	n.a.	n.a.	20.6	5.6
1973-74	23.5	24.3	23.3	24.3	20.7	20.3	22.2	n.a.	n.a.	23.2	12.6
1974-75	26.4	29.4	28.7	25.5	24.5	22.5	27.4	n.a.	n.a.	27.1	16.8
1975-76	29.5	34.3	34.2	33.6	29.2	27.4	21.8	n.a.	n.a.	30.9	14.0
1976-77	33.5	39.8	38.8	36.9	32.7	29.5	39.4	n.a.	n.a.	35.4	14.6
1977-78	37.1	44.0	41.9	40.1	35.8	30.8	47.7	n.a.	n.a.	38.9	9.9
1978-79	41.8	47.4	44.0	43.1	38.0	35.6	46.0	n.a.	n.a.	41.9	7.7
1979-80	47.7	50.9	46.5	46.9	43.2	38.4	50.4	n.a.	n.a.	46.2	10.3
1980-81	52.1	54.7	49.9	52.3	47.7	41.2	55.6	n.a.	n.a.	50.4	9.1
1981-82	56.6	58.2	53.6	57.5	53.8	45.0	66.9	n.a.	n.a.	55.5	10.1
1982-83	61.8	61.7	58.1	63.6	60.4	51.1	79.4	61.8	61.8	61.4	10.6
1983-84	66.8	65.4	61.8	69.4	65.2	56.8	73.0	66.3	66.3	65.5	6.7
1984-85	70.9	69.8	67.5	72.9	68.6	62.3	61.5	69.1	68.6	68.6	4.7
1985-86	75.9	75.6	74.4	77.8	75.2	68.8	65.5	76.4	74.6	74.6	8.7
1986-87	82.7	83.1	78.8	84.1	84.3	77.7	76.9	82.7	81.9	81.9	9.8
1987-88	88.4	88.6	81.9	89.9	90.7	86.8	85.7	89.0	87.9	87.9	7.3
1988-89	94.5	94.8	88.2	95.1	94.9	93.4	91.4	93.8	93.4	93.4	6.3
1989-90	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	7.1
1990-91	103.2	104.5	102.8	105.8	105.4	106.5	111.5	103.6	104.9	104.9	4.9
1991-92	106.1	105.7	98.8	109.1	106.9	111.5	122.7	106.1	107.1	107.1	2.1
1992-93	109.1	107.7	95.0	110.4	111.7	119.9	129.3	108.2	108.5	108.5	1.3
1993-94	112.2	106.4	94.2	112.4	112.8	134.8	137.9	111.3	111.7	111.7	2.9

(a) Base of each index is year 1989-90=100.0 (Note that for previous editions index base has been year 1980-81=100.0)

(b) Over previous year.

## VALUE OF RETAIL SALES BY COMMODITY GROUPS, TASMANIA (\$ million)

## Chapter 23

Year	Groceries	Fresh meat	Other food (a)	Beer, wine, spirits (b)		Clothing, drapery, footwear	Domestic hardware (c)	Electrical goods (d)	Furniture, floor coverings	Other goods (e)	Total (excl. motor vehicles, etc.)
1952-53 (f)	17.3	9.1	11.9	10.7	25.7	3.1	4.6	4.9	16.3	103.6	
1956-57 (f)	23.4	11.1	15.1	14.8	30.4	3.3	6.3	6.4	20.3	131.1	
1961-62 (f)	28.6	13.9	20.0	17.0	35.3	4.1	10.7	7.2	29.3	166.1	
1965-66	35.2	17.8	27.7	20.3	41.6	4.5	11.2	8.7	36.3	198.3	
1966-67	36.5	19.4	24.2	23.3	45.5	9.1	11.7	10.1	39.2	215.0	
1967-68	37.3	19.9	26.1	25.0	48.9	5.5	12.4	11.2	41.6	227.9	
1968-69 (f)	48.7	20.7	23.1	30.9	49.5	8.8	13.4	12.6	49.9	257.6	
1969-70	41.7	21.0	30.7	28.7	62.2	6.1	13.3	12.9	49.4	256.0	
1970-71	45.2	21.3	32.6	30.7	55.6	6.7	13.6	13.5	52.9	272.1	
1971-72	50.0	22.2	33.9	32.4	59.7	7.5	15.4	14.4	55.8	291.3	
1972-73	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	319.5	
1973-74 (f)	63.8	26.2	35.8	47.8	76.1	14.4	24.5	21.4	64.5	374.5	
1974-75	76.7	31.3	47.2	61.7	100.3	17.1	36.1	28.9	86.1	485.4	
1975-76	87.3	31.2	49.7	68.8	101.6	22.1	48.3	31.7	91.6	532.3	
1976-77	110.4	35.7	58.0	77.5	117.3	24.5	56.4	34.6	103.6	618.0	
1977-78	120.8	37.6	64.0	91.6	133.1	29.0	53.1	37.8	118.4	685.4	
1978-79	132.0	48.2	72.8	100.5	141.2	29.5	53.2	38.8	134.3	750.5	
1979-80 (f)	168.0	55.9	71.9	105.6	151.0	28.2	53.0	39.0	144.3	816.9	
1980-81	171.5	55.2	99.0	114.0	154.6	35.5	54.1	39.9	161.9	885.7	
1981-82	195.1	60.3	106.8	122.3	166.6	38.8	57.0	42.3	178.9	968.1	
1982-83	234.8	63.6	91.4	119.5	186.6	39.5	69.0	41.5	184.4	1 030.5	
1983-84	276.1	73.4	99.7	129.7	198.9	46.2	78.6	49.7	202.3	1 154.6	
1984-85	324.4	76.5	108.6	153.5	221.8	44.8	78.2	58.4	229.5	1 296.0	
1985-86	361.3	79.9	126.1	171.5	216.0	51.6	86.8	56.6	249.0	1 399.0	

(a) Includes fresh fruit and vegetables, confectionery, soft drinks, ice-cream, cakes, pastry, cooked provisions, fish, etc., but excludes some delivered milk and bread.

(b) Excludes sales from licensed clubs up to 1982-83.

(c) Excludes basic building materials (e.g. timber, roofing tiles, etc.), builders' hardware and supplies.

(d) Includes radios, televisions and accessories, musical instruments, domestic refrigerators, etc.

(e) Includes tobacco, cigarettes, newspapers, books, stationery, chemists' goods, jewellery, etc.

(f) Census figures.

## AVERAGE RETAIL PRICES OF FOODSTUFFS, HOBART (a) (cents)

Chapter 23

Year	Bread	Tea	Sugar	Potatoes	Butter	Eggs	Bacon	Silver-side	Lamb	Lamb	Pork
	(b)				(factory)	1 doz	rashers	(corned)	(leg)	chops	(leg)
	680 g	250 g	2 kg	1 kg	500 g	55 g	250 g	1 kg	1 kg	1 kg	1 kg
1901	2.3	6.8	9.3	1.4	12.5	10.6	9.3	9.3	9.0	10.4	11.7
1906	2.4	6.8	9.3	2.2	11.6	12.9	7.9	9.3	9.7	10.6	11.2
1911	2.6	6.8	9.7	4.7	12.1	12.1	11.9	9.3	8.6	10.6	11.2
1916	3.2	7.9	12.8	2.1	17.5	14.4	15.5	16.8	18.1	19.4	21.4
1921	5.4	9.6	22.0	1.9	23.7	18.8	19.4	18.1	17.6	20.1	28.7
1926	4.6	12.0	16.3	3.7	21.2	16.2	16.4	15.7	17.6	20.7	24.0
1931	3.4	12.8	16.8	1.9	17.1	12.0	13.0	13.0	10.8	14.8	17.9
1936	3.7	12.6	17.9	2.4	15.0	14.9	11.1	14.6	15.4	16.8	18.1
1941	4.6	16.8	17.9	2.4	18.4	15.9	16.0	16.5	15.9	17.2	23.1
1946	4.6	12.5	17.9	2.2	19.3	20.5	19.3	20.1	21.2	21.2	26.0
1951	7.8	21.3	21.2	7.6	27.9	40.8	21.8	38.1	42.1	40.1	67.2
1956	12.4	40.3	36.6	20.5	51.0	54.1	34.6	55.6	55.6	43.9	106.3
1961	14.5	38.3	42.3	20.2	52.4	57.1	39.5	85.8	56.2	45.9	119.5
1966	17.0	36.5	41.8	11.3	56.7	63.0	52.7	94.6	69.2	57.5	140.2
1967	18.0	36.6	46.0	15.5	57.3	65.7	54.9	100.5	71.4	62.2	145.7
1968	19.1	36.4	49.0	15.2	57.3	62.2	56.3	138.9	108.5	111.8	149.5
1969	20.1	35.2	49.2	13.4	59.7	68.3	54.6	135.8	106.3	108.0	147.5
1970	21.3	33.9	49.0	14.1	60.6	67.7	55.6	138.9	197.6	109.3	147.5
1971	23.5	35.3	48.0	14.5	62.0	64.4	55.2	144.4	107.4	107.6	148.8
1972	24.9	36.7	48.4	16.3	63.9	67.4	56.9	149.9	113.3	114.0	151.9
1973	27.0	35.6	47.9	20.5	63.9	75.2	57.6	175.0	148.8	149.3	171.3
1974	31.2	37.2	48.0	30.4	67.5	58.8	75.6	201.3	170.9	174.8	220.0
1975	39.2	49.7	52.4	19.6	77.0	93.7	91.9	180.8	171.5	173.1	256.6
1976	45.1	53.0	56.7	33.7	85.2	109.2	111.6	201.1	197.1	198.2	302.7
1977	48.8	92.3	63.5	26.6	91.5	123.4	123.0	218.7	238.9	240.0	326.1
1978	52.0	88.5	68.8	35.8	91.3	128.5	126.5	247.5	269.8	277.8	344.5
1979	57.0	79.5	85.3	39.5	94.8	138.5	149.5	379.5	332.8	349.3	415.3
1980	63.8	77.3	95.3	45.0	104.8	147.5	170.5	441.8	357.5	371.0	464.0
1981	72.0	79.5	102.0	51.5	119.0	161.3	182.5	447.5	357.5	378.8	490.3
1982	79.5	86.5	115.8	45.3	150.8	169.3	204.8	441.8	359.5	373.8	540.0
1983	84.3	103.3	128.5	59.8	168.0	178.0	218.0	499.5	375.5	413.8	536.3
1984	92.0	140.3	134.0	52.8	171.0	184.8	225.8	528.5	401.3	440.0	550.8
1985	92.8	157.0	139.8	50.3	175.8	194.3	239.8	538.0	391.5	399.8	575.0
1986	98.0	149.0	150.3	61.0	185.8	201.0	242.8	552.8	401.0	437.0	593.0
1987	105.5	152.0	163.8	70.0	184.3	195.3	261.0	577.0	435.0	498.0	601.5
1988	113.5	153.3	173.0	67.3	182.5	211.3	270.0	619.5	453.8	557.8	628.5
1989	120.0	151.5	206.0	82.5	197.8	228.8	291.5	633.3	469.8	581.5	666.5
1990	131.3	172.0	237.8	48.5	197.5	238.8	321.0	653.0	488.5	621.3	689.8
1991	137.3	179.0	214.3	47.8	204.5	238.3	317.8	658.8	492.8	632.0	700.5
1992	142.3	172.5	200.5	61.5	202.8	237.0	315.3	681.3	492.0	656.3	688.5
1993	149.0	184.0	216.8	64.9	203.8	250.3	310.0	658.8	517.0	661.8	674.8
1994	155.3	196.3	235.8	76.0	205.8	258.0	313.0	690.3	574.8	675.0	668.3

(a) In almost all cases the table units are not necessarily those for which the original price data were obtained. In such cases, prices have been calculated for the table unit.

(b) Prior to 1978, bread delivered, 900 g.

(c) Prior to 1968 prices shown were for 'Corned beef (brisket), Mutton (leg), Mutton chops (loin)', respectively.

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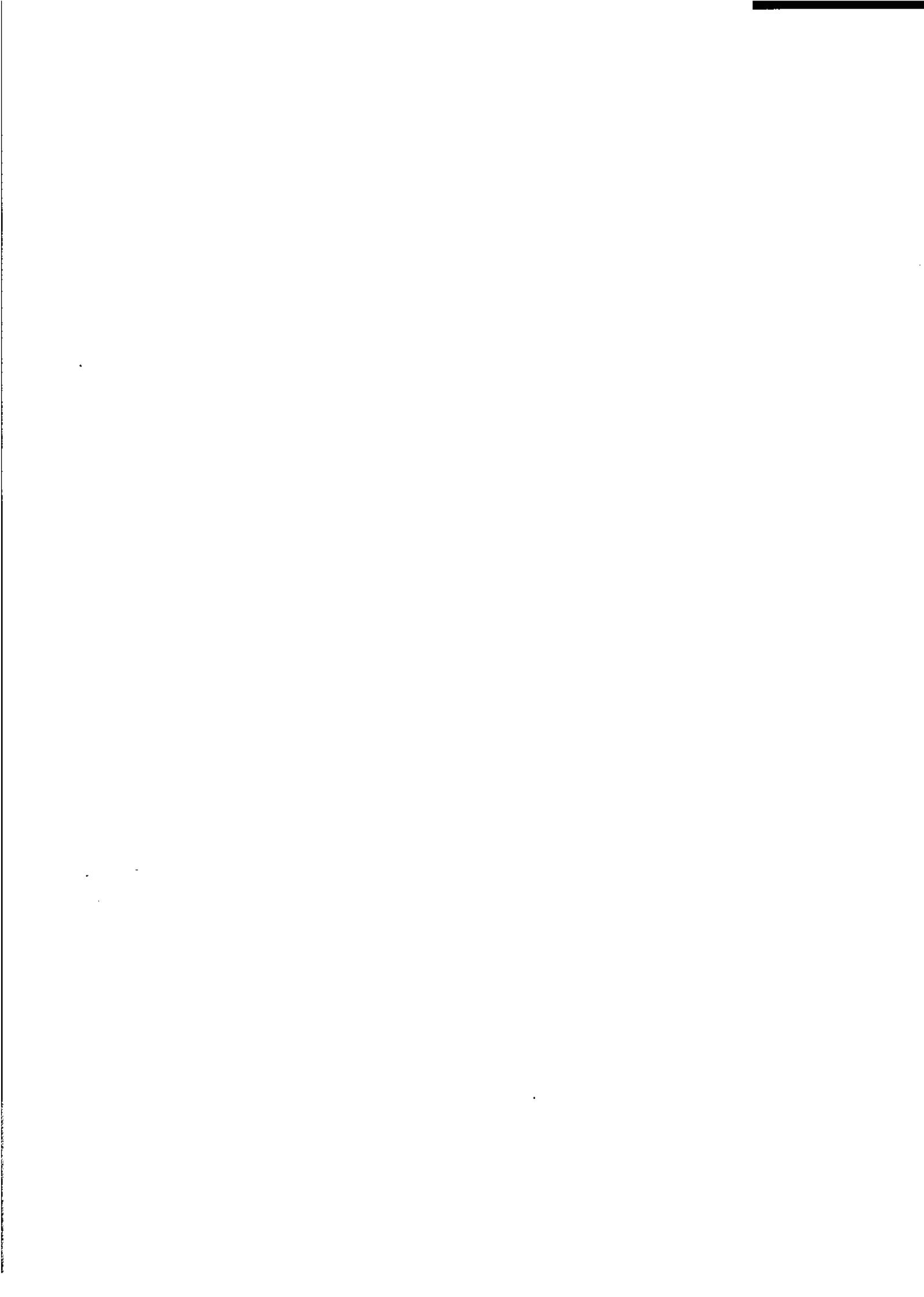
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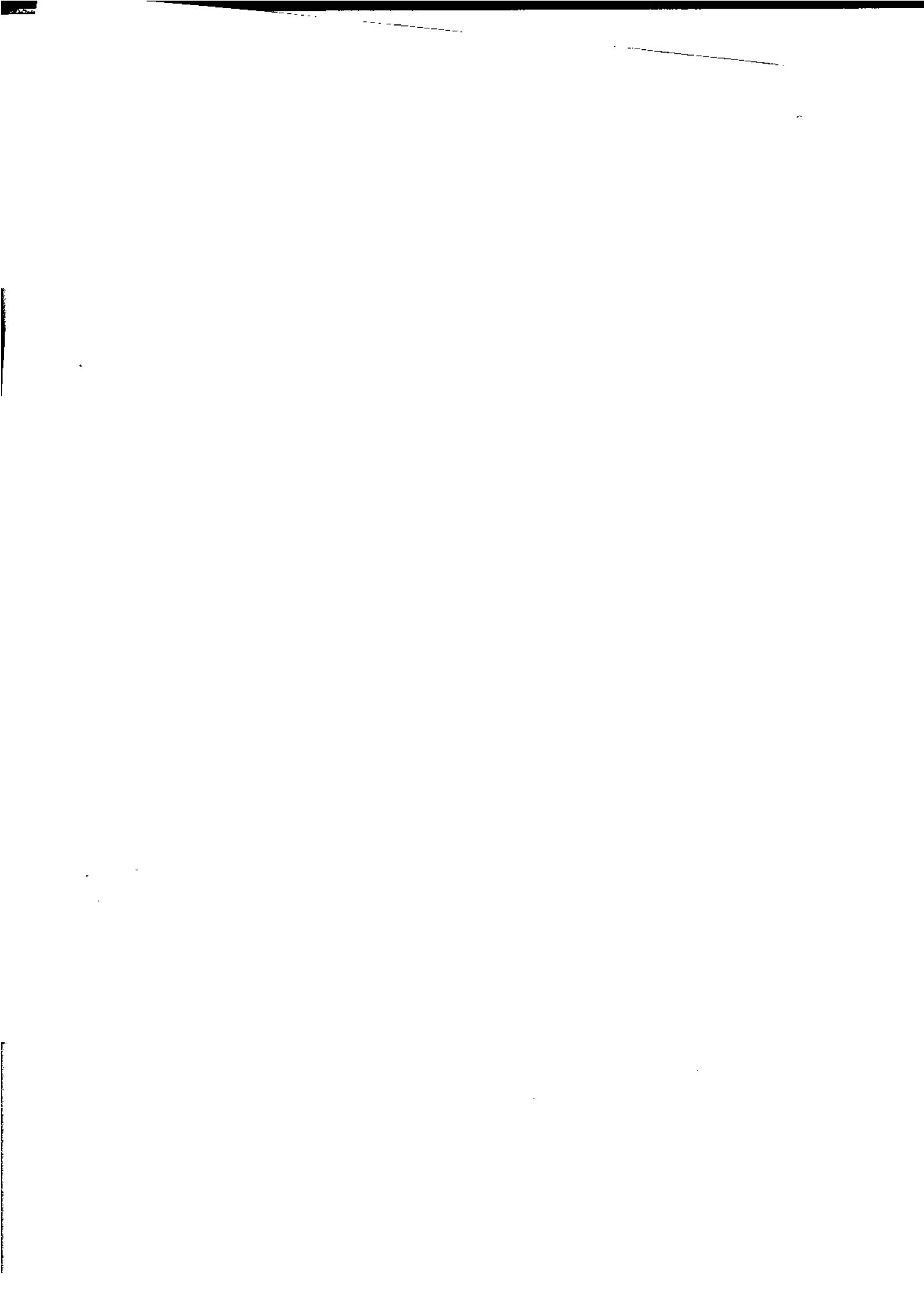
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