INVESTING IN OUR NATURAL AND CULTURAL HERITAGE

THE COMMONWEALTH'S ENVIRONMENTAL EXPENDITURE 2000-01

STATEMENT BY
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MINISTER FOR THE ENVIRONMENT AND HERITAGE
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Minister's Foreword

This is the Howard Government's fifth Budget since it assumed office in 1996 and my fifth Budget as the minister responsible for the environment.

During the Government's two terms of office we have presided over an extraordinary diversion of resources to the refurbishment of the nation's natural estate.

Much of the additional money is being delivered through the Natural Heritage Trust, capitalised at \$1.5 billion with most of the revenue coming from two partial sales of Telstra, by programmes administered by my own portfolio and by the Agriculture, Fisheries and Forestry portfolio.

This year our combined spending on the environment is estimated at more than \$1 billion. If realised, it would bring direct spending on the environment during our term to \$3.6 billion, or an average of \$728 million a year, 43 per cent more than the annual spending of the Labor Government's last year in office.

That, however, is not the complete story. Last year's mid-term review of the Trust revealed that every \$1 of Trust money generated additional resources in cash or kind worth \$7.

So Trust funding of more than \$700 million until now has generated additional resources of up to \$5 billion for the environment, more than doubling the direct outlays of \$3.6 billion in the five years to end 2000-01.

As I said, a truly extraordinary performance, and it would not have been possible without the cooperation of state, territory and local governments, some enterprising firms, and the voluntary work of more than 300,000 people from communities throughout Australia.

According to the review, nearly 70 per cent of one-stop-shop programme approvals – the majority of Trust programme approvals – were for community projects.

This is more evidence that this generation of Australians can fairly claim to be environmentally aware and environmentally responsible.

Other valuable insights came from the review – the need to integrate programmes, for example, and to apply them across entire regions and catchments.

The new *Environment Protection and Biodiversity Conservation Act 1999* comes into effect in July. The Act is the most significant reform of environmental law undertaken by an Australian government. It clearly delineates federal responsibilities and is designed to exploit the strengths of our federal system.

We set an international precedent with the creation of the National Oceans Office to manage our extensive marine resources to 200 nautical miles off the coast and beyond to the edge of the continental shelf.

The Office now has a director, who began in April, and is developing a series of regional marine plans, beginning with the plan for the south-east marine region. This region begins in southern New South Wales and arcs around Tasmania and Victoria to South Australia.

On climate change, we have committed more than \$1 billion to honour our obligations under the Kyoto protocol. This is the first year in which a full suite of greenhouse programmes is funded. New funding this year is worth more than \$200 million.

We have doubled spending on the Living Cities Programme this year to reduce atmospheric pollutants, reduce fouling of urban waterways, and stop stormwater systems carrying refuse into our surf beaches.

And we also are increasing our effort to help Australian industry apply the concept of sustainable development in its operating procedures. This concept is taking hold. Good corporate citizenship – less waste, fewer emissions and pollutants, restoration of any environmental damage, and more efficient energy use, to list some of its characteristics – is proving to be a net benefit to the firms practising it.

Many sustainable practices are the result of improved efficiency, which is improving the bottom line of many balance sheets. New technologies and services supporting sustainability also have obvious export potential.

It has been a rewarding year since the last Budget. This year promises just as much.

Robert Hill

Minister for the Environment and Heritage

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Chapter 1: Introduction

This statement is an account of the Commonwealth's spending on environment and environment-related objectives.

First, the Strategic Directions and Budget Overview chapter summarises the environmental Budget for 2000-01, describes each new measure, and outlines the Government's strategic priorities.

Second, the Government in Partnership chapter uses case studies to show how the Government is working in partnership with industry and the community to address these priorities.

Finally, the Summary of Activities appendix is a description of all Commonwealth environmental activities. Activities are organised by sectors, such as oceans or inland waters, rather than by departmental responsibility.

Environmental activities are not limited to the Environment and Heritage portfolio. Sustainable development requires the application of environmental considerations across all Commonwealth policies and programmes. Commonwealth programmes concerned with resource and industry sectors, economic growth, microeconomic reform, social goals and international cooperation and development integrate environmental considerations with economic and social considerations. As well as managing programmes relevant to the environment, many agencies are improving the environmental management of their operations, such as recycling and energy efficiency.

A summary of environmental activities undertaken by each portfolio is presented in Table 1.1.

Table 1.1: Environmental Activities by Portfolio

Portfolios	Major environmental responsibilities
Agriculture, Fisheries and Forestry	Natural resource management policy, integrating environmental considerations with a broad range of environment-related programmes.
Australian Quarantine and Inspection Service	Quarantine services to prevent entry of exotic pests and diseases, and for inspecting and certifying export goods prescribed under the <i>Export Control Act 1982</i> .
Attorney-General's	Community-based environmental legal services and environment-related legal advice.
Australian Customs Service	Border operations to control potentially environmentally damaging imports and exports.
Communications, Information Technology and the Arts	Radio frequency and electromagnetic energy research and information.
Defence	Management of the environmental and heritage attributes of the Defence estate, particularly training areas.
Education, Training and Youth Affairs	Green Corps and other programmes which provide youth training, skills and work experience in environmental conservation and heritage activities. Provision of environmental education materials and professional development to teachers.
Employment, Workplace Relations and Small Business	Administers the national industrial chemicals notification and assessment scheme.

Table 1.1: Environmental Activities by Portfolio (continued)

Portfolios	Major environmental responsibilities
Environment and Heritage	Primarily responsible for environmental policy, with a broad range of environmental programmes.
Antarctic Division	Research on oceans and marine life, atmosphere, climate change and protection of the Antarctic environment.
Bureau of Meteorology	Atmospheric, oceanographic and hydrological monitoring, research and service provision.
Australian Greenhouse Office	Coordinates domestic climate change policy and manages the delivery of major new and existing Commonwealth greenhouse programmes.
Finance and Administration	Monitors Commonwealth environmental spending and contributes to environment policy.
Foreign Affairs and Trade	Promotes solutions to international environmental issues consistent with Australia's economic and environmental interests.
Australian Agency for International Development and the Australian Centre for International Agricultura Research	Overseas aid programme supporting Australia's national interests through sustainable development activities in developing countries.
Health and Aged Care	A range of environmental health activities and contributes to chemica assessments.
Industry, Science and Resources	Industry development policies and programmes covering research and development, innovation, technology diffusion and business networks. Major funder of environmental research particularly through CSIRO, Cooperative Research Centres, the Australian Institute of Marine Science, and the Australian Nuclear Science and Technology Organisation. Renewable energy industry assistance, energy efficiency programmes, policy advice on tourism in World Heritage areas.
Prime Minister and Cabinet	Provision of general environmental policy advice.
Aboriginal and Torres Strait Islander Commission	Land management and Aboriginal heritage programmes.
Transport and Regional Services	Primarily responsible for transport policy integrating environmental considerations; protection of the marine and coastal environment through the Australian Maritime Safety Authority.
Treasury	Contributes to the development of environment policy.
Australian Bureau of Statistics	Development of environmental accounts and reporting of environment statistics.
Productivity Commission	Addresses environmental issues in its public inquiries and research.
Australian Taxation Office	Administers a range of environment-related taxes, levies, deductions and rebates.

Unless otherwise indicated, all financial information presented in this document represents the net cost to the Commonwealth; the figures are exclusive of any GST which may be payable by the Commonwealth and which is recoverable as an input tax credit.

Chapter 2: Strategic Directions and Budget Overview

STRATEGIC DIRECTIONS

Australia has made significant advances in recent years in managing and protecting the environment. Successes include establishing the world's first greenhouse office; focussing attention on oceans through Australia's Oceans Policy; and involving Australian communities in the repair and conservation of their own environments through the Natural Heritage Trust.

Success has been the result of partnerships with community, industry, state and local governments. The next 12 months will see a strengthening of the partnership framework.

The Government is moving to integrate the principles of sustainable development into programmes across all government agencies, as well as improving the sustainability of departments' in-house operations.

This section sets out the priorities for 2000-01, and illustrates the implementation of the Government's conceptual framework for environmental and heritage protection. The second half of the chapter summarises the Government's environmental expenditure and describes new spending measures in this Budget.

Environment Protection and Biodiversity Conservation Act

The Environment Protection and Biodiversity Conservation Act 1999 begins on 16 July 2000. The Act is the most fundamental reform of Commonwealth environmental laws since the first environmental statutes were enacted in the early 1970s. The Act defines the environmental responsibilities of the Commonwealth and allows the Commonwealth, states and territories to combine in a national scheme of environmental protection and biodiversity conservation.

Implementation of the Act will focus the Commonwealth on matters of national environmental significance, allowing a streamlined environmental assessment and approvals process, an integrated regime for biodiversity conservation, and the management of important protected areas. The Commonwealth will be able to accredit state and territory environmental assessment processes and, in limited circumstances, decisions, where a state or territory meets the rigorous requirements of the Act.

Community participation in meeting the objectives of the Act is encouraged through the wide range of opportunities for public comment and consultation. The Act recognises the role of indigenous people in biodiversity conservation. The Act will better equip the Commonwealth to deal with new issues.

Business of Sustainable Development

There are significant opportunities for businesses that adapt to sustainable development. Reducing environmental impacts will be achieved by increasing the resource efficiency of business operations as well as reducing waste. The net result of such actions is cost savings and enhanced competitiveness. This is being recognised internationally where principles of sustainable development are providing opportunities for innovation, improved product quality and efficiency.

The Government recognises that the business sector has already undertaken activities to increase its sustainability. Many businesses have improved their environmental performance by adopting environmental policies and environmental management systems. Some companies publish environmental reports openly describing their environmental impacts and their contributions to sustainable development. There also has been strong participation in government programmes, such as the Greenhouse Challenge, where many companies have signed voluntary agreements to improve their environmental performance. Businesses are realising that their competitiveness depends on addressing environmental issues.

Achieving sustainability involves business embracing the concept of eco-efficiency – providing goods and services more efficiently while reducing resource consumption and environmental impacts. This can be done by reducing the material and energy intensity of goods and services, maximising recycling and renewable resource use, reducing pollution, and increasing product durability and service intensity. Environment Australia will develop partnerships with industry to address the barriers that businesses face in implementing eco-efficiency.

A preferred alternative to more stringent environmental regulation is to involve business, whose decisions have such an important impact on environmental quality, in a partnership to improve environmental performance and improve living standards.

Achieving sustainable development in Australia requires producers and consumers to take account of the social and environmental impacts of their activities. The Government is seeking to equip business with the information and skills necessary to adopt more environmentally sensitive practices. These are the first moves towards an economy that takes proper account of the wider impacts of resource use – a transition involving a wide variety of initiatives and behavioural changes by government, business and consumers. Enhancing the capacity of business to deal with environmental issues not only reduces the costs of meeting future environmental targets and standards, it also provides new business opportunities.

There are a number of examples of the Government working with industry to reduce environmental impacts by reducing waste and increasing resource efficiency.

The Government is committed to reducing waste going to landfill and in July 1999 developed, in cooperation with other governments and stakeholders from industry, a National Packaging Covenant. The covenant will minimise the environmental impacts of packaging waste and develop economically viable and sustainable recycling collection systems. The Government will continue to encourage industry to be responsible for its

waste through programmes such as waste management awareness and developing eco-efficiency agreements with different industry sectors.

In 2000-01, the Government will ensure environmentally sustainable management, refining and reuse of waste oil by introducing a levy on lubricating oils to finance recycling.

To achieve ecologically sustainable development, Australian industry must have access to leading environmental technology and management methods. The Government therefore supports Australia's environment technology industries, which offer improved domestic performances and significant export opportunities. The Australian environment industry will be showcased at the 2000 Sydney Olympics as a leader in environmental management.

The Government has developed a National Pollutant Inventory whereby large companies report their emissions of certain chemicals to the environment. There is now public access to nearly 1,200 reports on emissions from industrial facilities across Australia.

The Living Cities Programme – A New Urban Agenda

Australians living in cities are concerned about air pollution, fouled waterways, and refuse finding its way into the stormwater system and spoiling our beaches. The Government provided an extra \$50 million over three years in the 1999-2000 Budget to create the Living Cities Programme to address the problems of air quality, urban waterways, waste management, chemical collection, urban vegetation and coastal water quality. Combating urban air pollution is a priority: a national strategy to monitor and manage emissions will concentrate on such air toxics as dioxins, benzene and formaldehyde.

Considerable progress has been made. Chemical collections under the Chemwatch program began in April; a public information program generated substantial interest in the compressed natural gas refuelling element of the programme; the Urban Stormwater Initiative began in February and works will begin in July; and the Cleaner Water Initiative began in February. The Air Toxics programme also is well underway.

Natural Heritage Trust

In 2000-01 the Commonwealth Government will allocate more than \$360 million to community groups to achieve on-ground results in environmental protection and conservation through the Natural Heritage Trust. Trust funding will be \$1.5 billion over six years from 1996-97 to 2001-02. The Trust also has encouraged private sector involvement in environmental protection and sustainable natural resource management. In 1999-2000, every \$1,000 of Commonwealth funding generated additional resources in cash or kind worth \$7,000.

The mid-term review of the Trust confirmed that it raises community awareness and enables communities to take responsibility for environmental solutions. In 1999-2000 more than 67 per cent of one-stop-shop approvals were for community projects.

To provide better integration of Trust activities, from 2000-01 the Government will place increased emphasis on regional scale projects. The emphasis will be on implementing regional plans where there are well-developed strategic plans in place which focus on national or local priorities. This means that land, water, and biodiversity management problems will be addressed using an integrated regional approach.

For more information on the operation of the Trust, see the section on Natural Heritage Trust Progress later in this chapter and the Working with Community section in Chapter 3.

Australian Greenhouse Office

The Australian Greenhouse Office is the world's only national greenhouse-dedicated agency, established and funded by the Australian Government to help achieve Australia's commitments under the Kyoto protocol. The Government has provided almost \$1 billion over four years – the largest amount of funding per capita in the world.

Initiatives to reduce the rate of Australia's greenhouse gas emissions include:

- the \$400 million Greenhouse Gas Abatement Programme that will result in maximum emission reductions or sink enhancement;
- \$75 million support for conversions to compressed natural gas or liquid petroleum gas
 for commercial vehicles that have a gross vehicle mass equal to or over 3.5 tonnes,
 trains and ferries;
- \$31 million support for the use of photovoltaic systems on residential buildings and community-use buildings;
- \$26 million support for the development and commercialisation of renewable energy;
- an additional \$264 million support for the use of renewable energy for remote power generation;
- continuing the Greenhouse Challenge, currently involving some 449 companies and industry associations; and
- introducing legislation this year to ensure that a 9,500 gigawatt hours of Australia's electricity supply will be sourced from renewable energy by 2010, the equivalent of two new Snowy Mountains' hydro-electric schemes.

National Oceans Office

The Government has set another international precedent by establishing the National Oceans Office to implement Australia's Oceans Policy. The policy will protect the marine environment and promote the sustainable development of marine resources.

In December 1999, the Government established the National Oceans Office in Hobart, Tasmania, as an Executive Agency under the Australian Public Service Act 1999 and

allocated \$50 million over three years for implementing the first phase of Australia's Oceans Policy. The first Director was appointed in April 2000.

The centrepiece of the policy is the development of regional marine plans. The Government will establish an integrated planning process for the marine waters out to 200 nautical miles and the extended continental shelf beyond that.

The first regional marine plan will be for the south-east marine region, comprising waters off Victoria, Tasmania including Macquarie Island, eastern South Australia, and southern New South Wales. The area of this region is about 2 million square kilometres – the equivalent of around one-quarter of the continental landmass of Australia.

Senator Robert Hill, Minister for the Environment and Heritage, launched the south-east regional marine plan process at the National Oceans Forum in Hobart in April 2000.

As part of the plan, the National Oceans Office has funded high-resolution seabed mapping in the south-east marine region and adjacent areas. Some \$1.2 million will be spent to charter a marine geoscience vessel to undertake the survey work.

Building on seabed survey work, a major cooperative programme aims to develop rapid acoustic seabed habitat survey methods. The National Oceans Office is providing \$1.6 million of the total cost of some \$2.7 million.

World Heritage

The Government spends more than \$50 million each year to manage World Heritage properties. Much of it is for the management of the four World Heritage properties for which the Commonwealth has direct responsibility: the Great Barrier Reef, Kakadu and Uluru-Kata Tjuta national parks, and the Territory of Heard and McDonald Islands. A big part is used to supplement state funding so state-managed World Heritage properties meet the high standards required. During the past four years the Government has given more than \$61 million to the states for the management of World Heritage properties.

The funds have been directed to projects identified as priorities in each property's management plan, supported as priorities by the community and scientific advisory committees, that focus on practical outcomes. The Wet Tropics Cassowary Recovery Strategy (see the case study in the Government in Partnership Chapter) is a project that met all of these criteria and has contributed to excellent World Heritage management.

Indigenous Australians

The Environment and Heritage portfolio interacts with indigenous Australians across all its activities. Environment and heritage have several dimensions: country, culture, biodiversity and recognition of skills. Integrated management achieves social and economic benefits as well.

Particular initiatives are listed on the next page.

- The Indigenous Protected Areas Programme provides opportunities for indigenous people to help conserve areas that have high environmental values. By declaring their land an Indigenous Protected Area, indigenous landowners become partners with government and the community to protect and maintain their own cultural values associated with land management.
- Uluru-Kata Tjuta, Booderee and Kakadu national parks, which are jointly managed by the Commonwealth Government and traditional owners, are a demonstration of world's best practice in joint management of protected areas.
- The *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* allows the Commonwealth to make declarations of protection over significant areas and objects threatened by injury or desecration, at the request of indigenous people.
- The new *Environment Protection and Biodiversity Conservation Act 1999* recognises the importance of indigenous people in the conservation and use of biodiversity and the promotion of indigenous knowledge of biodiversity. An Indigenous Advisory Committee will advise the minister on the operation of the Act taking into account the significance of indigenous knowledge of land management, conservation and sustainable use of biodiversity.
- An Indigenous Career Development Recruitment and Training Strategy within the portfolio will enhance the skills and opportunities for indigenous employees.

Threatened and Migratory Species

Included in this Budget is provision to enhance protection for threatened species and communities, and migratory species. Additionally the Government is seeking the international protection of all albatross species. Measures to protect migratory waterbirds and their habitat along the East Asian-Australasian Flyway are a priority for 2000-01.

Implementation of the *Environment Protection and Biodiversity Conservation Act 1999* will strengthen the Commonwealth's capability to conserve the national environment. One significant measure concentrates on the protection of wetlands of international significance listed under the Ramsar Convention.

Water Reform

Reform of national management of water resources remains a priority. Government policy has been guided by the Council of Australian Governments' Water Reform Framework, a strategic framework for reform.

The Water Reform Framework has ensured environmental impacts are considered in water use decisions. Water allocations from overused rivers and aquifers have ceased. New dams are being assessed on their ecological sustainability. Water management plans that provide adequate environmental flows in surface and groundwater are being developed. These reforms combined with other initiatives within the Natural Heritage Trust are helping to reverse the widespread degradation of Australia's land and water assets.

Land Clearing

Through the Natural Heritage Trust Partnership Agreements the Government has worked with the states and territories to reduce clearing of native vegetation. States and territories have committed to better manage and protect native vegetation, including measures to retain and manage native vegetation, and controls on clearing.

The Australian and New Zealand Environment and Conservation Council endorsed the National Framework for the Management of Australia's Native Vegetation in December 1999 as a national strategy to manage and monitor native vegetation.

Philanthropy

The Government will continue to encourage involvement by private individuals and organisations in managing and conserving the environment.

Recent changes to taxation laws to encourage donations of land for environmental purposes include:

- allowing an income tax deduction in relation to gifts of property worth more than \$5,000, regardless of when or how the property was acquired;
- exempting bequests of property from capital gains tax; and
- allowing apportionment of deductions for gifts of property over five years.

These measures will encourage donations of land with significant conservation values, often land that people have cared for over many years but may not have been in a position to donate without a tax deduction. Allowing five-year apportionment is of particular significance to people who are not able to write off the donation of a large asset against their income in a single year.

BUDGET OVERVIEW

Funding for the Environment

Good environmental practice is embodied in all Commonwealth policies and programmes. This statement of the Commonwealth's environmental expenditure therefore describes the full suite of Commonwealth environmental programmes and activities, and identifies new measures in the 2000-01 Budget designed to achieve better environmental outcomes across all portfolios.

Financial information and descriptions of programmes present information currently available. Identification of environmental expenditure depends on the extent to which spending can be ascribed to environmental purposes, and this varies across programmes. Inevitably, some environmental expenditure cannot be accurately recorded.

Commonwealth environmental expenditure covered by the environmental programmes undertaken by the Environment and Heritage portfolio and the Agriculture, Fisheries and Forestry portfolio are shown in Table 2.1.

Figures in Table 2.1 for the Environment and Heritage portfolio present estimated expenditures for environmental outcomes on an accrual basis with outyear estimates in outturn prices. The figures include corporate resources, which have been allocated across outputs and outcomes.

Table 2.1: Environmental Expenditures Undertaken by the Environment and Heritage, and Agriculture, Fisheries and Forestry Portfolios

Description	1999-00	2000-01	2001-02	2002-03	2003-04
·	\$m	\$m	\$m	\$m	\$m
Environment and Heritage portfolio					
Outcome 1: Environment, especially aspects that are matters of national environmental significance, is protected and conserved ^(a)	461.6	714.1	711.5	465.3	440.7
Outcome 2: Australia benefits from meteorological and related science and services ^(b)	7.4	7.2	7.2	7.1	7.0
Outcome 3: Australia's interests in Antarctica are advanced	98.0	100.3	102.0	103.6	104.7
Agriculture, Fisheries and Forestry portfolio	202.7	182.1	141.5	76.1	16.6
	769.7	1003.7	962.2	652.1	569.0

⁽a) Funding of \$896 million from the *A New Tax System – Measures for a Better Environment* package is reflected in the above figures from 2000-01 to 2003-04.

⁽b) The Bureau of Meteorology figures relate to environmental expenses only and include a proportion of corporate resources.

New Measures

Measures announced since the 1999-2000 Budget and included in the 2000-01 Budget are shown in Table 2.2.

Table 2.2: New Measures

Title of Measure	2000-01	2001-02	2002-03	2003-04
	\$m	\$m	\$m	\$m
Product Stewardship Arrangements for Waste Oil				
Programme – transitional assistance ^(a)	15.0	15.0	15.0	15.0
Programme – stewardship benefits ^(b)	24.7	24.5	24.2	24.0
Establishment of a Regulator for the Mandatory Target for the Uptake of Renewable Energy in Power Supplies ^(c)	1.6	1.7	1.7	1.5
Interim Sydney Harbour Federation Trust	_	_	_	_
Greenhouse Gas Abatement Programme	100.0	100.0	100.0	100.0
Supporting Renewable Remote Power Generation	66.0	66.0	66.0	66.0
Supporting Photovoltaic Systems	4.0	6.0	9.0	12.0
Compressed Natural Gas and Liquid Petroleum Gas Vehicle Conversion	15.0	20.0	20.0	20.0
Diesel National Environment Protection Measure	10.0	10.0	10.0	10.0
Diesel and Alternative Fuels Grants Scheme	9.0	12.0	18.0	_
Supporting the Development and Commercialisation of Renewable Energy	4.0	5.0	7.0	10.0
National Biotechnology Strategy ^(c)	0.3	J.0 _	7.0	10.0
3, 3,		24.2	22.7	-
Adelaide Airport Noise Amelioration	10.3	24.2	23.7	5.5

⁻ denotes nil

Product Stewardship Arrangements for Waste Oil

As part of the development of product stewardship arrangements for waste oil, a levy will be applied to lubricating oils and similar products during 2000-01 to fund payments involved in sustainable recycling and reuse of waste oil. Revenue raised through the new levy on lubricating oils and similar products will be paid as an incentive to waste oil recyclers and reusers to support sustainable long-term arrangements for the management of waste oil in Australia.

The product stewardship arrangements for waste oil were announced in May 1999, as part of the *A New Tax System – Measures for a Better Environment* package. The Government has also committed \$60 million over four years for transitional assistance to facilitate the introduction of product stewardship.

⁽a) Transitional assistance for a stewardship system was appropriated through the *Appropriation* (Supplementary Measures) Act (No 2) 1999. The measure was identified in the 1999-2000 PAES.

⁽b) In 1999 the Government approved a stewardship system involving the collection of levy revenue (to be identified in the ATO budget statements) and associated benefit payments to recyclers (identified here). The measure will be included in the 2000-01 PBS and is budget neutral as stewardship benefits are fully offset by the levy revenue.

⁽c) These measures have been funded internally through reprioritisation.

Establishment of a Regulator for the Mandatory Target for the Uptake of Renewable Energy in Power Supplies

The Government has decided to establish a regulator as part of the Australian Greenhouse Office (AGO) to oversee the implementation and progress towards achieving the mandatory target of an additional 9,500 gigawatt hours of renewable energy used in power supplies by 2010, with enforceable interim targets. The mandatory targets will be achieved by the imposition of legally enforceable liabilities on wholesale purchasers of electricity to proportionately contribute towards supporting the purchase of this additional renewable energy.

The four-year cost of this measure will be \$6.5 million, with no net Budget impact. The AGO will fully absorb the costs for the first three years (\$5.0 million from 2000-01 to 2002-03), in addition to providing offsets (see above table) for the costs of the fourth year (\$1.5m in 2003-04) through savings generated from its budget during the first three years.

The Government agreed to the implementation of the mandatory target for the uptake of renewable energy in power supplies as a result of the Prime Minister's *Safeguarding the Future: Australia's Response to Climate Change* statement of November 1997.

Interim Sydney Harbour Federation Trust

The Government will allocate funding of \$6 million over two years, from existing funding, to the interim Sydney Harbour Federation Trust (the trust is an interim body, pending passage of enabling legislation establishing the trust). The funding will allow the trust to develop management plans for each site and ensure that essential maintenance and security of trust properties occurs, as well as providing limited public access. The properties include North Head, Georges Head, Middle Head, Woolwich Dock and Cockatoo Island.

Greenhouse Gas Abatement Programme

The Government will provide a further \$400 million over four years from 2000-01 to 2003-04, under *A New Tax System – Measures for a Better Environment*, through the Greenhouse Gas Abatement Programme to support measures, particularly in rural and regional areas, that assist Australia in meeting its obligations on climate change. The measure will support activities that are likely to result in substantial reductions in greenhouse emissions or substantial enhancement of carbon sinks, and are consistent with ecologically sustainable development. In making programme choices the Government also will take into account the potential for job creation, new technologies, innovative processes, export potential and the capacity of the programme to act as a catalyst for more non-government investment.

Supporting Renewable Remote Power Generation

The Government will provide up to \$264 million over four years from 2000-01 to 2003-04, under *A New Tax System – Measures for a Better Environment*, as rebates to support the replacement of diesel powered remote power generation with renewable energy. Funding will be made available through the Australian Greenhouse Office to states and territories to subsidise cash rebates up to 50 per cent of the capital value of renewable remote area

power supply systems. An estimated \$66 million is expected to be collected from excise on diesel for power generation in 2000.

Supporting Photovoltaic Systems

The Government will provide \$31 million over four years from 2000-01 to 2003-04, under *A New Tax System – Measures for a Better Environment*, to support the use of photovoltaics on residential and community use buildings. A cash rebate will be available where residences and community use buildings, such as schools and community halls, install a photovoltaic system for the conversion of sunlight into electricity. This measure will not cover solar thermal generation, such as solar hot water systems, because these systems will benefit from the Government's proposed 2 per cent renewables target programme.

Compressed Natural Gas and Liquid Petroleum Gas Vehicle Conversion

The Government will provide \$75 million in grants over four years from 2000-01 to 2003-04, under *A New Tax System – Measures for a Better Environment*, to implement an Alternative Fuels Conversion Programme. This programme supports the conversion of conventionally fuelled vehicles with a gross vehicle mass weight of at least 3.5 tonnes to either Compressed Natural Gas (CNG) or Liquid Petroleum Gas (LPG).

Diesel National Environment Protection Measure

The Government will provide \$40 million over four years from 2000-01 to 2003-04, under *A New Tax System – Measures for a Better Environment*, to develop a diesel National Environment Protection Measure (NEPM) and develop in-service diesel vehicle emission testing facilities. The NEPM will address the issue of emissions from all diesel vehicles currently in use in Australia (the in-service fleet), through the establishment of in-service emission standards. The possibility will be explored of extending the use of the testing facilities to an inspection and maintenance testing programme for petrol vehicles.

Diesel and Alternative Fuels Grants Scheme

The Government will provide \$39 million over the three years from 2000-01 to 2002-03, to maintain the current price relativities between diesel and alternative transport fuels by allowing those on-road transport operators who are eligible for the diesel fuel grant to also be eligible for alternative fuel grants. The retention of the existing price differential between diesel and alternative fuels will encourage wider use of alternative fuels, reduce greenhouse gas emissions and improve air quality. Eligible users of alternative fuels such as compressed natural gas, liquid petroleum gas and recycled waste oil, and renewable fuels such as ethanol and canola oil, will attract alternative fuel grants.

Supporting the Development and Commercialisation of Renewable Energy

The Government will provide \$26 million over four years from 2000-01 to 2003-04, under *A New Tax System – Measures for a Better Environment*, to boost the commercialisation of renewable energy. The additional funding will be integrated with the Renewable Energy Commercialisation Programme announced in the Prime Minister's *Safeguarding the Future: Australia's Response to Climate Change* statement of November 1997.

National Biotechnology Strategy

An environmental risk programme for genetically modified organisms is a component of the National Biotechnology Strategy. As part of the programme the Minister for the Environment and Heritage and the Minister for Health and Aged Care will collaborate with CSIRO on an initial project to improve the knowledge base and monitor risks in the field to address some of the most immediate environmental risk priorities.

Adelaide Airport Noise Amelioration

The Government will provide funding of \$60 million over four years to establish a new programme to reduce the impact of aircraft noise in areas around Adelaide Airport. Under the programme, owners of residences and public buildings in areas surrounding the Adelaide Airport subject to high levels of aircraft noise will be eligible to have their buildings insulated. This will help ensure that Adelaide Airport continues to maintain its important contribution to the development of the surrounding region.

Natural Heritage Trust Progress

The Government has committed \$1.5 billion to the Natural Heritage Trust over six years from 1996-97 to 2001-02. The investment has been made from the proceeds of the first and second tranche sales of 49 per cent of Telstra. The Trust fosters partnerships between communities, industry and all levels of government to achieve complementary environmental protection and sustainable natural resource management.

More than \$700 million has been approved for more than 6,400 Natural Heritage Trust and related projects to improve biodiversity conservation and sustainable agriculture. Most projects have been in rural and regional Australia.

Table 2.3: Natural Heritage Trust Funding(a)

Description	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Vegetation							
Bushcare	3.7	22.2	50.1	99.6	87.1	83.8	346.5
Farm Forestry Programme	_	2.8	6.5	14.1	14.6	9.2	47.2
Inland Waters							
Murray-Darling Basin 2001	3.8	27.5	34.9	51.6	45.2	32.6	195.6
National Rivercare							
Programme	-	5.7	14.3	24.6	23.5	14.8	82.9
Riverworks Tasmania	1.7	2.6	0.3	4.2	-	_	8.8
National River Health							
Programme	0.1	1.6	1.7	6.2	4.5	1.7	15.8
Waterwatch	0.2	2.2	2.4	3.0	2.6	2.6	13.0
National Wetlands							
Programme	0.5	1.6	1.6	5.8	3.8	3.8	17.1
Biodiversity							
National Reserve System	0.4	2.9	11.2	30.5	20.0	20.0	85.0
Endangered Species							
Programme	2.0	2.1	6.9	5.1	5.5	5.4	27.0

Table 2.3: Natural Heritage Trust Funding (continued)

Description	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Land Resources							
National Land and Water							
Resources Audit	1.3	2.4	11.8	12.0	11.5	5.4	44.4
National Feral Animal							
Control Programme	3.7	3.1	1.6	4.9	3.0	2.6	18.9
National Weeds Programme	2.1	1.3	1.6	12.8	5.9	4.8	28.5
National Landcare Programme (including							
landcare tax measures)	10.2	30.1	49.0	81.4	77.5	78.5	326.7
FarmBis: Advanced Property Management Planning	0.4	0.3	2.7	6.7	4.9	_	15.0
Coasts and Oceans							
Oceans Policy	-	-	-	4.1	7.4	8.5	20.0
Coasts and Clean Seas	_	8.6	20.3	36.3	27.2	24.4	116.8
Fisheries Action Programme	_	1.9	2.2	3.8	2.7	2.1	12.7
Environment Protection							
Waste Management Awareness Programme	0.2	0.6	0.7	2.0	1.3	1.1	6.0
Atmosphere							
Air Pollution in Major Cities	1.3	1.5	2.4	5.1	4.1	4.1	18.5
Australian Heritage							
World Heritage Area							
Management & Upkeep	4.7	10.7	10.0	9.4	8.9	8.9	52.5
	36.3	131.4	232.1(b)	423.1	361.3	314.7	1499.0

⁻ denotes nil

Expenditure through the Trust from 2000-01 will emphasise regional scale projects. Such projects, which protect and better manage land, water and biodiversity strategically across a region or catchment, require careful planning of different land uses, industries and communities. Where regions or catchments have well-developed plans or strategies that address national and local priorities, the Trust will support implementation of those strategies, devolving responsibility to regional bodies.

The mid-term review of the Trust's activities confirmed its outstanding contribution to the conservation, sustainable use and repair of Australia's environment. The review found the Trust had raised awareness of environmental issues and enabled communities to take responsibility for environmental solutions. More than 300,000 Australians have participated in Natural Heritage Trust activities. In 1999-2000, more than 67 per cent of one-stop-shop programme approvals (representing the majority of the Trust's programmes including Landcare and Bushcare) were for community projects.

The Natural Heritage Trust generates additional contributions from community groups and their cooperative partners, including state agencies. In 1999-2000, for every \$1,000

⁽a) This table shows approved funding from the Natural Heritage Trust Ministerial Board, and excludes corporate overheads. Due to rounding some columns and rows may not add exactly to totals. The Natural Heritage Trust estimates may vary in the future within overall totals. New measures are expressed in outturn prices and other expenditure and revenue figures are expressed in 1999-2000 prices.

⁽b) Includes \$39.8 million carryover from 1997-98.

approved by the Commonwealth for one-stop-shop Natural Heritage Trust projects, resources and in-kind contributions amounted to about \$7,000.

Access to and responsibility for such scarce resources as fresh water are important issues. The Trust has enabled cooperative frameworks that will serve Australia well in the future.

For example, the Murray-Darling 2001 initiative, supported with \$196 million from the Trust, has mobilised community efforts and increased the understanding among landholders of the problems Australia faces. Water catchments are not defined by state boundaries. The Murray-Darling Basin Commission has been recognised internationally as an example of world's best practice in securing cooperation between different state jurisdictions. The cooperative approach illustrated by the Murray-Darling management provides a first step towards attaining results in achieving effective and equitable water caps, ensuring necessary environmental flows and establishing coordinated salinity strategies.

The lessons learned from the first three years of the Trust will inform a new national natural resource management strategy that will address issues such as land and coastal management, soil degradation, water resources, and loss of biodiversity.

Chapter 3: Government in Partnership

Australia begins its second century as a nation with many environmental assets. Among the most important of them are Australians themselves who are acutely conscious of their environment with its unique flora and fauna.

Until recently, protecting Australia's environment and managing its natural resources was the preserve of governments, principally state governments. The Commonwealth Government was an occasional participant, and local government was not important. Environmental regulations set minimum standards to be met by industry and the community. There was little incentive to achieve higher standards.

Now the Commonwealth Government recognises that leadership and the best ideas often come from partnerships with the private sector, local communities, industry and lobby groups, and other levels of government.

The Prime Minister, in his 2000 Federation Address, stressed the importance of meeting social policy challenges by strengthening 'a social coalition built on a partnership of individuals, families, business, government, and welfare and charitable organisations'. This concept is relevant to meeting environmental challenges and achieving sustainable development.

The combined efforts of governments at all levels, corporations, community groups and individuals are required to protect Australia's environment and sustainably manage the nation's natural resources. Government should enhance people's participation in environmental policy development and promote a framework for partnership in environmental activities.

The Government accepts the need to provide a regulatory 'safety net' to ensure the conservation and sustainable use of natural resources. The *Environment Protection and Biodiversity Conservation Act 1999*, which enters into force in July 2000, offers a regulatory safety net for Australia's environment which is world's best practice.

The Government has reformed its environment protection laws to reduce duplication between levels of government and to clarify the role for the Commonwealth in matters of national environmental significance. These reforms reduce environmental regulation and allow government to help industry and the community to apply sustainable practices.

The Government has a wide range of partnership arrangements in place focussing on many environmental challenges. Just a few examples are given in this statement – working with communities through the Natural Heritage Trust, working with industry, managing Australia's World Heritage areas, and working in the Antarctic environment – to illustrate the breadth of activities and partnerships.

WORKING WITH THE COMMUNITY

The Natural Heritage Trust has allowed the strong commitment to sustainable natural resource management to translate into getting out and doing the things that need to be done 'on the ground'.

The Government committed \$1.5 billion to the Natural Heritage Trust – the largest financial commitment to environmental action by any Australian federal Government in history. More than \$700 million has been approved for over 6,400 Natural Heritage Trust projects.

More than 67 per cent of one-stop-shop programme approvals (representing the majority of the Trust's programmes including Landcare and Bushcare) were awarded to community projects in 1999-2000.

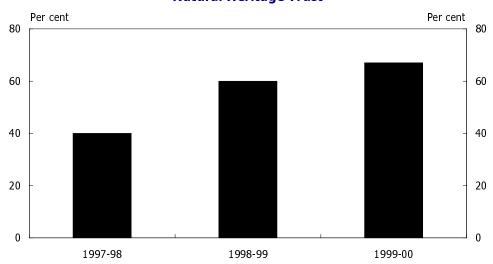


Chart 1: Percentage of Approved Funding Going to Community Under the Natural Heritage Trust

Operation of the Natural Heritage Trust combines the knowledge and resources of farmers, indigenous people, scientists, the community, environmental groups and governments and encourages them to work together.

Most projects funded by the Natural Heritage Trust are cooperative efforts between the community, governments and experts. Often three or more different organisations and groups cooperate on a project.

The success of the Trust is best described by the groups who undertake the projects. Five case studies are outlined below, illustrating the cooperative partnerships the Government is involved in. They describe some of the environmental challenges and some of the innovative methods to meet those challenges.

Hindmarsh Biolink Project, Western Victoria

The Hindmarsh Biolink Project in the wheat fields of western Victoria's Wimmera plains, which have been over-cleared in the past, is one of many Bushcare projects.

Biolink consists of four linked projects funded through the Natural Heritage Trust to a total of \$392,500 so far. The project aims to re-establish links between the Big and Little Deserts through a series of vegetation corridors along broad road reserves and through farmland.

First year achievements of the project include 169 hectares of newly established vegetation, 55 hectares of vegetation on private property protected, 76,000 seedlings planted by machine or hand, and 222 kilometres of direct seeding lines completed.

The mayor of the local Shire of Hindmarsh, Councillor Daryl Argyle, has been a driving force behind the project. Councillor Argyle has brought the partners together, negotiated for additional state funding and made Biolink the symbol of Hindmarsh Shire's new direction. Partners in the project include the Shire, Greening Australia Victoria, wheat farmers, local sponsors, city volunteers, state governments and the Commonwealth Government.

Although the project area is three hours from Melbourne, a planting weekend in August 1998 attracted so many volunteers from Melbourne and beyond that there was nearly a shortage of plants. Over 1,000 visitors came, camped and helped with the project.

The project is now in its second year and has achieved significant results in terms of large areas direct seeded and planted. The project is working on the scale of annually achieving rates of 80,000 trees, shrubs and understorey seedlings planted, several hundred kilometres of direct seeding lines, and about 60 kilometres fenced. The goal is to plant 220,000 seedlings over an area of 425 hectares, and to protect 3,850 hectares of existing vegetation using 240 kilometres of fencing.

Some of Victoria's rarest eucalyptus species have been identified in the area as a result of this project. Some are known from just a few sites and are still the subject of taxonomic studies. With so little natural vegetation remaining on the Wimmera plains, this project is of special importance.

Farm Planning – Helping Profits, Helping the Environment

Bruce Archer of 'Chester' near Westwood in northern Tasmania is a strong supporter of whole farm planning. With his wife, Katrina, and 20 other members of landcare groups, he participated in a whole farm planning course.

Bruce and Katrina had been active in landcare for some time, as founding members of the Lower Meander Valley Landcare Group in 1990 and through the introduction of sustainable farming practices on their own property.

'The planning course we did through the landcare group really got us motivated,' Bruce said.

'It crystallised our thinking and meant we could set short- and long-term goals. Setting two-, three- and five-year goals helps you look back and see how you're going. Our group was the first in our area to do the course but now everyone's done it. I think farmers everywhere should go through the exercise.'

Whole farm planning is supported by the Natural Heritage Trust through the National Landcare Programme as a way of providing farmers with the skills to take control of their future, to plan for change, and to better manage the economic, social and environmental risks associated with farming. Over 12,000 participants attended 880 group workshop programmes across Australia during 1998-99.

Bruce has achieved the main objectives of his five-year plan. The plan included introducing direct drilling to minimise tillage and to reduce soil structure decline, becoming self-sufficient in water storage, introducing a 'no fallow' system in summer to reduce erosion and to alleviate soil damage, introducing time-controlled grazing to better utilise pasture, using fertilisers more efficiently, and incorporating farm forestry for environmental benefit and financial diversification. The farm plan links in with the Lower Meander Landcare Group's Rivercare plan, also supported by the Trust.

Bruce and Katrina have placed an emphasis on establishing sustainable production regimes that harmonise with natural systems.

The environment has been a big winner as a result of the farm plan. With funding from the Natural Heritage Trust the Archers have removed willows along the Meander River and have fenced off 2.5 kilometres of riverside vegetation. They aim to fence a further two kilometres of riverbank to prevent erosion, encourage natural revegetation and improve water quality.

'Our aim is to be as sustainable as possible in as many areas as achievable,' Bruce said.

Bruce Archer won the 1999 National Landcare Programme Tasmania Individual Landcarer Award and the Cotton Australia Tasmania Primary Producer Award.

Bird Watchers Undertake Survey

The Natural Heritage Trust has supported 20,000 bird surveys by providing Birds Australia with \$1.2 million to catalogue Australia's 700-plus bird species and produce a new Bird Atlas of Australia by 2001.

Birds Australia Project Organiser, Dr Geoff Barrett, said the organisation had been overwhelmed by the goodwill of people around the country who volunteered to take part in the survey.

'More than 300,000 birds have been sighted by the volunteer bird watchers, which has been a tremendous help to our project,' Dr Barrett said.

Dr Barrett said that volunteers have helped to establish a foundation set of sites in which birds will be surveyed each season and compared with the local habitat conditions and management history.

'We're starting to get good samples of a range of different management histories of these sites and this helps us to make landscapes more attractive to birds,' Dr Barrett said.

Many of the sites have been regenerated by tree-planting and habitat recovery programmes in recent years. Documenting the histories of the sites and their ability to once again attract bird populations is a significant part of the four-year study.

The new bird atlas will provide a valuable means for measuring changes to the status and distribution of bird species across the whole of Australia from a known benchmark. This information is providing a valuable framework for evaluating the revegetation activities funded through the Natural Heritage Trust and in time may provide a useful monitoring tool of biodiversity values.

Saving Loggerhead Turtles, Western Australia

Saving the loggerhead turtles at Coral Bay is a good example of Coastcare's protection of coastal and marine species.

Supported by the Coral Bay Progress Association and headed by 'Turtle Man' Peter Mack, this project is designed to protect loggerhead turtle hatchlings from feral foxes and four wheel drive traffic.

Loggerhead turtles regularly nest along the beaches of Bateman Bay, near Coral Bay, in Western Australia. Unfortunately, feral foxes frequent the area and are a threat to loggerhead turtles.

'The foxes dig up and eat the turtle eggs and prey on hatchlings as they emerge from the sand,' says Peter.

'Four wheel drives are another threat because the tyre grooves left behind can create trenches that the hatchlings fall into, preventing them from reaching the sea.'

The group's volunteers identify nests the morning after the turtles have laid their eggs at night. They protect the nests with stout branches, cages and signs, and monitor them to stop fox predation.

'Once the hatchlings are ready to leave their nests, we help them reach the water safely,' says Peter. 'Hundreds of people watch them over the course of the hatching season.

Their presence actually protects the hatchlings because its scares away the foxes and seagulls.

'By stopping the foxes digging up the nests, several thousand extra baby loggerhead turtles reach the sea each year. But it will be another 30 years before we expect to see an increase in the number of adult breeding turtles.'

Outstanding New National Park for South Australia

A spectacular addition to South Australia's national parks system was announced in December 1999.

The Gawler Ranges National Park, 350 kilometres north-west of Adelaide, has been created through the \$1 million purchase of Paney Station in the southern Gawler Ranges. The Commonwealth provided up to \$822,000 under the Natural Heritage Trust funded National Reserve System Program. The National Parks Foundation of South Australia contributed \$50,000 towards the project.

The 120,000 hectare reserve was the first new national park in South Australia in eight years and will join the Flinders and Gammon Ranges as major conservation drawcards. It is a dramatic landscape of red volcanic hills, covered with yellow spinifex contrasting with grey tones of blue bush and saltbush, in broad sweeping valleys crossed by tree-lined watercourses.

The new Gawler Ranges National Park will ensure the conservation of rare blue bush and saltbush communities. It is home to at least 21 rare and threatened species including the yellow-footed rock-wallaby, southern hairy-nosed wombat, central long-eared bat, sandhill dunnart, malleefowl, pink cockatoo, crimson mallee, honey myrtle, mallee box and woolly spinifex.

The area is a transition zone between the drier pastoral regions to the north and the wetter arable districts to the south. It is a mixing area of western and eastern species, and arid and temperate species, so there is high biodiversity in the plants (210 species) and birds (120 species).

The park contains some of the oldest pastoral heritage sites in South Australia, particularly Old Paney Station, the site of the first police camp in the area, which was established in 1864.

WORKING WITH INDUSTRY

In addition to developing community partnerships to achieve effective environmental outcomes, the Government is encouraging and helping industry to effect positive environmental change.

The Government is working with industry to move 'beyond compliance' – getting ahead of regulation and moving towards environmental best practice, cleaner production and clean technology. Many industries are developing codes of conduct that outline reasonable steps for preventing or minimising environmental harm caused by an activity, often aiming to achieve a higher standard than required by regulations.

Australian industry has made significant improvements in its environmental performance.

To be strong, Australia's economy must achieve economic growth in a way that is environmentally sustainable. The Government is working with industry to ensure that growth is achieved with minimal environmental costs.

The achievement of sustainable development requires a concerted effort from all sectors. In its partnerships with industry the Government has developed a Business of Sustainable Development Strategy. This strategy will accelerate the move of business and industry towards sustainable development. This year, the Government will spend \$7.6 million to improve eco-efficiency and implement environmental solutions.

The Government will develop closer working relationships with industry to encourage it to go beyond compliance. Activities will include more consistent regulations, economic instruments to encourage eco-efficiency, and collaborating with the finance, accounting and legal sectors. The Government also will lead by example and will 'green' its own operations.

In working with industry, the Government will provide tools and resources for businesses to implement environmental improvements. Businesses will be encouraged to pursue sustainable development and the level of environmental information and awareness will be increased throughout the business sector. The aim is to establish environmental performance as core business, integrated with other performance management systems.

Sustainable development requires the expertise and technology to manage and provide solutions. Mainstream business already has developed some innovative approaches to environment protection and these management systems, best practice approaches, treatment processes and equipment form the basis of an emerging environment business sector.

The Government will work with industry to identify the capabilities in environment protection and to facilitate the delivery of best practice environmental solutions. The Government also will build capacity for environment initiatives, here and overseas, and will help market Australian capabilities.

The Government is encouraging business to be environmentally accountable to its shareholders and the public. The Government recently launched the National Pollutant Inventory, a public database that tracks certain pollutants being released to the

environment by major industry emitters and sources in particular locations. The Government also encourages public environmental reporting.

Public Environmental Reporting

Public environmental reporting is a process whereby an organisation voluntarily provides public information on its environmental performance and achievements as well as its contribution to sustainability. It generally involves collecting information on the impacts of the organisation on the environment, and its performance in managing those impacts. Public environmental reports include information on environmental policies; consumption of water, energy and raw materials; waste and emissions of greenhouse gases; regulation compliance; and details of community consultation.

The Government has provided \$240,000 to fund environmental reporting extension officers to work with three key industry and business groups – the Business Council of Australia, the Australian Chamber of Commerce and Industry, and the Australian Industry Group. These organisations are also putting resources into the project. Over the next 12 months the officers will communicate with the business members of these organisations to provide them with effective and practical ways to develop public environmental reports.

A Framework for Public Environmental Reporting – An Australian Approach has been developed and launched. This document outlines reasons for reporting, provides a guide on how to go about developing a public environmental report and gives suggestions on issues to be reported. It will greatly assist the extension officers to promote the concept to business organisations.

Dr John Burgess, the Vice President of Safety, Environment and Technology at BHP, has acknowledged the close relationship between the environment and community.

'Good social and environmental management can be entirely consistent with achieving real economic and business benefits,' he was reported as saying. 'A number of projects in recent years have delivered substantial greenhouse benefits as well as being sound investments in their own right.'

Information about public environmental reporting can be found at: http://www.environment.gov.au/epg/environet/eecp/tools3.html

Australia has been at the forefront of programmes encouraging cleaner production and waste reduction. We are now among the world leaders in embracing the new concept of eco-efficiency. In simple terms, eco-efficiency means 'doing more with less' – using environmental resources more efficiently in economic processes.

WasteWise

WasteWise is a partnership with the construction industry to minimise waste in the building and construction sector.

Industry groups have signed voluntary agreements with the Government to assess and reduce their construction waste going to landfill.

WasteWise reporting has highlighted many successes by industry in reducing construction and demolition waste, for example:

John Holland Group

The John Holland Group managed to recycle approximately 11,000 tonnes (40,000m³) of waste material, which represented 86.8 per cent of all waste produced throughout its national operations.

Project Coordination (Australia)

Project Coordination was able to recycle approximately 240 tonnes of waste material, which represented 68 per cent of all waste produced throughout its Canberra operations.

Australian Institute of Building

The Australian Institute of Building published a corporate statement of commitment to waste reduction and subsequently developed a Waste Minimisation Code of Practice for adoption by members of the Institute. The Code of Practice commits participating members to developing and promoting waste management best practice.

Housing Industry Association

The Housing Industry Association has published a Waste Management Guide for Residential Building as a contribution to WasteWise and is embarking on a national seminar series to educate members about waste management and broader environmental issues.

Managing Waste Oil

Each year about 500 million litres of oils and lubricants are sold in the Australian market. Only about one-third of this amount is being properly recycled or reused. While much of the 'missing' oil may be consumed and not be recoverable, stockpiled waste oil and waste oil in landfills is potentially a major environmental risk.

The Government is increasing oil recycling through the use of 'product stewardship' – the concept that producers and users of a product share responsibility for it throughout its life. After extensive industry and stakeholder consultation, a model of product stewardship was developed based on the proper disposal or reuse of the waste oil being shared between producers and consumers. Financial modelling has shown that product stewardship increases the value of waste oil, encouraging appropriate recycling. Funds to pay the benefits are largely raised from an excise-style levy on oils entering the domestic market. This arrangement is based on the 'user pays' principle – the users of the product bear some of the costs of recycling and proper disposal.

The new arrangements will begin this year. Existing state and territory regulations in respect of waste oil are not affected by product stewardship arrangements. It is a basic condition of receiving product stewardship benefits that a recycler is acting in accordance with relevant state or territory legislation.

The waste oil industry is dynamic and highly competitive. Recognising this, the Government is committed to flexible arrangements to accommodate the changes that will occur over the next four years, and has set aside \$60 million in transitional funds to help in this process.

Australia's EnviroNET

Australia has a strong and growing environment business sector. This sector increases the capacity of individuals, government, and industry to address environmental problems. The Government promotes this sector through Australia's EnviroNET database.

Australia's EnviroNET is the premier national and international Internet gateway to Australia's environment business sector. It contains information on Australia's environment business capabilities, pollution control, research and development, and tertiary education courses. It provides an electronic platform for the dissemination of Australian solutions to environmental protection problems. Approximately 30,000 people access the database every month.

With a series of pathways and links, Australia's EnviroNET allows users to access information about leading environmental technology and environmental management solutions.

EnviroNET also helps develop environmental technology. It provides access to information on Australia's research and development capacities, details environment-related courses at Australian universities, colleges and training institutions, and outlines funding opportunities, both domestic and international, available to Australia's environment business sector.

Those pursuing improved environmental performance can access both suppliers of Australian environmental products and services, and information on cleaner production and eco-efficiency approaches, systems and services.

Australia's EnviroNET also contains details for Australian business and industry groups, and information on Australian community initiatives. It has links to Commonwealth Government, state, territory and local government web sites.

Sydney 2000 Olympic and Paralympic Games: Green Games-Green Business

Australia is hosting the Sydney 2000 Olympic and Paralympic Games in September/October this year. The Government is committed to making the Sydney Games the 'greenest' in history.

Environment Australia is using the unique opportunity provided by the Olympics to work with the environment management industry of Australia, the Olympic Coordination Authority, Sydney Organising Committee for the Olympic Games (SOCOG), and the Olympic Roads and Transport Authority to showcase Australia's innovative environmental technologies and capabilities to the Australian public and overseas visitors.

Through its partnership in Business Club Australia, an Austrade initiative, Environment Australia will showcase Australian environmental technologies and display a range of industry promotion products. Environment Australia will also support the SOCOG Environment Pavilion which will highlight to visitors the environmental technologies and partnerships that enabled delivery of the world's first truly 'green games'.

A complementary initiative is the development of an environment industry promotional package that includes publications on Australia's environmental achievements at the Sydney 2000 Olympic and Paralympic Games, Australia's leading edge environmental technologies and Australian sustainable mining technologies.

National Fuel Standards

Motor vehicles are significant contributors to air pollution and greenhouse gas emissions.

Improvements in fuel quality and vehicle technology are two of the most effective strategies for reducing pollutant emissions from motor vehicles. The Government has committed to improve the fuel economy of vehicles, to encourage alternative fuels, to move to international emission standards and to phase out leaded petrol.

Leaded petrol will be phased out nationally by 1 January 2002.

The Government, industry and other key stakeholders are developing new fuel specifications for petrol and diesel that will reduce greenhouse gas emissions and air pollutants from road transport. New fuel standards will also enable the adoption of improved vehicle technologies.

A New Tax System – Measures for a Better Environment outlines commitments to reduce the sulfur content of diesel fuel to 500 parts per million (ppm) in 2002 and 50ppm in 2006. It also introduces more stringent vehicle emission standards in line with best practice international standards.

A recent study of diesel vehicles emissions estimated that the implementation of government initiatives on vehicle emissions and fuel quality will reduce particles emissions by up to 75 per cent, and oxides of nitrogen, carbon monoxide and hydrocarbons by more than 50 per cent in urban areas.

New national fuel standards for petrol and diesel will be legislated by the end of 2000.

The refining industry's vision, as stated in its action agenda, is that 'Australia will have a strong, efficient refining industry that is environmentally responsible'.

WORKING IN ANTARCTICA

The Government's Australian Antarctic Division conducts research with Australian and international scientists to better understand environmental processes in Antarctica.

The Government, through the Australian Antarctic Division, works closely with other countries, industry, and the scientific community to protect one of the world's last frontiers. Australia was one of the first countries to sign the Antarctic Treaty's environmental protocol that provides a broad structure for protecting the environment south of latitude 60°S.

Australia's environmental responsibilities cover sites in the 6 million square kilometre Australian Antarctic Territory, thousands of kilometres of Antarctic coast, a vast segment of the Southern Ocean, the subantarctic Territory of Heard and McDonald Islands, and operations in Tasmania.

Projects in Antarctica are diverse such as protecting Australian fishing resources, cleaning up disused sites, and undertaking research to understand environmental processes. These activities are performed under some of the harshest climatic conditions on earth making the environmental problems even more difficult to remedy. Recent successes include reducing fuel usage in Antarctic stations, as shown in Chart 2.

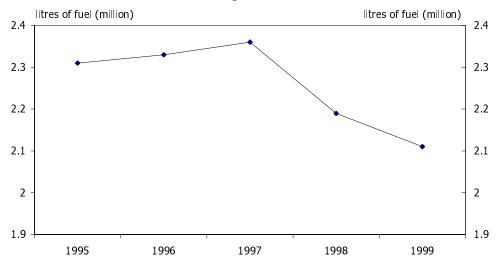


Chart 2: Fuel Usage in Antarctic Stations

Saving the Patagonian Toothfish

The Australian Antarctic Division (AAD) is one of a number of Government agencies that have worked together to lead the fight to reduce illegal and unregulated fishing that is threatening Patagonian toothfish stocks around Heard Island and other subantarctic islands.

Some toothfish stocks are close to commercial extinction because poachers are taking substantially more than is sustainable.

The Director of AAD, Dr Tony Press. said that the Australian Government has played a leading role in the international fight to protect the Patagonian toothfish from pirates.

'Denying market access for illegally caught fish is the most cost-effective way to address this problem, but Australia will continue to take a range of measures to combat pirate fishers, including patrols in the treacherous Southern Ocean to apprehend any foreign vessels fishing illegally,' said Dr Press.

A new international agreement, the Catch Documentation Scheme for Toothfish, negotiated by Australia at the Commission for the Conservation of Antarctic Marine Living Resources will help to combat illegal, unreported and unregulated fishing. The agreement requires fishing vessel masters and their flag states to declare where and how toothfish were caught. Signatories to the agreement represent 90 per cent of global markets for toothfish. They have all agreed not to import toothfish caught outside the scheme.

Antarctic Clean-up

Australia's abandoned sites at Wilkes, near Casey, and Atlas Cove on Heard Island are being cleaned up. In 2000-01 the Commonwealth will spend \$95,000 on the Wilkes clean-up programme and \$80,000 at Atlas Cove.

Mr Bruce Hull, the Australian Antarctic Division's Environment Officer, who is responsible for the clean-up programme, said that Antarctica's harsh climate and short summer operating seasons increase the costs of cleaning up Australia's abandoned sites.

In the early days, when resupply ships were small, most nations operating in Antarctica disposed of their wastes in tips on the outskirts of their stations. Australia now has a legacy of disused sites, ranging from small field campsites to depots, tip sites, and in some cases abandoned stations that must be cleaned up under the Antarctic Treaty's environmental protocol.

'At Wilkes there are several tip sites adjacent to Newcomb Bay and currently we are concentrating on the paths of pollutants released during the clean-up and the effects of these on sea creatures,' Mr Hull said.

The station at Atlas Cove on Heard Island is considerably less contaminated than Wilkes, but the logistical difficulties of collecting, containing, and removing the wastes are comparable.

The project includes assessing site contamination, surveying the station's heritage values, and cleaning up windblown debris.

'These sites are of considerable historical significance. The station at Atlas Cove operated from 1948 to 1954. Our work in cleaning up our left overs will be used as a model for those other countries in Antarctica faced with similar problems,' Mr Hull said.

Antarctica in Mid-winter

Australian scientists have endured temperatures as low as -29° C within the winter pack ice to undertake the first ever midwinter investigation of areas of anomalous open water and thin ice (called polynyas) in Antarctic regions.

With wind speeds averaging 25 knots throughout the six-week study it was no picnic for the 62 dedicated scientists aboard the icebreaker *RSV Aurora Australis*. But their results justified the effort.

Head scientist Dr Ian Allison said that the processes that occur in these small but dynamic regions are important in determining global climate change.

Oceanographers made detailed measurements of the changes over time of the salinity, temperature, dissolved oxygen and currents of the total water column. Glaciologists determined the thickness and growth rate of the ice, and deployed 21 satellite-tracked buoys to record the rate and pattern of ice transport out of the polynya. Meteorological data was obtained and biologists trawled to sample krill and zooplankton populations, and counted seabirds, whales and seals.

'Coastal polynyas are important components in the formation of Antarctic bottom water which controls the deep ocean circulation, as 'ice-factories' for the total pack ice zone, as areas of intense heat loss from the ocean to the cold polar atmosphere, and as potential biological oases during winter,' Dr Allison said.

The study was conducted in the Mertz Glacier Polynya, centred near 66.5°S, 145°E, one of the largest persistent winter polynyas on the Antarctic coast.

Pack-ice Seal Survey

Australian scientists are counting the number of crabeater seals in Antarctica in one of the largest wildlife surveys ever undertaken. The crabeater seal is the dominant predator of krill, a major food source.

The survey has taken five years of preparation and involves five other countries (Argentina, Germany, Norway, the USA and the UK). The Australian survey team, led by Dr Colin Southwell, covered 8,000km of survey track by helicopter and 2,000km by ship in an area of more than 1 million square kilometres.

Estimates of the crabeater seal population vary from 15-70 million. To make a more accurate estimate of their numbers requires a survey of the huge expanse of the pack-ice, which even at the late summer minimum is over 4 million square kilometres,' Dr Southwell said.

WORKING IN WORLD HERITAGE AREAS

For more than 25 years, Australia has been one of the strongest supporters of the World Heritage Convention. Australia has 13 sites included on the World Heritage List for their outstanding universal natural and cultural values; more natural World Heritage properties than any other nation in the world. Australia's expertise and commitment to World Heritage is recognised by other countries who ask Australia to assist with the management of their World Heritage places.

Australia was the first country in the world to enact domestic legislation implementing the World Heritage Convention. The *Environment Protection and Biodiversity Conservation Act* 1999, which enters into force in July 2000, will strengthen protection for Australia's World Heritage properties.

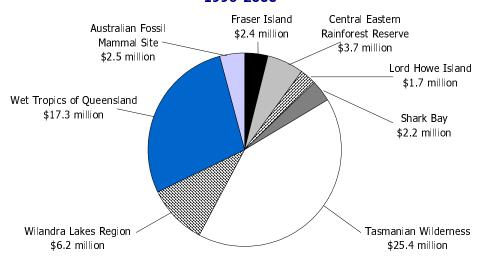
The new Act regulates any action likely to have a significant impact on the World Heritage values of a World Heritage property. It ensures such actions are subject to a rigorous assessment and approval process.

Complementing the Act are strong partnerships with state governments and the community to ensure that world-class management is delivered on the ground in each World Heritage property. Management is guided by management plans approved by ministers, with strong input from community advisory committees and scientific advisory committees.

The Government has established strong partnerships with indigenous people in the management of World Heritage properties. Traditional owners are experts in land management. In Kakadu and Uluru-Kata Tjuta national parks the traditional owners have the majority of seats on the boards of management that determine management policy and draw up the plans of management.

The Commonwealth provides funding of more than \$50 million each year for the management of Australia's 13 World Heritage properties. In the past four years the Government has provided more than \$61 million to the states for more than 300 management projects in the World Heritage properties.

Chart 3: Commonwealth Funding to the States for World Heritage Management 1996-2000^(a)



(a) Figures rounded to the nearest \$100,000.

Wet Tropics Cassowary Recovery Strategy – a World Heritage Partnership with the Community

The endangered southern cassowary is a large, spectacular, tropical rainforest bird – the icon of the Wet Tropics of Queensland World Heritage property.

The total number of cassowaries in the rainforests of the Wet Tropics has been estimated at between 1,100 and 1,500 and declining.

With seed Commonwealth funding of \$290,000 Environment Australia and the Wet Tropics Management Authority set up the Cassowary Advisory Group with representatives from local cassowary conservation groups, landholders, local government, on-ground conservation officers, and scientific advisers.

Chairman, George Mansford, the driving force behind the Cassowary Advisory Group, said that the energy, commitment and creativity of the group has produced a significant multiplier effect by drawing in industry, community and local government support.

The original Commonwealth cash funding has multiplied to a budget of more than \$445,000 and the non-cash contributions by cassowary conservation groups, landowners, local and state governments, wildlife parks and universities have multiplied the effects even further.

In little more than two years, we have identified individual birds at risk and their range, helped design traffic controls to reduce the chance of birds being struck by cars, arranged dog management projects, coordinated cassowary corridors by planting cassowary food plants, installed fencing to stop birds crossing the road in high risk areas, supported research projects such as sedation trials and DNA analysis, and dramatically increased community awareness.

'The group demonstrates how members of the community can directly contribute to the protection of the World Heritage values that make the Wet Tropics so universally outstanding,' George Mansford said.

International Partnerships – the Asia-Pacific Focal Point

The Minister for the Environment and Heritage announced the establishment of the Asia-Pacific Focal Point (APFP) at the World Heritage Bureau and Committee meetings in Paris in July 1999.

The aims of the APFP are to help Asia-Pacific countries meet their obligations under the World Heritage Convention, and help ensure best practice management of World Heritage sites. Pacific states welcomed the initiative at a World Heritage meeting in Vanuatu in August 1999.

Already the APFP has been involved in placing three Australian professional officers in countries in the region through the Australian Youth Ambassadors for Development Programme. The three officers will help develop a World Heritage nomination for Levuka (Fiji); work in Apia (Samoa) in the UNESCO Pacific office to develop management plans for the Solomon Islands World Heritage site at East Rennell; and assist Vietnam with management planning for the Ha Long Bay World Heritage Area.

The APFP is now working with Kiribati to help them to adopt the World Heritage Convention, and with Papua New Guinea to help develop their nominations of Kuk, an ancient agricultural site in the central highlands, and Bobongara, an archaeological site on the Huon Peninsula which is the location of the oldest human habitation site in the Pacific outside Australia.

Appendixes: Summary of Environmental Activities

SCOPE AND STYLE CONVENTIONS

The Appendixes aim to show all expenditure directly attributable to environmental objectives. However, expenditure on environmental objectives is not always readily identifiable, for example where it is only one part of a larger project and not able to be separately identified. Consequently, the figures provided underestimate total Commonwealth expenditure. The figures provided for tax expenditures (tax concessions) are the cost to revenue estimated by the Australian Taxation Office and the Treasury.

The expenditure figures do not include general-purpose payments to the states and territories that may then be applied to environmental spending. Nor do figures include general funding to tertiary educational bodies that may be applied to environmental research or training.

This statement provides spending figures and descriptions of all Commonwealth activities and programmes that have an environmental benefit as their primary or secondary goal. Environmental benefit has been defined as:

- the prevention, reduction or elimination of waste, pollution or other degradation of the environment; and/or
- the conservation, rehabilitation, restoration or enhancement of the environment.

Although some programmes may not seem strictly of an environmental nature, the aim of the statement is to show a broad range of programmes that have an identifiable environmental element.

Figures for new measures include inflation consistent with other Budget statements. Other figures are expressed in 2000-01 prices unless otherwise indicated. There are some significant gaps in the figures for future years. Often this reflects the fact that the document is reporting components of larger programmes and that decisions about how these programme funds will be deployed in future years have not yet been made.

Tables of new measures, and programme and tax expenditure estimates, are broken into two sections. The first section includes new measures announced in the current Budget. The second section shows ongoing programme and tax expenditure estimates.

Not all dollar figures in the text are included in the tables of new measures, programmes and tax expenditure estimates. For instance, those dollar figures that are only broadly indicative or are provided as illustrations of particular projects, or are partially funded from Commonwealth outlays, are excluded.

All dollar figures are rounded to the nearest \$100,000. This means that figures in tables may not add up to totals given in tables or in the text. Forward estimates from 2001-02 onwards are only estimates and are subject to normal budgetary procedures.

Unless otherwise indicated, all financial information presented in this document represents the net cost to the Commonwealth; the figures are exclusive of any GST which may be payable by the Commonwealth and which is recoverable as an input tax credit.

Appendix 1 – Common Measures

Table A1.1: Common Measures – Programme and Tax Expenditure Estimates

This table lists activities in the order that they appear in the following text. 'na' denotes that spending cannot be precisely identified and it does not mean that spending is not occurring.

Description	1999-00	2000-01	2001-02	2002-03	2003-04
	\$m	\$m	\$m	\$m	\$m
PROGRAMME AND TAX EXPENDITURE ESTIN					
Commonwealth Environmental Legislation a	nd Legal A	ctivities			
International Environmental Law	na	na	na	na	na
Breaches of Environmental Laws	na	na	na	na	na
Legal Drafting and Services	na	na	na	na	na
Community Environmental Legal Programme	0.6	0.6	0.6	0.6	0.6
International Activities					
Overseas Aid ^(a)	241.9	281.7	_	_	-
International Relationships	1.0	1.2	1.2	1.2	1.2
Community Involvement and Education					
Tax and Grant Support	2.0	1.8	1.8	1.8	1.8
Community Environmental Education	na	na	na	na	na
Community Development Employment Projects	na	na	na	na	na
Youth Involvement – Green Corps	21.7	22.0	22.3	22.6	22.9
Expanding the Environmental Knowledge Ba	se				
Higher Education Research & Research Training	na	na	na	na	na
CRC Programme	35.9	35.5	_	_	_
Public Inquiries and Research	na	na	na	na	na
Provision and Standardisation of Data	na	na	na	na	na
Integrated Framework for Measuring Sustainable Development	0.1	0.4	na	na	na
AUSLIG	na	na	na	na	na
PM's Science, Engineering & Innovation Council	na	na	na	na	na
National Standards Commission	na	na	na	na	na
Health and the Environment	iiu	114	114	114	IIG
Community Housing and Infrastructure	na	na	na	na	na
National Environment Health Strategy	1.2	1.5	0.3	_	_
National Tobacco Strategy	na	na	na	na	na
Transport and Health	na	na	na	na	na
World Health Organisation	2.4	2.4	2.4	2.4	2.4
Commonwealth Support for Local Environme			۷.٦	۷.٦	۷.٦
Parliamentary Zone Review	na	na	na	na	na
Environmental Resource Officers ^(b)	0.5	0.5	11a	11a	-
Local Agenda 21	0.5	0.3	_	_	_
Environment Australia	0.2	0.2	_	_	
Dept of Transport and Regional Services	0.2	0.2	_	_	_
denotes will be denotes not evallable	_	0.1	-	-	

⁻ denotes nil: na denotes not available

⁽a) Australia's overseas aid programme is administered by the Australian Agency for International Development and the Australian Centre for International Agricultural Research. This environmental expenditure estimate includes projects directly linked to the environment, projects which have environment-related components and contributions to international organisations, including the Global Environment Facility and the Montreal Protocol Multilateral Fund.

⁽b) Figures for 2000-01 include grant payments to local government associations planned to be made in June 2000.

COMMONWEALTH ENVIRONMENTAL LEGISLATION AND LEGAL ACTIVITIES

International Environmental Law

On behalf of the Commonwealth, the Attorney-General's Department performs a number of legal activities relating to the environment, including giving advice on international environmental law and its implementation in Australia. This includes policy and legal advice on the application of Commonwealth administrative law and reviewing decisions made under Commonwealth environmental legislation, and the drafting of regulations and other instruments on environmental matters.

Website: www.law.gov.au **Contact:** Attorney-General's Department – 02 6250 6666

Breaches of Environmental Laws

On 21 January 2000 the Attorney-General referred to the Australian Law Reform Commission a review of Commonwealth laws relating to the imposition of administrative and civil penalties, including penalties for breaches of environmental laws. The final report is due on 1 March 2002.

Website: www.alrc.gov.au **Contact:** Australian Law Reform Commission – 02 9284 6333

Legal Drafting and Services

The Office of the Parliamentary Counsel provides legislative drafting resources according to government legislative priorities. The Australian Government Solicitor also provides legal services to Commonwealth agencies and departments to assist them in carrying out their work programmes, including environmental work.

Contacts: Office of the Parliamentary Counsel – 02 6270 1400 Australian Government Solicitor – 02 6250 6320

Community Environmental Legal Programme \$0.6 million in 2000-01

The Commonwealth funds a network of Environmental Defenders Offices located around Australia to deliver environmental legal services to the Australian community. Funding is used to provide advice, education, resource materials, promotion and law reform/research activities for the benefit of the general public.

Website: www.edo.org.au **Contact:** Attorney-General's Department – 02 6250 5575

INTERNATIONAL ACTIVITIES

Overseas Aid \$281.7 million in 2000-01

The objective of Australia's overseas aid programme is to advance Australia's national interest by assisting developing countries to reduce poverty and achieve sustainable development. The aid programme focusses on the Asia-Pacific region, with significant assistance also provided to Africa, South Asia and international development institutions.

A portion of Australia's aid supports activities that directly address environmental issues in developing countries in sectors including natural resource management, renewable energy, waste management, water resource planning and management, sustainable agriculture, conservation and capacity building. In addition, many other aid activities have indirect environmental benefits.

Websites: www.ausaid.gov.au www.aciar.gov.au Contacts: AusAID, Rural Development, Infrastructure and Environment Group – 02 6206 4055 ACIAR, Deputy Director R&D – 02 6217 0559

International Relationships \$1.2 million in 2000-01

Commonwealth ministers and agencies represent Australia in a range of regional and global multilateral institutions and ongoing negotiations that work to influence protection of the environment. Organisations range from the United Nations Commission on Sustainable Development to the World Trade Organisation and the South Pacific Regional Environment Programme. Australia seeks to ensure that these bodies work systematically to improve global and regional environmental outcomes as either a primary or secondary objective.

The Commonwealth cultivates bilateral relationships with its counterpart agencies in key countries to improve mutual understanding of approaches to the environment and where desirable to work on joint approaches.

Website: www.dfat.gov.au/environment **Contacts:** Environment Australia, Portfolio Strategies Group – 02 6274 1388 Department of Foreign Affairs and Trade, Environment Branch – 02 6261 1885

COMMUNITY INVOLVEMENT AND EDUCATION

Tax and Grant Support \$1.8 million in 2000-01

Donations to non-profit environmental organisations listed on the Commonwealth's Register of Environmental Organisations are tax deductible. In 1998-99 these tax deductible donations amounted to approximately \$25.2 million.

Grants to voluntary environment and heritage organisations are available to assist community-supported organisations to cover administrative costs associated with their environmental work. Funds of \$1.65 million were awarded in 1999-2000.

Contact: Environment Australia, Portfolio Strategies Group – 02 6274 1388

Community Environmental Education

Environment Australia undertakes environmental education activities to raise awareness and understanding of environmental issues and influence community attitudes and behaviour. Measures to improve national coordination and promote national best practice in environmental education will be implemented in 2000-01 as set out in the publication *Today Shapes Tomorrow: Environmental Education for a Sustainable Future.*

Website: www.environment.gov.au/education/education.html Publication: Today Shapes Tomorrow: Environmental Education for a Sustainable Future, 1999 Contact: Environment Australia, Portfolio Strategies Group – 02 6274 1019

Community Development Employment Projects

The Community Development Employment Projects scheme provides employment and training opportunities in remote regions whilst contributing to the economic and social development needs of indigenous communities. A number of projects in the scheme involve activities that are directly environmentally related, including the development and support of joint management regimes for areas of high conservation value.

Website: www.atsic.gov.au **Publication:** *Aboriginal and Torres Strait Islander Commission Annual Report 1998-99* **Contact:** Aboriginal and Torres Strait Islander Commission – 02 6121 4404

Youth Involvement – Green Corps \$22.0 million in 2000-01

Green Corps (Young Australians for the Environment) provides young people aged 17-20 years with a full-time training position for at least six months on community-based environmental and heritage projects located throughout Australia but primarily in rural and remote areas. Green Corps projects include landcare, eco-tourism and restoration activities, and survey and data collection work. Green Corps is delivered nationally by the Australian Trust for Conservation Volunteers.

Contact: Department of Education, Training and Youth Affairs – 02 6240 9495

EXPANDING THE ENVIRONMENTAL KNOWLEDGE BASE

A number of Commonwealth research organisations conduct research relevant to the environment including the CSIRO, the Land and Water Resources Research and Development Corporation, the Australian Geological Survey Organisation, the Bureau of Rural Sciences, the Bureau of Meteorology, the Australian Institute of Marine Science, Environmental Research Institute of the Supervising Scientist and the Australian Nuclear Science and Technology Organisation. More detail is provided about their activities in following sections.

CSIRO Research

CSIRO is Australia's largest single performer of environmental and sustainability-related research. It spends about \$110 million of its direct government funding on environment-related research, and about \$50 million of additional contract funding from competitive grant schemes and industry sources. CSIRO's research directions and priorities are set with the assistance of Sector Advisory Committees containing high level representatives of client and stakeholder groups, including government agencies.

Contact: CSIRO Office of Deputy Chief Executive, Environment - 02 6246 4557

Higher Education Research and Research Training

The Education, Training and Youth Affairs portfolio provides support for a diverse range of environmental research performed in universities through grants from the Australian Research Council and through operating grants which contribute towards the costs of university teaching, research and infrastructure.

Cooperative Research Centres \$35.5 million in 2000-01

Cooperative Research Centres (CRCs) are selected in competitive rounds that are conducted every two years. CRCs are usually funded for seven years. A total of 15 CRCs undertake projects that will have significant environmental and community benefits in their research outcomes over and above any commercial potential. These CRCs are: Waste Management and Pollution Control; Antarctica and the Southern Ocean; Catchment Hydrology; Biological Control of Pest Animals; Great Barrier Reef World Heritage Area; Freshwater Ecology; Southern Hemisphere Meteorology; Tropical Rainforest Ecology and Management; Sustainable Development of Tropical Savannas; Conservation and Management of Marsupials; Water Quality and Treatment; Weed Management Systems; Sustainable Tourism; Coastal Zone, Estuary and Waterway Management; and Greenhouse Accounting.

Contact: Department of Industry, Science and Resources – 02 6213 6429

Public Inquiries and Research

The Productivity Commission conducts independent public inquiries and research into a broad range of economic and social issues, including environmental matters that affect the welfare of Australians. The Commission's statutory policy guidelines require it to ensure that industry develops in a way that is ecologically sustainable.

Website: www.pc.gov.au

Contact: Productivity Commission, Media and Publications Unit – 02 6240 3239

/ 03 9653 2244

Provision and Standardisation of Data

The Australian Bureau of Statistics' environment programme provides data to all sectors, including academic, government (local, state and federal), industry and private enterprise. It also helps coordinate and standardise data relating to the environment. Activities include developing physical accounts (energy and water to be released in 2000); conducting the environment protection expenditure collection; household surveys on water, energy, waste and transport; and producing an annual compendium publication.

Website: www.abs.gov.au

Contact: Australian Bureau of Statistics – 02 6252 5000

Integrated Framework for Measuring Sustainable Development \$0.4 million in 2000-01

The Bureau of Rural Sciences is developing a framework for harmonising existing sectoral approaches to measuring sustainable development of primary industries. This will enable reporting at different spatial scales and across different jurisdictional units.

Website: www.brs.gov.au

Publication: Chesson J and Clayton H, 1998. A Framework for Assessing Fisheries with Respect to Ecologically Sustainable Development. Bureau of Rural Sciences, Canberra

Contact: Bureau of Rural Sciences - 02 6272 5893

Australian Surveying and Land Information Group (AUSLIG)

AUSLIG's spatial data collection, production and coordination activities ensure the availability of fundamental geographic information for the Australian community. AUSLIG's map and satellite image data are particularly useful for environmental monitoring and natural resource management.

Website: www.auslig.gov.au

Contact: Australian Surveying and Land Information Group – 02 6201 4201

Prime Minister's Science, Engineering and Innovation Council

The Prime Minister's Science, Engineering and Innovation Council is examining the potential for Australian industry to promote the development and commercialisation of new technologies in areas such as greenhouse science and dryland salinity.

Contact: Department of Industry, Science and Resources – 02 6213 6348

National Standards Commission

The National Standards Commission has responsibilities under the *National Measurement Act 1960* to ensure national and international consistency of measurements used for regulatory purposes through its membership of the International Organisations of Legal Metrology. It participates in the development of international standards for a wide range of environmental measuring instruments.

Contact: National Standards Commission – 02 9888 3922

HEALTH AND THE ENVIRONMENT

Community Housing and Infrastructure

The Community Housing and Infrastructure Programme funds projects that contribute to improving environmental health outcomes for indigenous communities by providing housing, infrastructure and municipal services. Programme funding may be used to address landscaping, dust control, sewage, water supplies and other community infrastructure needs.

Website: www.atsic.gov.au

Publication: Aboriginal and Torres Strait Islander Commission Annual Report 1998-99 **Contact:** Aboriginal and Torres Strait Islander Commission – 02 6121 4635

National Environmental Health Strategy \$1.5 million in 2000-01

The Department of Health and Aged Care provides leadership in environmental health policies that aim to reduce community exposure, particularly in disadvantaged populations, to environmental hazards.

Website: hna.ffh.vic.gov.au/nphp/envforum/index.htm **Contact:** Department of Health and Aged Care – 02 6289 3700

National Tobacco Strategy

The National Tobacco Strategy 1999 to 2003 includes in its aims a reduction in exposure to environmental tobacco smoke. This includes establishing smoke-free public places as the norm. The National Tobacco Strategy is also working with other levels of government to facilitate a nationally consistent approach to passive smoking protection.

Website: www.health.gov.au:80/pubhlth/publicat/document/metadata/tobccstrat.htm **Contact:** Department of Health and Aged Care – 02 6289 7688

Transport and Health

The Department of Health and Aged Care is preparing the collection of national data and indicators on bicycle use to measure and monitor the contribution cycling makes to transport, health and the environment throughout Australia. This supports other research on transport, health protection and the promotion of physical activity.

Websites: www.health.gov.au www.ausport.gov.au Publications: Australian Cycling The National Strategy 1999-2004 Developing an Active Australia: A Framework for Physical Activity and Health, 1998 Contact: Department of Health and Aged Care – 02 6289 1555

World Health Organisation \$2.4 million in 2000-01

Australia supports environmental health activities undertaken by the World Health Organisation (WHO) through an annual contribution. WHO's Protection of the Human Environment Programme undertakes research, risk assessment and standard setting work in relation to issues such as food safety, water supply and sanitation, chemical safety and environmental health. The Health in Sustainable Development Programme aims to ensure that health and environment issues are an integral part of national development policies.

Website: www.who.org/home/map_ht.html#Environment%20and20Lifestyle **Contact:** Department of Health and Aged Care – 02 6289 8848

COMMONWEALTH SUPPORT FOR LOCAL ENVIRONMENT INITIATIVES

Parliamentary Zone Review

The Parliamentary Zone Review provides an opportunity to incorporate environmental and heritage conservation values and the commitment to creating a better environment in the parliamentary zone in Canberra. One of the initiatives of the review is creating a comprehensive pedestrian and cycle way system. Central to the system of paths is the proposal for a walking track that will be laid out according to indigenous cultural precepts. The review also seeks to rationalise and manage the amount of parking in the parliamentary zone. Allied to this is the introduction of a shuttle bus, allowing people to leave their cars in one place and still move easily and conveniently around the zone. Conservation Management Plans are also being undertaken for significant places and buildings in the parliamentary zone.

Website: nationalcapital.gov.au/fs_nca.html **Contact:** National Capital Authority – 02 6271 2852

Environmental Resource Officers \$0.5 million in 2000-01

The Environmental Resource Officer Scheme places an officer in peak local government associations in each of the states and the Northern Territory. These officers provide a one-stop-shop for information and advice.

Website: www.environment.gov.au/igu **Contact:** Environment Australia, Portfolio Strategies Group – 02 6274 1018

Local Agenda 21 \$0.3 million in 2000-01

Environment Australia is collaborating with the National Office of Local Government to promote Local Agenda 21, a framework for local government to integrate environmental, economic and social objectives. Australia has committed to an APEC target of doubling the number of Local Agenda 21 councils by 2003.

The Department of Transport and Regional Services also funds a variety of Local Agenda 21 related activities.

Websites: www.environment.gov.au/igu www.environment.gov.au/anzecc www.dotrs.gov.au/nolg/lgip/index.htm

Publication: Cotter B and Hannan K (Environs Australia), 1999. *Our Community, Our Future: A Guide to Local Agenda 21*. Commonwealth of Australia, Canberra **Contacts:** Environment Australia, Portfolio Strategies Group – 02 6274 1018

Department of Transport and Regional Services – 02 6274 8118

Appendix 2 – Biodiversity

Table A2.1: Biodiversity – Programme and Tax Expenditure Estimates

This table lists activities in the order that they appear in the following text. 'na' denotes that spending cannot be precisely identified and it does not mean that spending is not occurring.

Description	1999-00	2000-01	2001-02	2002-03	2003-04
	\$m	\$m	\$m	\$m	\$m
PROGRAMME AND TAX EXPENDITURE ESTI	MATES				
Biodiversity Conservation					
Biodiversity Convention and Strategy	1.8	1.9	1.9	1.9	_
Access to Biological Resources	-	-	-	-	_
Cartagena Protocol on Biosafety	-	-	_	_	_
Off-Reserve Conservation					
Bushcare ^(a)	100.2	91.3	84.5	_	_
Philanthropy	na	na	na	na	na
Reserves and Protected Areas					
National Reserves System	29.7	20.5	19.7	_	_
Commonwealth Protected Areas	58.2	59.5	59.9	60.7	60.7
Other Commonwealth Land	na	na	na	na	na
Feral Animals and Weeds					
Plant Pest Eradication	na	0.9	na	na	na
Tri-State Fruit Fly Strategy	na	na	na	na	na
Environmental Impact of Locust Control (b)	0.1	0.1	0.1	0.1	0.1
National Feral Animal Control ^(c)	5.0	2.3	2.8	-	_
Animal and Plant Quarantine Policy	6.1	5.7	5.7	1.7	1.7
Wildlife Conservation					
Wildlife Management	na	na	na	na	na
Wildlife Resource Conservation	2.3	2.5	2.4	2.4	2.4
Threatened Species					
Endangered Species	8.5	9.5	5.5	-	_
Biodiversity Information Base					
Australian Biological Resources Study	5.4	3.4	3.5	3.5	3.5
CSIRO (total)	na	20.3	20.4	20.5	na
Biodiversity knowledge and informatics	na	5.7	5.8	5.9	na
Ecosystem sustainability at farm to catchment scale	na	2.3	2.3	2.3	na
Ecological sustainability at regional to national scales	na	1.8	1.8	1.8	na
Conservation and use of biodiversity	na	4.1	4.2	4.2	na
Management of environmental pests, weeds and diseases	na	4.5	4.5	4.7	na
Sustainable tourism	na	0.9	0.9	0.9	na
Ecological risk assessment of GMOs	na	1.0	0.9	0.8	na
Nature Based Tourism					
National Action Plan for Tourism	na	na	na	na	na
Australian Tourism Commission Environment Strategy	na	na	na	na	na

⁻ denotes nil; na denotes not available

⁽a) Includes funding for Cape York Peninsula.

⁽b) The Commonwealth and states jointly fund this programme.

⁽c) Jointly administered by Agriculture, Fisheries and Forestry—Australia, and Environment Australia.

BIODIVERSITY CONSERVATION

Biodiversity Convention and Strategy \$1.9 million in 2000-01

Under the Convention on Biological Diversity, activities in 2000-01 will concentrate on reviewing progress and setting new targets for the National Strategy for the Conservation of Australia's Biological Diversity. The strategy deals at a global level with the full range of biological diversity conservation, its sustainable use, and the fair and equitable sharing of the benefits arising from this use. The strategy covers all of Australia's biological diversity, and focusses on the conservation of Australia's indigenous biological diversity. The strategy aims to have all sectors of the community sharing the costs and benefits of conserving biological diversity, including the costs of conservation, and the economic benefits from conserving biological diversity.

Website: chm.environment.gov.au **Contact:** Environment Australia, Biodiversity Group – 02 6274 2562

Access to Biological Resources

On 22 December 1999 the Minister for the Environment and Heritage announced an Inquiry into Access into Biological Resources in Commonwealth Areas. The inquiry is considering the ownership of plant and animal resources, the conditions under which access should be given, and how to ensure that biodiversity is protected. A particular focus is how to equitably share the benefits that come from indigenous knowledge and practices. The inquiry will prepare recommendations for a scheme to control access in Commonwealth areas, with a report due by 30 June 2000. This scheme will be established under the *Environment Protection and Biodiversity Conservation Act 1999* and will help deliver on Australia's responsibilities under the Convention on Biological Diversity.

Contact: Environment Australia, Biodiversity Group – 02 6274 2528

Cartagena Protocol on Biosafety

The Government is analysing the implications for Australia of the Cartagena Protocol on Biosafety, negotiated under the Convention on Biological Diversity in January 2000. The Protocol establishes an international regime to cover the environmental impact of trade in living (genetically) modified organisms. It will enter into force when 50 countries have ratified.

Website: www.dfat.gov.au/environment **Contact:** Department of Foreign Affairs and Trade, Environment Branch – 02 6261 2705

OFF-RESERVE CONSERVATION

Bushcare \$91.3 million in 2000-01

Bushcare is the largest of the Natural Heritage Trust programmes. It has a nationwide objective to reverse the decline in the quality and extent of native vegetation cover. The programme funds projects by landholders, communities and government agencies to protect native vegetation, to replant degraded land and to support the sustainable management of natural resources.

Website: www.nht.gov.au/programs/bushcare.html **Contact:** Environment Australia, Biodiversity Group – 1800 671 717

Cape York Peninsula

The Cape York Plan was developed by the Commonwealth in consultation with the Queensland Government. It is being delivered by both governments in partnership with industry, indigenous communities and conservation organisations. The objectives are to protect the outstanding environment, heritage and cultural values of the Cape. This is being achieved through voluntary property management planning, expanding the network of protected areas, providing community grants and funding projects to ensure the protection of the natural and cultural values of the region.

Contact: Environment Australia, Biodiversity Group – 1800 671 717

Philanthropy

The Government continues to encourage involvement by private individuals and organisations in managing and conserving the environment. Recent changes to taxation laws encourage donations of land for environmental purposes. These changes allow an income tax deduction of gifts of property worth more than \$5,000. This deduction can be apportioned over five years. Bequests of property are exempt from capital gains tax.

Contact: Environment Australia, Portfolio Strategies Group – 02 6274 1968

RESERVES AND PROTECTED AREAS

National Reserve System \$20.5 million in 2000-01

The Commonwealth is working with all levels of government, industry and the community to develop further a comprehensive, adequate and representative National Reserve System. This includes establishing and managing new ecologically significant protected areas, providing incentives to landholders to incorporate private land in the National Reserve System, and developing and implementing best practice standards for protected area management.

Indigenous Protected Areas

The Indigenous Protected Areas (IPA) component of the National Reserve System aims to establish and manage protected areas on indigenous owned estates and to establish cooperative management arrangements for government owned protected areas between indigenous groups and the relevant government nature conservation agency.

IPA projects on indigenous lands are developing plans of management for the conservation of natural and cultural features utilising both traditional and modern scientific approaches to land management. To date six IPA projects have progressed to the stage of formally declaring land as Indigenous Protected Areas. These are Nantawarrina and Yalata in South Australia; Oyster Cove, Risdon Cove and Preminghana in Tasmania; and Deen Maar in Victoria. These IPAs have added some 515,000 hectares of land to Australia's protected area system that is managed according to identified IUCN management principles.

The Deen Maar Indigenous Protected Area provides an example of the activities undertaken by indigenous landholders with government support through the IPA programme. The 453 hectare property, 50 kilometres west of Warrnambool in Victoria, is managed by the Framlingham Aboriginal Trust. Work on the property is focussed on rehabilitating the degraded wetland and coastal dune system. Significant effort has also gone into reducing the rabbit population, controlling weeds, revegetation and track maintenance. There has recently been the re-discovery of up to 20 orange bellied parrots (which comprise about 15 per cent of the total population of these critically endangered parrots known to exist) in the Deen Maar IPA. Since the Framlingham Aboriginal Trust have taken over the management of the property they have altered the water flows of the wetland area which has retained water in the wetlands for longer periods.

Website: www.environment.gov.au/bg/nrs/nrsindex.htm Contacts: Environment Australia, Biodiversity Group (reserves) – 02 6274 2706 Environment Australia, Biodiversity Group (indigenous) – 02 6274 2327

Commonwealth Protected Areas \$59.5 million in 2000-01

The Commonwealth manages 18 protected areas in the Northern Territory, the External Territories and Australian waters. Three of the six national parks managed by the Commonwealth (Kakadu and Uluru-Kata Tjuta national parks in the Northern Territory and Booderee National Park in the Jervis Bay Territory) are jointly managed with Aboriginal traditional owners. Kakadu and Uluru-Kata Tjuta are included on the World Heritage list.

Website: www.biodiversity.environment.gov.au/protecte/intro.htm Contacts: Environment Australia, Biodiversity Group (terrestrial) – 02 6274 2221 Environment Australia, Biodiversity Group (marine) – 02 6274 1919

Other Commonwealth Land

Biodiversity is protected on other Commonwealth land such as Department of Defence land and leased federal airports. The Commonwealth has also made a substantial commitment to marine biodiversity in Australia's Exclusive Economic Zone (see Appendix 7 – Oceans).

FERAL ANIMALS AND WEEDS

National Weeds Programme

See Appendix 3 - Land Resources and Forests.

Plant Pest Eradication \$0.9 million in 2000-01

The Plant Pest Eradication Programme aims to maintain international market access through the prevention and eradication of exotic plant pests, weeds and diseases.

Website: www.ansto.gov.au/ansto/capability/cs10.html Contact: Agriculture, Fisheries and Forestry—Australia, Plant Pest Eradication Programmes – 02 6272 5399

Tri-State Fruit Fly Strategy

As part of the Tri-State Fruit Fly Strategy the Australian Nuclear Science and Technology Organisation irradiates between six and fifteen million insect pupae each week to produce sterile fruit flies. The insect irradiation service reduces the pressure of fruit flies and acts as a barrier to the further spread of the flies. The sterile male flies out-compete the fertile males to reduce the number of fertilised eggs in nature. This is a project run by three states. NSW Agriculture has the leading role.

Website: www.ansto.gov.au/ansto/capability/facilitiesp.html **Contact:** Australian Nuclear Science and Technology Organisation, Physics Division – 02 9717 3052

Environmental Impact of Locust Control \$0.1 million in 2000-01

The Australian Plague Locust Commission undertakes research to assess the impact on non-target fauna of the aerial application of insecticides for locust control. If necessary the standard operating procedures would be modified in light of this research to ensure the impacts on other fauna are minimised.

Contact: Australian Plague Locust Commission – 02 6272 5727

National Feral Animal Control \$2.3 million in 2000-01

The National Feral Animal Control Programme, funded through the Natural Heritage Trust, aims to reduce damage by pest animals to agriculture and the environment. The agricultural component of the programme provides support for projects that develop more cost-effective, humane pest animal management techniques and strategies. It also supports extension activities that promote better practices.

Under the environmental component of the programme the focus of funding is upon actions identified in the threat abatement plans for foxes, feral cats, feral goats and rabbits to promote recovery and protection of nationally listed endangered and vulnerable species.

Websites: www.brs.gov.au

www.nht.gov.au

Publication: Olsen P, 1998. Australia's Pest Animals: New Solutions to Old Problems. Bureau of Resource Sciences/Kangaroo Press

Contacts: Bureau of Rural Sciences, Agricultural Pests Unit – 02 6272 3801 Environment Australia, Biodiversity Group – 02 6274 2388

Animal and Plant Quarantine Policy \$5.7 million in 2000-01

The health of Australia's animal, plant and human populations is maintained by a range of quarantine programmes that include protection of the environment. The quarantine activities also underpin vital access to overseas markets for Australia's export industries, by enabling compliance with the international regulatory framework that governs trade between nations.

Website: www.aqis.gov.au

Contact: Australian Quarantine and Inspection Service – 1800 020 504

WILDLIFE CONSERVATION

Wildlife Management

The 'incidental catch (or by-catch) of seabirds during oceanic long-line fishing operations' was listed in July 1995 as a key threatening process under the *Endangered Species Protection Act 1992*. This listing led to the preparation of a threat abatement plan (TAP). The ultimate aim of the threat abatement process is to achieve a zero by-catch of seabirds, especially threatened albatross and petrel species, in long-line fisheries. Key elements of the TAP to be implemented in 2000-01 are: prescribing in regulations the appropriate modifications to fishing practices or equipment (mitigation measures) to reduce seabird by-catch to below 0.05 seabirds per thousand hooks; providing for development of new mitigation measures; and collecting the information necessary to improve knowledge of seabird long-line by-catch through the implementation of a 'pilot observer programme'.

In a complementary activity, the Commonwealth Government is also leading an international initiative aimed at providing better protection for albatrosses in the southern hemisphere. Australia is consulting with other range states of southern hemisphere albatrosses on the development of an agreement that would see countries taking cooperative actions to improve albatross conservation.

Contact: Environment Australia, Biodiversity Group – 02 6274 2337

Wildlife Resource Conservation \$2.5 million in 2000-01

Trade in native species and products derived from them is regulated under the Commonwealth *Wildlife Protection (Regulation of Exports and Imports) Act 1982* which also gives effect to Australia's obligations under the Convention on International Trade in Endangered Species of Wild Fauna and Flora. A new database system will be implemented to provide for the electronic issue of permits, growth in the number of recorded trade activities and more effective enforcement activities.

Website: www.biodiversity.environment.gov.au/plants/wildlife/intro.htm **Publication:** Buying Wildlife Products – Tips for Travellers **Contact:** Environment Australia, Biodiversity Group – 02 6274 2270

THREATENED SPECIES AND ECOLOGICAL COMMUNITIES

Endangered Species \$9.5 million in 2000-01

The Endangered Species Programme provides a core resource for the conservation of nationally threatened species and ecological communities, primarily through funding on-ground community action to protect habitat and abate threats, and the preparation and implementation of recovery and threat abatement plans. A primary focus for 2000-01 is ensuring that Environment Australia can quickly and effectively respond to the requirements of the *Environment Protection and Biodiversity Conservation Act 1999*. The new Threatened Species Scientific Committee has been established to advise the Government on the administration of the programme.

Website: www.biodiversity.environment.gov.au/plants/threaten/ **Contact:** Environment Australia, Biodiversity Group – 02 6274 2744

BIODIVERSITY INFORMATION BASE

Australian Biological Resources Study \$3.4 million in 2000-01

The Australian Biological Resources Study (ABRS) supports the description and documentation of Australia's plants and animals by funding taxonomic research and the

dissemination of taxonomic information to underpin Australia's biodiversity conservation and landcare efforts. In 2000-01 ABRS will continue to provide advice and support for the Global Taxonomy Initiative of the Convention on Biological Diversity, and to assist with the development of the proposed Global Biodiversity Information Facility, and the local counterpart, the Australian Biodiversity Information Facility. ABRS will also develop a range of tools for improving the dissemination, accessibility and useability of this cornerstone species information to meet the needs of local communities through to high-level decision makers.

Website: www.anbg.gov.au/abrs **Contact:** Environment Australia, Biodiversity Group – 02 6250 9430

CSIRO Research \$20.3 million in 2000-01

CSIRO undertakes a range of research to provide understanding and tools for sustainable use and conservation of biodiversity. This work focusses on a system-wide understanding of the functions and values of biodiversity, and covers local to global scale issues. Key elements of the work include research on biodiversity knowledge and informatics; ecosystem sustainability at farm to catchment scale; ecological sustainability at regional to national scales; conservation and use of biodiversity; management of environmental pests, weeds and diseases; sustainable tourism; and ecological risk assessment of genetically modified organisms.

Website: www.csiro.au and follow links to biodiversity sector **Contact:** CSIRO Biodiversity Sector – 02 6242 1667

Australian Institute of Marine Science

See Appendix 7 – Oceans.

NATURE BASED TOURISM

National Action Plan for Tourism

The Department of Industry, Science and Resources developed, in conjunction with stakeholders from the tourism industry, state governments and non-government organisations, a National Action Plan for Tourism, which was launched in 1998. The implementation of this plan continues to contribute to ecologically sustainable tourism development, recognising that environmental, community and cultural issues are an integral part of economic decisions.

Contact: Department of Industry, Science and Resources – 02 6213 7088

Australian Tourism Commission Environment Strategy

The Australian Tourism Commission Environment Strategy objectives include monitoring, reporting on and reducing the impact of international tourism on Australia's natural environment. Activities promoted by the strategy include market research and communicating environmental messages through tourism information material.

Contact: Australian Tourism Commission – 02 9361 1305

Appendix 3 – Land Resources and Forests

Table A3.1: Land Resources and Forests — Programme and Tax Expenditure Estimates

This table lists activities in the order that they appear in the following text. 'na' denotes that spending cannot be precisely identified and it does not mean that spending is not

occurring.

Description	1999-00	2000-01	2001-02	2002-03	2003-04
	\$m	\$m	\$m	\$m	\$m
PROGRAMME AND TAX EXPENDITURE ESTIN	1ATES				
Sustainable Agriculture					
National Landcare Programme (total)	105.6	82.6	80.3	36.8	na
Natural Heritage Trust	68.6	45.8	43.5	-	-
Natural Resource Management (Financial Assistance) Act	37.0	36.8	36.8	36.8	na
FarmBis	6.1	4.4	na	na	na
National Weeds Programme	4.0	2.1	1.8	_	_
Taxation Measures (total)	43.0	26.0	26.0	26.0	26.0
Tax deduction for water conveying and land degradation preventative measures	25.0	25.0	25.0	25.0	25.0
Taxation allowance for drought preparedness	17.0	_	_	_	_
Tax rebate for expenditure on landcare works	na	na	na	na	na
Innovative and Sustainable Agricultural Systems	0.4	0.2	na	na	na
Forests, Plantations and Farm Forestry					
National Forest Inventory	1.5	1.5	0.6	na	na
International Sustainable Forestry	1.4	1.1	1.1	1.1	1.1
Plantations 2020 Vision	0.3	1.2	0.3	0.1	na
Farm Forestry	16.0	15.1	15.9	9.2	na
Assessing the Resource Base					
National Land and Water Resources Audit	10.0	10.0	4.7	na	na
BRS – Land and Water Sciences	4.1	3.0	na	na	na
Geographic Information System	na	na	na	na	na
CSIRO (total)	na	20.6	20.7	20.8	na
Sustainable agriculture through changed land use and management practices	na	3.7	3.7	3.7	na
Degraded landscape management and rehabilitation	na	5.5	5.6	5.6	na
Clean-up of contaminated environments	na	3.4	3.4	3.4	na
Tools for sustainable resource use at regional scales	na	6.3	6.3	6.4	na
Sustainable native forest management	na	1.7	1.7	1.7	na
Land and Water Resources Research and Development Corporation	11.1	11.3	11.4	11.6	na
Mining and Land Rehabilitation					
Sustainable Mining Operations	4.5	4.5	na	na	na

⁻ denotes nil; na denotes not available

The principal Commonwealth initiative for sustainable natural resource management is the \$1.5 billion Natural Heritage Trust which is creating partnerships of individuals, communities and governments to address Australia's environmental and natural resources problems. The Trust provides an integrated approach to sustainable land and water management and the conservation of Australia's biological diversity. Programmes relevant to land resources and forests include the National Landcare Programme and the Farm Forestry Programme.

SUSTAINABLE AGRICULTURE

National Landcare Programme \$82.6 million in 2000-01

The National Landcare Programme seeks to improve natural resources management systems to sustain ecological processes and provide a basis for sustainable production activities. The programme seeks to increase understanding of natural resource management issues, and to improve the skills and capacity of land managers to implement more sustainable management practices. It directs funding towards on-ground works on the basis of catchment and regional strategic plans and is working towards institutional and policy change to achieve sustainable systems for natural resource management.

Website: www.landcare.gov.au **Publication:** *Natural Heritage Trust Annual Report, 1998-99* **Contact:** Agriculture, Fisheries and Forestry—Australia – 02 6272 4622

FarmBis \$4.4 million in 2000-01

FarmBis promotes sustainability and self-reliance by developing the business management skills of farm managers and communicating the benefits of continuous learning. FarmBis contributes funds to the cost of training activities such as quality assurance, risk management, rural leadership and natural resource management.

Website: www.affa.gov.au/rural/farmbis **Contact:** Agriculture, Fisheries and Forestry—Australia – 02 6272 4899

National Weeds Programme \$2.1 million in 2000-01

The goal of the National Weeds Programme is to reduce the detrimental impact of nationally significant weeds on the sustainability of Australia's productive capacity and natural ecosystems. This is being achieved by supporting the development of integrated strategic approaches to reduce the impact of weeds of national significance, preventing the introduction of new pest plants through revised quarantine assessment procedures and assessing the potential of existing pest plants to become weeds of national significance.

Website: www.nht.gov.au/programs/weeds.html **Publication:** *National Weeds Strategy,* 1997 **Contact:** Agriculture, Fisheries and Forestry—Australia – 02 6272 4371

Taxation Measures \$26.0 million in 2000-01

Commonwealth taxation arrangements provide for a range of deductions, rebates and allowances to promote better land and water management, including:

- deductions for the cost of conserving and conveying water and for capital expenditure on soil conservation, preventing land degradation and related measures;
- a taxation allowance for capital expenditure on drought preparedness; and
- a tax rebate for expenditure on landcare works.

Contact: Australian Taxation Office - 02 6216 5781

Innovative and Sustainable Agricultural Systems \$0.2 million in 2000-01

This initiative is refining a framework that identifies key information needs at various levels of the agricultural industry and government, in order to make sound decisions about sustainable land use. Key topics include the extension of environmental auditing to agricultural industries through benchmarks for best practice for sustainable agriculture; risk management of pesticides; and sustainable agricultural systems. Outcomes are the increasingly better management of systemic environmental impacts, and adoption of sustainable agricultural practices and systems that set world standards.

Website: www.brs.gov.au **Contact:** Bureau of Rural Sciences – 02 6272 3435

FORESTS, PLANTATIONS AND FARM FORESTRY

National Forest Inventory \$1.5 million in 2000-01

The National Forest Inventory is Australia's national repository for forest-related scientific spatial information on Australia's forests. It hosts the National Farm Forest Inventory, the National Plantations Inventory and the National Vegetation Information System. It ensures Australia's national and international forest reporting requirements are met.

Website: www.brs.gov.au/nfi
Publication: Australia's State of the Forests Report 1998
Contact: Bureau of Rural Sciences – 02 6272 4299

International Sustainable Forestry \$1.1 million in 2000-01

Australia is engaged in a United Nations process to develop a global framework for the conservation and sustainable management of forests. Australia is cooperating with the World Bank in the development of a new forest strategy and is considering a partnership

in the Global Forest Alliance. Australia also supports efforts to improve forest management in a number of countries, including through aid projects, policy and strategy development. Environment Australia promotes EcoPlan, a computer software tool developed by Environment Australia to assist forest management planning.

Contact: Environment Australia, Portfolio Strategies Group – 02 6274 1319

Plantations for Australia: the 2020 Vision \$1.2 million in 2000-01

This initiative is the Commonwealth's contribution to a government/industry target to treble the nation's plantation estate over the period 1996-2020. The initiative aims to reverse the trade deficit for wood products and to stimulate rural development, including creation of up to 40,000 jobs. It will also assist in meeting Australia's net greenhouse gas emissions target as well as delivering improved land management outcomes.

Website: www.affa.gov.au/agfor/forests/2020/2020.html
Publication: Plantations for Australia: The 2020 Vision
Contact: Agriculture, Fisheries and Forestry—Australia – 02 6272 3818

Farm Forestry \$15.1 million in 2000-01

The Farm Forestry Programme encourages the incorporation of commercial tree growing in agricultural landscapes for the purpose of wood and non-wood production, increasing agricultural productivity and sustainable natural resource management.

Website: www.dpie.gov.au/agfor/forests/findex.html **Contact:** Agriculture, Fisheries and Forestry—Australia – 02 6272 4193

ASSESSING THE RESOURCE BASE

National Land and Water Resources Audit \$10.0 million in 2000-01

The National Land and Water Resources Audit will provide a nationwide assessment of Australia's land, vegetation and water resources to support sustainable development now and in the future. It will provide data, analysis, and appraisal to facilitate improved decision making on land, vegetation and natural resource management by building a national information base.

Website: www.nlwra.gov.au

Publication: National Land and Water Resources Audit Annual Report: 1998-99

Contact: Agriculture, Fisheries and Forestry—Australia – 02 6272 5849

Bureau of Rural Sciences – Land and Water Sciences \$3.0 million in 2000-01

The Bureau of Rural Sciences provides scientific advice to policy makers on land degradation including dryland salinity, groundwater resource and contamination risk assessment, greenhouse issues, soils and surface water resources.

Website: www.brs.gov.au **Contact:** Bureau of Rural Sciences – 02 6272 3937

Geographic Information System

The Australian Geological Survey Organisation has developed a geographic information system that integrates mineral potential with other values to facilitate informed land use decisions. The system has been used successfully in the Regional Forest Agreement process.

Website: www.agso.gov.au

Contact: Australian Geological Survey Organisation, Minerals Division – 02 6249 9556

CSIRO Research \$20.6 million in 2000-01

CSIRO research approaches sustainable use of natural resources in an integrated fashion. Environmentally focussed research is integrated with work in production oriented sectors to achieve full sustainability. Key output-related elements of land and forest research include: sustainable agriculture through changed land use and management practices; degraded landscape management and rehabilitation; clean-up of contaminated environments; tools for sustainable resource use at regional scales; and sustainable native forest management.

Website: www.csiro.au **Contacts:** CSIRO Land and Water – 02 6246 5951 CSIRO Forestry and Forest Products – 02 6281 8400

Land and Water Resources Research and Development Corporation \$11.3 million in 2000-01

The Land and Water Resources Research and Development Corporation conducts research into conservation and sustainable management of Australia's land resources and water resources. It uses Australia's existing research and development institutions and capacity to promote the productive and sustainable management of the natural resources that underpin Australia's rural primary industries and regional communities.

Website: www.lwrrdc.gov.au

Publication: Land and Water Resources Research and Development Corporation Annual Report 1998-99

Contact: Land and Water Resources Research and Development Corporation – 02 6357 3379

MINING AND LAND REHABILITATION

Sustainable Mining Operations \$4.5 million in 2000-01

The Australian Nuclear Science and Technology Organisation is developing processing technologies and waste management methods that will lead to cleaner and more environmentally sustainable operations in the mining industry to ensure that this industry sector remains viable and competitive in the future. The organisation is also active in devising environmentally sensitive and cost-effective technologies for the treatment, management and disposal of existing radioactive and other toxic waste from the nuclear, mining and resource processing industries.

Website: www.ansto.gov.au

Contact: Australian Nuclear Science and Technology Organisation, Materials Division – 02 9717 3265

Appendix 4 – Inland Waters

Table A4.1: Inland Waters – Programme and Tax Expenditure Estimates

This table lists activities in the order that they appear in the following text. 'na' denotes that spending cannot be precisely identified and it does not mean that spending is not occurring.

Description	1999-00	2000-01	2001-02	2002-03	2003-04
r	\$m	\$m	\$m	\$m	\$m
PROGRAMME AND TAX EXPENDITURE ESTI	MATES				
Rivers					
National Rivercare	24.6	23.4	14.8	_	_
National River Health	6.6	6.8	1.8	_	_
Waterwatch Australia	6.8	2.9	2.6	_	_
Lake Eyre Basin	na	na	na	na	na
Murray-Darling 2001	51.6	45.2	32.6	_	_
Wetlands					
National Wetlands	4.8	4.7	3.8	_	_
National Centre for Tropical Wetlands Research	na	na	na	na	na
Groundwater					
Great Artesian Basin Sustainability Initiative	3.0	6.2	7.9	8.1	6.6
Assessment, Research and Monitoring					
Bureau of Meteorology ^(a)	0.8	0.8	0.8	0.8	0.8
CSIRO Research (total)	na	11.9	11.9	11.9	_
Science based strategies for national water reform	na	3.1	3.1	3.1	_
Sustainable management of coastal rivers and	na	3.7	3.7	3.7	_

Urban water quality and supply

- denotes nil; na denotes not available

Best practice management of irrigated areas

na

3.2

1.9

3.2

1.9

3.2

1.9

RIVERS

National Rivercare \$23.4 million in 2000-01

The National Rivercare Programme is working towards the sustainable management, rehabilitation and conservation of rivers outside the Murray-Darling Basin. Rivercare works with all levels of government, industry and the community to maintain or improve water quality by preventing pollution, improving the management of discharges, controlling stock access to rivers, managing erosion and contributing to healthy stream and riparian ecosystems.

Website: www.rivercare.gov.au **Contact:** Agriculture, Fisheries and Forestry—Australia, Water Policy and Reform Section – 02 6272 5502 / 02 6272 3932

⁽a) Estimates of appropriation-based Bureau of Meteorology expenditure attributable to hydrological monitoring, research and service provision in support of environmental objectives.

National River Health \$6.8 million in 2000-01

The National River Health Programme identifies priorities to protect and repair the health of Australian rivers in partnership with state and territory governments, research organisations, industry, and the community. Investment is being directed through the programme's two sub-components, the Environmental Flows Initiative, and Australia-wide Assessment of River Health. The Environmental Flows Initiative aims to assist in the implementation of the Council of Australian Governments' Water Reform Framework. The initiative supports projects that help identify, allocate, and implement appropriate environmental flow regimes, and targets gaps in environmental flow knowledge. Biological monitoring under the first Australia-wide Assessment of River Health was completed in March 2000. Information from the assessment provides valuable data for the next national State of the Environment Report, the National Land and Water Resources Audit, and for monitoring the outcomes of the Natural Heritage Trust.

Contact: Environment Australia. Water Reform Section – 02 6274 2254

Waterwatch Australia \$2.9 million in 2000-01

Waterwatch Australia is an environmental education programme that coordinates community water monitoring as a catalyst for community action to address water quality. Water monitoring creates an ownership ethic for catchment-wide land and water management. Waterwatch creates links within communities, between local and state governments, and between the business sector and other organisations.

Website: www.waterwatch.org.au **Contact:** Environment Australia, Wetlands Section – 02 6274 2797

Lake Eyre Basin

The Commonwealth is continuing to work with relevant Queensland and South Australian agencies and the community to develop and implement the Lake Eyre Basin Agreement. The agreement will provide a framework for the cooperative management of the surface water and related natural resources associated with cross-border river systems in the Lake Eyre Basin, and the protection of dependent aquatic ecosystems. The National Landcare Programme is supporting capacity-building within the community to recognise the natural values associated with the Basin's land and waters, and to identify and promote changes in land use and practices to maintain these values.

Contact: Environment Australia, Regional Water Initiatives Section – 02 6274 2784

Murray-Darling 2001 \$45.2 million in 2000-01

The primary focus of the Murray-Darling 2001 Programme is to improve the health of the Basin's river systems by promoting an integrated catchment management approach to the

use of its water, land and other environmental resources. The programme seeks to improve the Basin's water quality and the health and productivity of its riparian land systems, wetlands and floodplains. It also aims to reduce salinity and waterlogging in irrigated and dryland areas, through the widespread adoption of sustainable land use and management practices by landholders, including the efficient use of irrigation water.

Website: www.nht.gov.au **Contact:** Agriculture, Fisheries and Forestry—Australia, Murray-Darling Basin Section –

02 6272 5502

WETLANDS

National Wetlands \$4.7 million in 2000-01

The National Wetlands Programme promotes the conservation, repair and wise use of wetlands across Australia. The Commonwealth is progressing a range of initiatives under the programme to implement the Commonwealth wetlands policy and support Australia's obligations under international conventions and bilateral agreements. These initiatives include a national framework of wetland policies; management plans for all Australian Ramsar sites; a national wetland inventory; the nomination of additional sites to the Ramsar Convention and to the East Asian-Australasian Shorebird Site Network; and support for community wetlands projects.

Website: www.environment.gov.au/bg/wetlands/ **Contact:** Environment Australia, Wetlands Section – 02 6274 2508

National Centre for Tropical Wetlands Research

A National Centre for Tropical Wetlands Research has been established in Darwin in northern Australia. The centre is an initiative announced by the Minister for the Environment and Heritage, Senator Robert Hill, to develop collaborative research and training programmes related to tropical wetlands. The Environmental Research Institute of the Supervising Scientist, the James Cook University, the Northern Territory University and the University of Western Australia, have formed an alliance to further effective conservation and management of tropical wetlands.

Contact: Environment Australia, Supervising Scientist – 08 8979 9711

GROUNDWATER

Great Artesian Basin Sustainability Initiative \$6.2 million in 2000-01

This initiative encourages the rehabilitation of bores and the replacement of bore drains in the Great Artesian Basin. Its main objective is to partially restore artesian pressure in strategic areas of the Basin. This will be positive for the pastoral industry and the environment and will maintain options for the future. This work is vital to the Strategic Management Plan for the Great Artesian Basin because renewed infrastructure is a necessary precursor for users to improve management and use the water more sustainably.

Website: www.gab.org.au **Contact:** Agriculture, Fisheries and Forestry—Australia, Groundwater and Regional Section – 02 6272 4627

ASSESSMENT, RESEARCH AND MONITORING

Bureau of Meteorology—Hydrometeorology \$0.8 million in 2000-01

The Bureau of Meteorology collects information on Australia's water resources, including hydrological and hydrometeorological data to monitor, assess, plan and manage surface water resources. The Bureau operates a network of rainfall and river height stations in conjunction with state and local government agencies. It also researches and develops techniques for quantifying Australian rainfall variability and extremes. These activities support a wide range of hydrological and environmental studies, including catchment and floodplain management, soil conservation, and waste-water storage.

Website: www.bom.gov.au/hydro **Contact:** Bureau of Meteorology, Hydrology Unit – 03 9669 4522

CSIRO \$11.9 million in 2000-01

CSIRO's work on inland waters is closely integrated with research on land matters, on coastal and marine related matters, and on urban water supply and quality issues. CSIRO's research aims to provide integrated information to enable better management of water quality and quantity for sustainable use. Key elements of the work include science based strategies for national water reform, sustainable management of coastal rivers and estuaries, best practice management of irrigated areas, and urban water quality and supply.

Website: www.csiro.au and follow links to land and water sector **Contact:** CSIRO Land and Water Sector – 02 6246 5951

Land and Water Resources Research and Development Corporation

See Appendix 3 – Land Resources and Forests.

Appendix 5 – Environment Protection

Table A5.1: Environment Protection – New Measures and Programme and Tax Expenditure Estimates

This table lists activities in the order that they appear in the following text. 'na' denotes that spending cannot be precisely identified and it does not mean that spending is not

occurring.

Description	1999-00 \$m	2000-01 \$m	2001-02 \$m	2002-03 \$m	2003-04 \$m
NEW MEASURES	7				
Product Stewardship Arrangements for Waste Oil					
Programme – transitional assistance ^(a)	_	15.0	15.0	15.0	15.0
Programme – stewardship benefits ^(b)	_	24.7	24.5	24.2	24.0
Diesel National Environment Protection Measure	_	10.0	10.0	10.0	10.0
National Biotechnology Strategy ^(c)	_	0.3	_	_	_
Adelaide Airport Noise Amelioration	_	10.3	24.2	23.7	5.5
PROGRAMME AND TAX EXPENDITURE ESTIM	1ATES				
Environment Protection					
National Environment Protection Council (d)	1.0	0.8	1.0	1.1	1.1
National Pollutant Inventory	5.1	2.2	na	na	na
Environmental Management and Leased Airports	3.0	3.3	3.5	3.7	3.9
Territories and Regional Support	0.6	0.6	0.6	0.6	0.6
Sydney Airport Noise Amelioration	65.0	64.9	na	na	na
Remediation of Land Formerly Owned by Australian National	3.6	5.0	2.1	_	_
Living Cities Programme					
Air Toxics	1.3	1.4	1.5	_	_
Cleaning our Waterways – Industry Partnership	0.1	0.7	0.9	_	_
Urban Stormwater Initiative	0.3	4.0	4.0	_	_
Chemwatch – ChemCollect	0.9	5.1	6.1	_	_
Environment/Industry Initiatives					
Business of Sustainable Development	_	4.2	na	na	na
Olympics and Paralympics 2000	0.6	0.3	_	_	_
Environment Industries	1.0	0.9	1.0	1.0	0.4
Best Practice Environmental Management in Mining	0.1	0.1	0.1	0.1	0.1
Industry and Export Development Strategy	0.3	na	na	na	na
Petroleum Environment Advice	na	na	na	na	na
Waste Minimisation					
Eco-efficiency	1.3	1.1	1.3	1.3	0.5
Waste Management Awareness	2.0	1.3	1.1	_	_
Hazardous Materials and the Environment					
Control of Hazardous Waste	0.8	0.8	0.8	0.8	0.4
Risk Assessment of Chemicals	1.5	1.5	1.6	1.7	1.8
Health Effects of Chemicals	0.8	0.8	0.8	0.8	0.8
Managing Health Risks of Genetically Modified Organisms	3.8	3.8	na	na	na
Management of Agricultural and Veterinary Chemicals	0.9	0.9	0.9	0.9	0.9
Radioactive and Toxic Waste	6.5	7.5	na	na	na
Remediation Projects	50.8	4.5	_	_	_

Table A5.1: Environment Protection — New Measures and Programme and Tax

Expenditure Estimates (continued)

Expenditure Estimates (continued)					
Description	1999-00	2000-01	2001-02	2002-03	2003-04
	\$m	\$m	\$m	\$m	\$m
Maralinga Clean-up	0.4	0.1	-	=	_
Protection from Nuclear Installation Hazards	0.9	0.9	0.8	0.8	0.8
Development of National Codes of Practice	0.5	0.5	0.5	0.5	0.5
Transport of Dangerous Goods	na	na	na	na	na
International Activities					
International Programme on Chemical Safety	0.1	0.1	0.1	0.1	0.1
Persistent Organic Pollutants Convention	0.1	0.1	0.1	0.1	0.1
Prior Informed Consent Convention	na	na	na	na	na
Environmental Assessment					
Supervising Scientist ^(e)	9.9	7.9	na	na	na
Environment Approvals and Assessment	4.7	5.0	2.8	3.0	2.2
Petroleum Exploration and Development	0.2	0.1	0.1	0.1	0.1
Tax Deduction for Environmental Activities	19.0	18.0	18.0	19.0	20.0
Research					
A Strategic Alliance	0.3	0.2	0.2	na	na
Environmental Laboratory Analysis	0.6	1.2	1.2	1.2	1.2
Environmental and Urban Impacts of Geohazards	na	na	na	na	na
CSIRO Research (total)	na	8.7	8.7	8.8	na
Sustainable manufacturing	na	4.1	4.1	4.0	na
Managing indoor environmental quality	na	1.9	1.9	2.0	na
Mineral processing with enhanced	na	1.8	1.8	1.9	na
sustainability	IIG	1.0	1.0	1.5	IId
Disposal of petroleum drilling and production wastes	na	0.9	0.9	0.9	na
Measurement of Solar Ultraviolet Radiation	0.3	0.3	0.3	0.3	0.3
Field Measurement of Electromagnetic Radiation	0.2	0.2	0.2	0.2	0.2
Environmental Radioactivity Monitoring	0.3	0.3	0.3	0.4	0.4
Effects of Underwater Explosions on Dugongs	0.1	0.1	_	_	_
Greening of Government	na	na	na	na	na

⁻ denotes nil: na denotes not available

NEW MEASURES

Product Stewardship Arrangements for Waste Oil \$39.7 million in 2000-01

This programme aims to develop and implement product stewardship arrangements for the management of waste oil. These arrangements, supported by legislation, will provide

⁽a) Transitional assistance for a stewardship system was appropriated through the *Appropriation* (Supplementary Measures) Act (No 2) 1999. The measure was identified in the 1999-2000 PAES.

⁽b) In 1999 the Government approved a stewardship system involving the collection of levy revenue (to be identified in the ATO budget statements) and associated benefit payments to recyclers (identified here). The measure will be included in the 2000-01 PBS and is budget neutral as stewardship benefits are fully offset by the levy revenue.

⁽c) This measure has been funded internally through reprioritisation.

⁽d) This includes the Commonwealth's contribution to the National Environment Protection Council Service Corporation for its operational budget. The amount was \$0.4 million in 1999-2000.

⁽e) The difference between 1999-2000 and 2000-01 figures is predominantly due to a reduction in the cost of corporate overheads attributed to the Supervising Scientist.

economic incentives to encourage the environmentally responsible recycling and reuse of waste oil.

Website: www.environment.gov.au/epg/oilrecycling **Publication:** Comprehensive Product Stewardship System for Waste Oil – A Discussion Paper **Contact:** Environment Australia, Environment Protection Group – 02 6274 1064

Diesel National Environment Protection Measure \$10.0 million in 2000-01

The diesel National Environment Protection Measure (NEPM) will address the issue of emissions from all diesel vehicles currently in use in Australia (the in-service fleet) by establishing in-service emission standards. This funding will also be used to establish vehicle emissions testing facilities. This will ensure that vehicles meet acceptable standards throughout their service life, and thereby reduce overall pollutant emissions from the vehicle fleet. Priority will be given to diesel vehicles.

Contact: Environment Australia, Environment Protection Group – 02 6274 1581

National Biotechnology Strategy \$0.3 million in 2000-01

An environmental risk programme for genetically modified organisms is a component of the National Biotechnology Strategy. As part of the programme the Minister for the Environment and Heritage and the Minister for Health and Aged Care will collaborate with CSIRO on an initial project to improve the knowledge base and monitor risks in the field to address some of the most immediate environmental risk priorities.

Contact: Environment Australia, Environment Protection Group – 02 6250 0751

Adelaide Airport Noise Amelioration \$10.3 million in 2000-01

The Government will implement a noise amelioration programme at Adelaide Airport at a cost of around \$60 million over four years. Under the programme, residences and certain public buildings around Adelaide Airport will be offered insulation against the effects of aircraft noise. The programme will offer similar benefits to those available in areas around Sydney Airport suffering similar levels of aircraft noise exposure. It will be funded from a levy on jet aircraft landings in the same way as the Sydney programme.

Website: www.dotrs.gov.au/airports/index.htm **Contact:** Department of Transport and Regional Services, Airports Division – 1800 992 986

ENVIRONMENT PROTECTION

National Environment Protection Council \$0.8 million in 2000-01

The main purpose of the National Environment Protection Council is to identify National Environment Protection Measures (broad framework-setting statutory instruments negotiated between state/territory governments and the Commonwealth Government). National Environment Protection Measures, set out in the Council's enabling legislation, relate to air quality; ambient marine, estuarine and fresh water quality; the protection of amenity in relation to noise; assessment of site contamination; hazardous wastes; the reuse and recycling of used materials; and motor vehicle noise and emissions.

Website: www.nepc.gov.au

Contact: Environment Australia, Environment Protection Group – 02 6274 1175

National Pollutant Inventory \$2.2 million in 2000-01

The National Pollutant Inventory is an Internet database providing information on pollutants emitted into the air, water and land anywhere in Australia. It provides the information base to assist governments in environmental decision making, promotes improved environmental performance by industry and fulfils a community right-to-know obligation in relation to pollution emissions.

Website: www.npi.ea.gov.au
Publication: National Pollutant Inventory Update
Contact: Environment Australia, Environment Protection Group – 02 6274 1488

Environmental Management at Leased Airports \$3.3 million in 2000-01

The Government funds the statutory roles of the Airport Environment Officers at most of the leased airports. These officers are responsible for overseeing environmental regulation, cleaning up and pollution prosecution actions. The Commonwealth is providing \$3 million for employment of both Airport Environment Officers and Airport Building Controllers in 2000-01. This cost is recovered through charges on airport owners and, where appropriate, airport users.

 $\textbf{Website:} \ www.dotrs.gov.au/airports \\ \textbf{Contact:} \ Department \ of \ Transport \ and \ Regional \ Services -02 \ 6274 \ 7390 \\$

Territories and Regional Support \$0.6 million in 2000-01

The Department of Transport and Regional Services supports state-level environmental services for the Indian Ocean Territories and Jervis Bay. These activities include

environmental monitoring, environmental impact assessment, pollution licensing, and water quality control.

Website: www.dotrs.gov.au/terr/index.htm **Contact:** Department of Transport and Regional Services, Territories and Regional Support – 02 6274 8088

Sydney Airport Noise Amelioration \$64.9 million in 2000-01

The Commonwealth will spend \$64.9 million in 2000-01 towards the insulation of aircraft noise affected residences and eligible public buildings under the Sydney Airport Noise Amelioration Programme.

Website: www.dotrs.gov.au/airports/index.htm **Contact:** Department of Transport and Regional Services, Airports Division – 1800 992 986

Remediation of Land Formerly Owned by Australian National \$5.0 million in 2000-01

The Commonwealth is committed to its obligations under agreements signed with South Australia and Tasmania in 1997 (the Railways Agreements) to remediate land in conjunction with the sale of Australian National's businesses. The programme extends to all states and territories except Queensland and has the objective of remediating former Australian National land to the environmental standards applicable in the relevant jurisdiction in 1997 and having regard to the purpose for which the land was used at that time.

Contact: Department of Transport and Regional Services, Rail Industry Branch
- 02 6274 7664

LIVING CITIES PROGRAMME

Air Toxics \$1.4 million in 2000-01

A core element of the Living Cities Programme, the Air Toxics Programme, will develop a national strategy to monitor, establish the levels of community exposure to, and manage emissions of selected air toxics. The Government will also consider whether to include air toxics in a future National Environment Protection Measure.

Air toxics are gaseous, aerosol or particulate pollutants (other than oxides of nitrogen, particles, ozone, carbon monoxide, oxides of sulfur and airborne lead) that are present in the air in low concentrations with characteristics such as toxicity or persistence that make them a hazard to human, plant or animal life.

Website: www.environment.gov.au/airtoxics **Contact:** Environment Australia, Environment Protection Group – 02 6274 1841

Cleaning Our Waterways - Industry Partnership \$0.7 million in 2000-01

The Cleaning Our Waterways – Industry Partnership Programme is funded under the Living Cities Programme. It targets industrial sources of water pollution to improve the quality, amenity and health of waterways in Australia's capital and major cities. The programme supports industries that adopt best practice techniques and technologies to maximise water efficiency and water reuse, and to reduce effluent production and run-off.

Contact: Environment Australia, Environment Protection Group – 02 6274 1870

Urban Stormwater Initiative \$4.0 million in 2000-01

Under the Living Cities Programme, the Government aims to improve the health of urban waterways in major coastal cities. The Urban Stormwater Initiative will encourage improved stormwater management through assisting projects that promote integrated catchment management approaches based on capital works incorporating source control, water sensitive urban design and, where possible, stormwater reuse.

Website: www.environment.gov.au/usi **Publication**: *Urban Stormwater Initiative Guidelines* **Contact:** Environment Australia, Marine Group – 02 6274 1684

Chemwatch - ChemCollect \$5.1 million in 2000-01

ChemCollect is a Commonwealth/state initiative to collect and safely dispose of unwanted agricultural and veterinary chemicals (particularly persistent organochlorine pesticides) from rural areas. These chemicals, if left on farms, pose a risk to human health, the environment and international markets for Australian produce. States will match Commonwealth funding.

Website: www.environment.gov.au/epg/swm/safe.pdf
Publication: Safe Handling of Organochlorine Pesticides on Farms
Contact: Environment Australia, Environment Protection Group – 02 6250 0214

ENVIRONMENT / INDUSTRY INITIATIVES

Business of Sustainable Development Strategy \$4.2 million in 2000-01

The Business of Sustainable Development Strategy is aimed at accelerating the move of business and industry towards sustainability. It includes a number of programme areas, focussing particularly on improving eco-efficiency (environmental and economic improvement) in business. Programmes will be undertaken in partnership with industry, to provide a framework which encourages business to become more sustainable and to provide the ability for business to do so.

Contact: Environment Australian, Environment Protection Group – 02 6274 1622

Sydney 2000 Olympic and Paralympic Games \$0.3 million in 2000-01

The Sydney Green Games are an opportunity to showcase Australia's environmental achievements and industry capabilities to the Australian public and the world, and to make Australia's environmental management of the Games the international benchmark for similar events and other major projects.

Contact: Environment Australia, Environment Protection Group – 02 6274 1330

Environment Industries \$0.9 million in 2000-01

To achieve sustainable development and on-ground environmental change, the Government is promoting Australia's environmental products and services. These products and services are provided by industry and government and are being promoted domestically and overseas. Activities include environmental industry promotion, identification of Australian environmental technologies in mining, identification of leading edge environmental technologies, capacity building in China and Indonesia, and updating Australia's EnviroNet.

Websites: www.environment.gov.au/net/environet.html www.environment.gov.au/epg/eifu Contact: Environment Australia, Environment Protection Group – 02 6274 1423

Best Practice Environmental Management in Mining \$0.1 million in 2000-01

Best Practice Environmental Management in Mining is a successful partnership programme between Environment Australia and the Australian mining industry. The programme encourages best practice principles in mining, from exploration through to construction, operation and eventual mine closure. A number of companies such as Alcoa

of Australia, BHP, North Ltd, Pasminco, Rio Tinto, Western Mining and others have contributed to case studies showcasing best practice.

Publication: *Best Practice Environmental Management in Mining* booklets **Contact:** Environment Australia, Environment Protection Group – 02 6274 1423

Industry and Export Development Strategy

To develop the Australian environmental industry, the Government is preparing an Environmental Management Industries Development Strategy. The strategy will assess market opportunities and evaluate potential for Australian environmental industries with a particular emphasis on capturing export market opportunities.

Website: www.isr.gov.au

Contact: Department of Industry, Science and Resources – 02 6213 7580

Petroleum Environment Advice

The Australian Geological Survey Organisation provides geoscientific advice about the effects of various offshore petroleum industry operations on the nature and quality of offshore marine environments. The work aims to improve resource management and environmental protection.

Website: www.agso.gov.au/

Contact: Australian Geological Survey Organisation, Petroleum and Marine Division

- 02 6249 9450

WASTE MINIMISATION

Eco-efficiency \$1.1 million in 2000-01

The Government is promoting eco-efficiency - the efficiency with which environmental resources are used to meet people's needs - by educating business and identifying activities that can improve their environmental performance. These activities include public environmental reporting, environmental accounting, environmental management systems, life cycle assessment and supply chain management.

Website: www.environment.gov.au/epg/environet/eecp/ **Publication:** *Profiting from Environmental Improvement in Business: An Eco-efficiency*

Information Kit for Australian Industry

Contact: Environment Australia, Environment Protection Group - 02 6274 1671

Waste Management Awareness \$1.3 million in 2000-01

The Waste Management Awareness Programme, under the Natural Heritage Trust, provides funding for waste reduction and resource recovery issues of national strategic benefit. The focus of the programme is to work with business and communities to improve the environmental performance of resource use, reuse and recovery. Activities aim to reduce the quantity of materials entering waste streams; promote greater uptake of reuse and recovery initiatives by business and the community; and develop markets for recovered materials.

Publications: WasteWise Construction Handbook WasteWise Construction Programme Review: A Report to ANZECC **Contact:** Environment Australia, Environment Protection Group – 02 6274 1622

HAZARDOUS MATERIALS AND THE ENVIRONMENT

Control of Hazardous Waste \$0.8 million in 2000-01

The Commonwealth implements and administers the *Hazardous Waste* (*Regulation of Exports and Imports*) *Act 1989.* The main purpose of the Act is to regulate the export and import of hazardous waste to ensure that it is disposed of safely so that human beings and the environment are protected from the harmful effects of the waste. The Act enables Australia to comply with specific obligations under the Basel Convention and other international instruments.

Website: www.environment.gov.au/epg/hwa.html **Publication:** Information Paper No. 1 A Guide to Australia's Laws on Importing and Exporting Hazardous Waste

Contact: Environment Australia, Environment Protection Group – 02 6250 0243

Risk Assessment of Chemicals \$1.5 million in 2000-01

Environmental impacts of new industrial, agricultural and veterinary chemicals are assessed prior to their introduction to Australia. Selected existing chemicals are also assessed. Assessments are conducted on a fully cost-recovered basis (from industry) for the National Industrial Chemicals Notification and Assessment and the National Registration schemes respectively.

Contact: Environment Australia, Environment Protection Group - 02 6250 7519

Health Effects of Chemicals \$0.8 million in 2000-01

The Department of Health and Aged Care provides advice on the potential health effects of chemicals in the environment, including activities which relate to policies for national management of chemicals, international harmonisation of chemical risk assessment and information exchange.

Website: www.health.gov.au/tga **Contact:** Department of Health and Aged Care – 02 6270 4301

Managing Health Risks of Genetically Modified Organisms \$3.8 million in 2000-01

The Commonwealth is working with states and territories to develop a national system to regulate public health and environmental risks associated with genetically modified organisms (GMOs). Governments are also administering interim arrangements for the control of GMOs pending the implementation of the new legislation. Both the current interim and new regulating arrangements focus on identifying and managing risk to the community (health risks) and environment associated with GMOs.

Website: www.health.gov.au/tga/genetech.htm **Contact:** Department of Health and Aged Care – 02 6270 4386

Management of Agricultural and Veterinary Chemicals \$0.9 million in 2000-01

Agriculture, Fisheries and Forestry—Australia develops policies and advice on the environmental, health, and trade risks that may arise from the use of agricultural and veterinary chemicals.

Publication: *Management of Agricultural and Veterinary Chemicals: A National Strategy* **Contact:** Agriculture, Fisheries and Forestry—Australia – 02 6272 5686

Radioactive and Toxic Waste \$7.5 million in 2000-01

The Australian Nuclear Science and Technology Organisation develops environmentally sensitive and cost – effective technologies for the treatment and management of radioactive and other toxic wastes, particularly from the nuclear, mining and resource processing industries.

Website: www.ansto.gov.au/ansto/environment1/research/radio01.html
Contact: Australian Nuclear Science and Technology Organisation, Materials Division
- 02 9717 3265

Remediation Projects \$4.5 million in 2000-01

The Department of Defence is undertaking major projects to remediate Mary's Creek, Jervis Bay and Albion Explosives Factory site at Deer Park, Melbourne. Mary's Creek remediation works are expected to commence in 2001. The project at Albion Explosives Factory covers the remediation and release of about 460 hectares of land in the western suburbs of Melbourne, including site management and land use planning for release on best terms.

Contact: Defence Estate Organisation – 02 6265 3895 / 02 6265 4134

Maralinga Clean-up \$0.1 million in 2000-01

The Commonwealth is managing the clean-up of residual radiation contamination from atomic weapons tests at Maralinga, South Australia, to delineate the contaminated areas and to verify that the rehabilitation criteria have been met. In addition, the Commonwealth provides a health physics auditing and lung monitoring service for the workers involved in the project. Much of the clean-up work has been completed and the Commonwealth is assessing the risks posed by the remaining residue.

Website: www.arpansa.gov.au
Publication: Annual Report of the Chief Executive Officer of ARPANSA 1998-99
Contact: Australian Radiation Protection and Nuclear Safety Agency, Environmental
Health and Radiation Branch – 03 9433 2211

Protection from Nuclear Installation Hazards \$0.9 million in 2000-01

The Government sets regulatory requirements to ensure that the amount of airborne and liquid radioactive discharges from the Commonwealth's nuclear installations are as low as reasonably achievable, and that the risk of accidental releases of radioactive materials is within international standards. Monitoring of the Australian Nuclear Science and Technology Organisation's installations confirms that the radioactive discharges are maintained at levels that are comparable to those of similar facilities elsewhere, and that the radiation doses that could arise from those discharges are a small fraction of the national and international limits.

Website: www.arpansa.gov.au
Publication: Annual Report of the Chief Executive Officer of ARPANSA 1998-99
Contact: Australian Radiation Protection and Nuclear Safety Agency, Regulatory Branch
– 02 9545 8333

Development of National Codes of Practice \$0.5 million in 2000-01

The national code of practice will provide national uniformity in radiation protection practices, including the mining and milling of radioactive ores and the safe disposal of radioactive wastes.

Website: www.arpansa.gov.au
Publication: Annual Report of the Chief Executive Officer of ARPANSA 1998-99
Contact: Australian Radiation Protection and Nuclear Safety Agency, Policy and
Corporate Support Branch – 03 9433 2211

Transport of Dangerous Goods

The Commonwealth, in cooperation with the states and territories, has put in place a national uniform regulatory regime for the transport of dangerous goods by road and rail. This legislation aims to ensure the protection of the environment, people and property during land transport of dangerous goods. The same uniform safe transport requirements now apply in each state and territory.

Website: www.dotrs.gov.au/dgoods **Publication:** The Australian Dangerous Goods Code (6th ed.)
The Australian Explosives Code (2nd ed.) **Contact:** Department of Transport and Regional Services, Land Policy Branch
- 02 6274 7016

INTERNATIONAL ACTIVITIES

International Programme on Chemical Safety \$0.1 million in 2000-01

The United Nations International Programme on Chemical Safety provides internationally evaluated scientific bases on which countries may develop their own chemical safety measures. The overall objective of the programme is to improve international and national management of chemicals.

Website: www.who.int/pcs/index.htm **Contact:** Department of Health and Aged Care – 02 6298 8848

Persistent Organic Pollutants Convention \$0.1 million in 2000-01

The Government participates in the intergovernmental negotiations for a convention on persistent organic pollutants (POPs) to control the production and release into the environment of persistent organic pollutants. The negotiations will cover 12 agreed POPs and will address possible expansion of this list.

Website: www.dfat.gov.au/environment **Contact:** Department of Foreign Affairs and Trade, Environment Branch – 02 6261 2335

Prior Informed Consent Convention

The Government will continue to participate in the interim arrangements of the Prior Informed Consent Convention (for certain hazardous chemicals and pesticides in international trade). The interim procedure has operated since September 1998 and will continue to do so until 50 governments have ratified the Rotterdam Convention, thus bringing it into force.

Website: www.dfat.gov.au/environment **Contact:** Department of Foreign Affairs and Trade, Environment Branch – 02 6261 2335

ENVIRONMENTAL ASSESSMENT

Supervising Scientist \$7.9 million in 2000-01

The Environmental Research Institute of the Supervising Scientist undertakes environmental research and reviews the environmental performance of uranium mines in the Alligator Rivers Region in the Northern Territory to ensure the protection of Kakadu National Park from the potential impacts of uranium mining. The Supervising Scientist also undertakes scientific research for the protection and management of the wetlands of northern Australia.

Website: www.environment.gov.au/science/index.html Publication: Supervising Scientist for the Alligator Rivers Region Annual Report 1998-99 Contact: Environment Australia, Supervising Scientist – 08 8979 9711

Environmental Approvals and Assessment \$5.0 million in 2000-01

The Approvals and Legislation Division of Environment Australia is responsible for the administration of referrals, assessment and approval processes under the *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act), the *Environment Protection (Impact of Proposals) Act 1974* (the EPIP Act) and the *Telecommunications Act 1997*. Implementation of the EPBC Act in 2000-01 will significantly change and strengthen the Commonwealth's role in the regulation of actions that may impact significantly on matters

of national environmental significance. Approval, compliance and enforcement powers under the EPBC Act are new activities. The Act also provides for the accreditation of state assessments and, in limited circumstances, state environmental approvals.

Website: www.environment.gov.au/net/eianet.html **Contact:** Environment Australia, Environment Protection Group – 02 6274 1444

Petroleum Exploration and Development \$0.1 million in 2000-01

The Government develops policy, provides advice and maintains regulatory arrangements under the *Petroleum (Submerged Lands) Act 1967* for the environmental assessment and approvals of petroleum exploration and development. These activities will be covered by the *Environment Protection and Biodiversity Conservation Act 1999*.

Publication: *Guidelines for Preparation and Submission of an Environment Plan* **Contact:** Department of Industry, Science and Resources – 02 6213 7934

Tax Deduction for Environmental Activities \$18.0 million in 2000-01

Tax deductions can be claimed over ten years or the life of a project, whichever is the least, for expenditure on an eligible environmental impact study. Immediate tax deductions can be claimed for expenditure on preventing, combating or rectifying pollution, or treating, cleaning up, removing or storing waste, where the waste or pollution was produced by, or is on the site of, the taxpayer's income-producing activities.

Publication: *MM7 and MM8 Tax Expenditures Statement 1998-99* **Contact:** Australian Tax Office – 02 6216 5781

RESEARCH

A Strategic Alliance \$0.2 million in 2000-01

The Commonwealth is funding an alliance between three Australian and two German research organisations to help solve water contamination problems in Australia and overseas, under the Australia-Germany Collaboration on Water and Environment Research and Development. The project targets a major national and international concern in relation to managing contaminated sediments.

Contact: Department of Industry, Science and Resources – 02 6213 6615

Environmental Laboratory Analysis \$1.2 million in 2000-01

Australian Government Analytical Laboratories is the Commonwealth's crisis response laboratory providing a capability for the analysis of environmental pollutants and contaminants. It is currently developing a pilot facility for ultra-trace dioxin analysis, and methods for testing food and crop samples for the presence of genetically modified organisms.

Contact: Australian Government Analytical Laboratories - 02 6213 6102

Environmental and Urban Impacts of Geohazards

The Australian Geological Survey Organisation provides research and information about earthquakes, landslides, tsunamis and storm tides, floods, volcanic eruptions, and magnetic storms. These natural hazards can damage the environment directly, for example, coastal erosion from tsunamis and storm tides, or indirectly through pollution following earthquake damage to pipelines, transportation systems, or waste storage facilities. The Australian Geological Survey Organisation also monitors nuclear tests throughout the world.

Website: www.agso.gov.au/ **Contact:** Australian Geological Survey Organisation – 02 6249 9611

CSIRO Research \$8.7 million in 2000-01

CSIRO undertakes production-orientated research. The research focusses on the key outcome of sustainability in all uses of environmental resources. Some major examples of such activity include: sustainable manufacturing, managing indoor environmental quality, mineral processing with enhanced sustainability, and disposal of petroleum drilling and production wastes.

Website: www.csiro.au Contact: CSIRO – 02 6246 4557

Measurement of Solar Ultraviolet Radiation \$0.3 million in 2000-01

The Commonwealth maintains a solar ultraviolet radiation (UVR) monitoring network covering the Australian capital cities, some major population centres, and the Australian stations in Antarctica. The monitoring network determines the character of the UVR environment and assesses the impact of depletion of the ozone layer on UVR layers and its consequences for public health.

Website: www.arpansa.gov.au **Publication**: Annual Report of the Chief Executive Officer of ARPANSA 1998-99 **Contact**: Australian Radiation Protection and Nuclear Safety Agency, Non-ionizing

Radiation – 03 9433 2211

Field Measurement of Electromagnetic Radiation \$0.2 million in 2000-01

The Commonwealth conducts an environmental surveillance programme of electromagnetic radiations (EMR) in Australian cities. The purpose of this monitoring is to determine the levels of radiofrequency EMR from all sources in populated areas and to assess the impact of increasing numbers of mobile phone base stations on the population's exposure to EMR.

Website: www.arpansa.gov.au **Contact:** Australian Radiation Protection and Nuclear Safety Agency, Non-Ionizing Radiation – 03 9433 2211

Environmental Radioactivity Monitoring \$0.3 million in 2000-01

The Commonwealth conducts an environmental surveillance programme involving an Australia-wide network of air and rainfall sampling stations for monitoring radioactive fallout. This network enables the detection of very low levels of radioactive contamination should they arise in the Australian environment from any local or overseas source. Releases of radioactivity to the environment by the Australian Nuclear Science and Technology Organisation facility are monitored, audited and reported annually, and annual inspections and environmental monitoring are conducted at the radioactive waste storage facilities in the Woomera. The Commonwealth also researches radon and the behaviour of radioactive aerosols in the environment.

Website: www.arpansa.gov.au **Contact:** Australian Radiation Protection and Nuclear Safety Agency, Health and Radiation – 03 9433 2211

Effects of Underwater Explosions on Dugongs \$0.1 million in 2000-01

The Department of Defence funds research to assess the effects of underwater explosions on dugong populations.

Contact: Defence Estate Organisation - 02 6266 7498

GREENING OF GOVERNMENT

Most Commonwealth portfolios have policies and programmes aimed at reducing environmental impacts of their operations and activities (Table A5.2).

Table A5.2: Summary of Environmental Management in Commonwealth Portfolios

Portfolio	Recycling of	Energy/	Environmental	Environmental
	Paper and	Water	Management	Building
	Other	Saving	Plan and/or	Design
	Wastes		Audits	
Agriculture Fisheries and Forestry — Australia		•		
Attorney-General's	~	~		
Bureau of Statistics	V	V	V	~
Communication, Information Technology and the Arts	~	~	V	~
Defence	~	~	V	
Education, Training and Youth Affairs	~	V	V	~
Employment, Workplace Relations and Small Business	~	~	~	
Environment and Heritage	~	~	✓	~
Family and Community Services	~	~	✓	~
Finance and Administration	~	~		~
Foreign Affairs and Trade	~	~		~
Health and Aged Care	~			
Immigration and Multicultural Affairs	~	~	V	
Industry, Science and Resources	~	~		
Prime Minister and Cabinet	~	~		~
Transport and Regional Services	~	~		~
Treasury	~	V		~
Veterans' Affairs	V	~	V	~

In addition to these standard measures, many agencies have adopted other measures that have resulted in improved environmental outcomes. Some examples are:

The Department of Family and Community Services national office recently signed a
two-year contract with a local bus company to provide transport for staff travelling
between two main office areas in Canberra. Initially introduced for a trial period of 12
months, this service is a low-cost and energy-efficient alternative to using private motor
vehicles and taxis.

- Centrelink is installing new energy management equipment and software in its national office complex to enable more energy efficient operation of building plant and equipment. Centrelink estimates that the savings from reduced electricity and gas consumption will exceed initial capital outlays within two years. Centrelink is also expanding its waste minimisation and recycling programme at its national office to produce savings of \$520,000 per annum.
- Special Broadcasting Service (SBS) embarked on a building upgrade programme where they used paint colours that would decrease the need for lighting, and carpet made partly from recycled products. The SBS energy efficiency programme has resulted in a 25 per cent improvement in building efficiency since 1992-93.
- Australia Post has joined the Greenhouse Challenge programme (see Appendix 6 Greenhouse and Atmosphere) and in its first reporting year reduced total greenhouse gas emissions by 14.9 per cent (50,000 tonnes) of CO₂ equivalent, well in excess of the anticipated 1.8 per cent saving. It is anticipated that an annual saving of 20 per cent will be achievable by the year 2005.
- The Department of the Treasury has entered into a purchasing contract with the Australian Capital Territory Electricity and Water Corporation to purchase 10 per cent green energy for the financial year 1999-2000.
- The Department of Environment and Heritage, a member of the Greenhouse Challenge programme (see Appendix 6 Greenhouse and Atmosphere), has an Environment Management System (EMS) which has achieved certification to the international environmental management standard ISO 14001. The EMS includes no waste bins at desks and the separation of wastes into five different bins. Since inception the EMS has reduced wastes sent to landfill by over 95 per cent; collected over 30 tonnes of organic material since 1996; collected almost 13 tonnes of co-mingled material for recycling since 1997; collected over 180 tonnes of paper/cardboard for recycling since 1997; reduced direct greenhouse emissions by over 40 per cent per staff member per annum since 1997 (including energy efficiency initiatives).
- The Department of Defence is developing an environmental management system to standardise environmental management across the portfolio. Environment management plans will cover most facilities and training areas by the end of this financial year. A geographic information system will support and guide effective environmental management across the Defence estate.

Training activity is conducted in an environmentally responsible manner, to ensure sustainability of Defence training areas and to minimise damage to non-Defence land. The next major combined Australian Defence Force / US Defence Force exercise will be held in 2001 and will be subject to rigorous environmental assessment and monitoring.

Appendix 6 – Greenhouse and Atmosphere

Table A6.1: Greenhouse and Atmosphere – New Measures and Programme and Tax Expenditure Estimates

This table lists activities in the order that they appear in the following text. 'na' denotes that spending cannot be precisely identified and it does not mean that spending is not occurring.

Description	1999-00	2000-01	2001-02	2002-03	2003-04
	\$m	\$m	\$m	\$m	\$m
NEW MEASURES					
Establishment of a Regulator for the Mandatory Target for the Uptake of Renewable Energy in Power Supplies ^(a)	-	1.6	1.7	1.7	1.5
Greenhouse Gas Abatement Programme	_	100.0	100.0	100.0	100.0
Supporting Renewable Remote Power Generation	_	66.0	66.0	66.0	66.0
Supporting Photovoltaic Systems	_	4.0	6.0	9.0	12.0
Compressed Natural Gas and Liquid Petroleum Gas Vehicle Conversion	_	15.0	20.0	20.0	20.0
Diesel and Alternative Fuels Grants Scheme	-	9.0	12.0	18.0	_
Supporting Development and Commercialisation of Renewable Energy	-	4.0	5.0	7.0	10.0
PROGRAMME AND TAX EXPENDITURE ESTIM	IATES				
Greenhouse					
International Activities	1.6	na	na	na	na
International Greenhouse Partnerships	2.6	2.0	_	_	_
National Greenhouse Strategy	5.5	4.5	_	_	_
Emissions Trading	1.1	na	na	na	na
National Carbon Accounting System	5.3	2.8	1.2	2.1	_
Cooperative Research Centre for Greenhouse Accounting	na	na	na	na	na
Bush for Greenhouse	1.4	1.1	1.1	1.1	_
Greenhouse Challenge	5.5	7.5	7.5	6.2	_
Cities for Climate Protection	2.4	2.7	2.7	2.7	_
Household Greenhouse Action	0.5	0.6	0.3	_	_
Mandatory Targets for the Uptake of Renewable Energy in Power Supplies	0.7	0.7	0.7	0.7	_
Renewable Energy Support					
Renewable Energy Commercialisation	3.4	6.1	6.1	9.3	_
Renewable Energy Showcase	2.7	3.1	_	_	_
Renewable Energy Equity Fund	0.2	4.1	3.1	3.1	2.6
Renewable Energy Internet Site	0.1				_
Emerging and Renewable Energy Action Agenda	0.5	na	na	na	na
Renewable Energy Industry	1.0	3.5	3.0	3.0	2.5
Cooperative Research Centre for Renewable Energy	1.5	1.5	1.5	1.5	_
Efficiency Standards for Power Generation	0.7	0.6	0.6	0.6	_
Energy Performance Codes and Standards	2.2	2.2	2.2	2.2	_
Raising Consumer Awareness in Energy Efficient Housing	••			_	_
Energy Efficiency in Government Operations	1.4	1.3	1.3	1.3	_
Accelerating Energy Market Reform	0.1	na	na	na	na

Table A6.1: Greenhouse and Atmosphere – New Measures and Programme and

Tax Expenditure Estimates (continued)

Description	1999-00	2000-01	2001-02	2002-03	2003-04
•	\$m	\$m	\$m	\$m	\$m
Energy Efficiency Best Practice	na	2.5	2.5	2.5	2.5
Environmental Strategy for the Motor Vehicle Industry	0.7	na	na	na	na
Compressed Natural Gas Infrastructure	2.8	2.3	1.8	_	_
Domestic Greenhouse Policy	1.5	1.5	1.5	1.5	_
Science and Research					
National Greenhouse Science	3.9	4.1	4.1	4.1	_
Geological Disposal of Carbon Dioxide	0.1	0.1	_	_	-
Human Impact on Climate Change	2.3	1.2	_	_	-
CSIRO Research	_	25.5	24.8	24.4	
Bureau of Meteorology ^(b)	6.0	5.9	5.9	5.8	5.8
Biospheric Sources and Sinks for Greenhouse Gases	0.5	0.5	na	na	na
Coastal Climatology	na	na	na	na	na
Ozone Protection					
Ozone Protection and Halon Bank	14.6	4.9	3.4	2.0	1.8
Ozone Protection Reserve	0.5	0.5	0.5	0.5	0.5
Ozone Protection Act	na	na	na	na	na
Air Quality					
Air Pollution in Major Cities	5.1	4.1	4.1	_	_
Air Quality Management	0.4	0.4	0.4	0.4	0.4

⁻ denotes nil; na denotes not applicable; .. denotes not zero, but rounded to zero

NEW MEASURES

Establishment of a Regulator for the Mandatory Target for the Uptake of Renewable Energy in Power Supplies \$1.6 million in 2000-01

The Government is developing legislation to implement its commitment to a mandatory target for the uptake of renewable energy in power supplies. Wholesale purchasers of electricity will be legally required to source increasing amounts of electricity from renewable energy sources, increasing the contribution that renewable energy makes to meeting Australia's electricity needs from the current levels of around 10 per cent to approximately 12 per cent by 2010. The legislation will establish the Office of the Renewable Energy Regulator to oversee the process, with funding to commence from 1 July 2000.

> **Website:** www.greenhouse.gov.au/markets/2percent_ren Contact: Australian Greenhouse Office, Sustainable Energy Group - 02 6274 1416

This measure has been funded internally through reprioritisation.

Estimates of appropriation-based Bureau of Meteorology expenditure attributable to atmospheric monitoring, research and service provision in support of environmental objectives.

Greenhouse Gas Abatement Programme \$100.0 million in 2000-01

The Government is providing \$400 million from 2000-01 to 2003-04 under the Greenhouse Gas Abatement Programme to reduce Australia's net greenhouse gas emissions by supporting activities that are likely to result in substantial emission reduction or substantial sink enhancement. This significantly builds upon the Prime Minister's previously announced \$180 million Greenhouse Programme (November 1997) which is presently being implemented. The new programme will play an important role in meeting Australia's commitment under the Kyoto protocol.

Website: www.greenhouse.gov.au/ggap/ **Contact:** Australian Greenhouse Office, Greenhouse Gas Abatement Programme – 02 6274 1648

Supporting Renewable Remote Power Generation \$66.0 million in 2000-01

The Renewable Remote Power Generation Programme will provide a rebate of up to 50 per cent of the cost of converting diesel-based, off-grid electricity supplies to renewable energy technologies. The programme will be funded from excise paid on diesel used to generate electricity by publicly owned public generators. States and territories will be allocated funding on the basis of the relevant diesel fuel excise paid in that state or territory. Up to \$264 million will be available over the four-year life of the programme.

Website: www.greenhouse.gov.au/renewable/initiatives.html **Contact:** Australian Greenhouse Office, Renewable Energy – 02 6274 1832

Supporting Photovoltaic Systems \$4.0 million in 2000-01

Under the Photovoltaic Rebate Programme, cash rebates are now available to householders who install grid-connected or stand-alone photovoltaic systems. A total of \$31 million is available over the four-year life of the programme from 1 July 2000. The programme was commenced early for residential consumers from 1 January 2000, to address industry concern about a potential drop in sales as customers deferred purchases in anticipation of the rebate. It will be expanded from 1 July 2000 to provide rebates to owners of community use buildings, such as schools.

Website: www.greenhouse.gov.au/renewable/initiatives.html **Contact:** Australian Greenhouse Office, Renewable Energy – 02 6274 1832

Compressed Natural Gas and Liquid Petroleum Gas Vehicle Conversion \$15.0 million in 2000-01

The Alternative Fuels Conversion Programme was announced by the Prime Minister in May 1999 and commenced in March 2000. The programme is designed to facilitate a strategic shift by Australia's heavier commercial vehicle and bus fleets to cleaner

compressed natural gas or liquefied petroleum gas fuels. A total of \$75 million has been allocated to the programme up to July 2004 to support the conversion of conventionally fuelled buses and commercial vehicles weighing 3.5 tonnes gross vehicle mass to compressed natural gas or liquid petroleum gas.

Website: www.greenhouse.gov.au/transport **Contact:** Australian Greenhouse Office, Alternative Fuels Team – 02 6274 1421

Diesel and Alternative Fuels Grants Scheme \$9.0 million in 2000-01

The intention of the scheme is to maintain the current price relativities between diesel and alternative transport fuels by allowing those on-road transport operators who are eligible for the diesel fuel grant to also be eligible for alternative fuel grants. The retention of the existing price differential between diesel and alternative fuels will encourage wider use of alternative fuels, reduce greenhouse gas emissions and improve air quality. Eligible users of alternative fuels such as compressed natural gas, liquid petroleum gas and recycled waste oil, and renewable fuels such as ethanol and canola oil, will attract alternative fuel grants.

Website: www.greenhouse.gov.au/renewable **Contact:** Australian Greenhouse Office, Renewable Energy – 02 6274 1832

Supporting Development and Commercialisation of Renewable Energy \$4.0 million in 2000-01

The Renewable Energy Commercialisation Programme is a five-year, competitive grants programme that promotes renewable energy initiatives that have strong commercial potential. The Prime Minister announced the programme's funding boost to \$56 million (from \$30 million) in May 1999.

Website: www.greenhouse.gov.au/renewable **Contact:** Australian Greenhouse Office, Renewable Energy – 02 6274 1832

GREENHOUSE

International Activities

The Government will continue its active participation in global negotiations to extend international commitments to address the threat of climate change. A key focus will be the negotiations to realise the Kyoto protocol to the United Nations Convention on Climate Change, particularly land use change and forestry elements. Other activities include involvement in related environmental negotiations, international reporting on progress on Australia's convention implementation and Australian input to international scientific bodies.

Website: www.greenhouse.gov.au/international/ **Contact:** Australian Greenhouse Office, Climate Change International Team – 02 6274 1931

International Greenhouse Partnerships \$2.0 million in 2000-01

The main goals of the International Greenhouse Partnerships Programme are to help establish cooperatively implemented project-based flexibility mechanisms as outlined under the Kyoto protocol and to ensure Australia and Australian industry gains experience in the operation of these mechanisms.

Website: www.isr.gov.au/resources/energy_greenhouse/igp/index.html Contact: Department of Industry, Science and Resources, International Greenhouse Partnerships Programme – 02 6213 7891

National Greenhouse Strategy \$4.5 million in 2000-01

The National Greenhouse Strategy, released in November 1998, provides a strategic policy framework through which Australia's international commitments will be met. It represents a commitment by the Commonwealth Government and state and territory governments to comprehensive action on greenhouse. The Commonwealth work programme for 2000 is focussed on continued delivery of Commonwealth measures and encouraging high quality outcomes for nationally focussed measures. These are in the areas of communication, education and training, life cycle assessment, and the development of environmental management strategies for the synthetic gases included in the Kyoto protocol. The first report on progress for the implementation of the National Greenhouse Strategy will be available in the second half of 2000. Key areas of expenditure include projections of Australia's greenhouse gas emissions on a sector by sector basis and analysis of the impact of current and proposed greenhouse gas abatement measures, and the National Greenhouse Gas Inventory that fulfils Australia's commitment to the Framework Convention on Climate Change to provide annual estimates of emissions and sinks of man-made greenhouse gases on a sectoral basis.

Websites: www.greenhouse.gov.au/pubs/ngs/ www.greenhouse.gov.au/inventory/index.html Contact: Australian Greenhouse Office, Policy and Planning Team – 02 6274 1822

Emissions Trading

The Emissions Trading Team is responsible for providing policy advice to the Commonwealth Government on the establishment of a national emissions trading system. A possible consequence of the Kyoto protocol is that emissions permits and credits will become tradeable internationally at some time in the future. Greenhouse gas emissions trading is potentially a low cost policy instrument, and is being considered within an overall policy framework

Website: www.greenhouse.gov.au/emissionstrading **Contact:** Australian Greenhouse Office, Emissions Trading Team – 02 6274 1132

National Carbon Accounting System \$2.8 million in 2000-01

The National Carbon Accounting System aims to provide a complete accounting and forecasting capability for human-induced sources and sinks of greenhouse gas emissions from Australian land-based systems. The information obtained will be used to fulfil the requirements of the UN Framework Convention on Climate Change and its instruments.

Website: www.greenhouse.gov.au/ncas **Contact**: Australian Greenhouse Office, Carbon Accounting Team – 02 6274 1926

Cooperative Research Centre for Greenhouse Accounting

The goal of the Cooperative Research Centre is to ensure that Australia is in the strongest position possible to argue internationally for a comprehensive system of accounting for carbon emissions and sinks. This will be achieved by demonstrating that emissions and sinks can be measured accurately.

Website: www.isr.gov.au/crc/centres/environ/tca.html **Contact:** Australian Greenhouse Office, Carbon Accounting Team – 02 6274 1926

Bush for Greenhouse \$1.1 million in 2000-01

The Government has allocated \$5.5 million from 1998-99 to 2002-03 to Bush for Greenhouse. The programme will enhance Australia's greenhouse sinks through facilitating corporate investment in revegetation activities.

Website: www.greenhouse.gov.au/pubs/factsheets/fs_bush.html **Contact:** Australian Greenhouse Office, National Sinks Team – 02 6274 1829

Greenhouse Challenge \$7.5 million in 2000-01

The Greenhouse Challenge is a joint initiative between the Commonwealth Government and industry to abate greenhouse gas emissions. Participating organisations sign agreements with the Government that provide the framework for undertaking and reporting on actions to abate emissions.

Website: www.greenhouse.gov.au **Contact:** Australian Greenhouse Office – 02 6274 1888

Cities for Climate Protection \$2.7 million in 2000-01

The Cities for Climate Protection – Australia Programme is a partnership between the Australian Greenhouse Office and the International Council for Local Environmental

Initiatives. The programme provides tailored support for participating councils and their communities to help them identify and implement emission reduction actions.

Website: www.greenhouse.gov.au/lgmodules/ or www.iclei.org/ccp-au/ **Contact:** Australian Greenhouse Office, Community Partnerships – 02 6274 1888

Household Greenhouse Action \$0.6 million in 2000-01

This programme aims to reduce greenhouse gas emissions in the residential sector by facilitating partnerships between key intermediaries from the community, industry and governments to address barriers to the supply, demand and effective use of energy efficient goods and services to households. Twenty partnership projects are to be implemented by mid-2002.

Website: www.greenhouse.gov.au **Contact:** Australian Greenhouse Office – 02 6274 1888

Mandatory Targets for the Uptake of Renewable Energy in Power Supplies \$0.7 million in 2000-01

Wholesale purchasers of electricity will be required to source increasing amounts of electricity from accredited renewable energy sources. Over the period from commencement (scheduled for 2001) to 2010, the target will gradually rise to 9,500 GWh of electricity generated from renewable energy sources. From 2010 to 2020, the target will remain stable at 9,500 GWh each year. An allocation of \$3.8 million over five years is provided to achieve the target.

Website: www.greenhouse.gov.au/markets/2percent_ren/ **Contact:** Australian Greenhouse Office, Sustainable Energy Group – 02 6274 1978

Renewable Energy Support \$16.9 million in 2000-01

To encourage the uptake of renewable energy, the Government has provided almost \$400 million over five years for programmes to support the commercialisation and application of renewable energy technologies, and to support the development of Australia's renewable energy industry. This support comprises \$60 million over five years and up to a further \$321 million over four years commencing 1 July 2000.

Renewable Energy Commercialisation

The Renewable Energy Commercialisation Programme is a five-year competitive grants programme that provides support for strategically important renewable energy initiatives that have strong commercial potential.

Renewable Energy Showcase

The Renewable Energy Showcase is a \$10 million one-off competitive grants programme running from 1998-99 to 2000-01, designed to develop and showcase leading, innovative Australian renewable energy commercialisation projects. The successful tenders involve wind, solar and biomass technologies.

Website: www.greenhouse.gov.au/renewable/renew2.html **Contact:** Australian Greenhouse Office, Renewable Energy – 02 6274 1832

Renewable Energy Equity Fund

The Renewable Energy Equity Fund focusses on facilitating the commercialisation and application of renewable energy technologies through the provision of equity finance. Government funding of almost \$20 million from 1998-99 to 2008-09 will be provided and invested along with private sector funding on a 2:1 basis.

Website: www.greenhouse.gov.au/renewable/renew4.html **Contact:** Australian Greenhouse Office, Renewable Energy – 02 6274 1832

Renewable Energy Internet Site

The Renewable Energy Internet Site is designed to support the Australian renewable energy industry. It provides an on-line database covering all organisations in the Australian renewable energy industry to assist customers to find suppliers and facilitate networking within the industry. It also includes a searchable database of all Australian renewable energy installations over 5kW, descriptions of renewable energy technologies and how to use them, and information on government support for the industry.

Website: renewable.greenhouse.gov.au/ **Contact:** Australian Greenhouse Office, Renewable Energy – 02 6274 1832

Emerging and Renewable Energy Action Agenda

In collaboration with industry and other stakeholders, the Commonwealth is developing an action agenda for emerging and renewable energy to develop internationally competitive Australian renewable energy industries servicing Australian and export markets. This action agenda will be finalised in the second quarter of 2000 and will contain strategies and actions for government and industry.

Website: www.isr.gov.au/agendas **Contact:** Department of Industry, Science and Resources, Environment Industries – 02 6213 7580

Renewable Energy Industry \$3.5 million in 2000-01

The Renewable Energy Industry Programme provides venture capital to early stage companies and other incorporated bodies that are commercialising research and development in renewable energy technologies. The programme also fosters an understanding of the renewable energy industry in the venture capital sector.

Website: www.ausindustry.gov.au/documents/dir8/doc501208.html **Contact:** Department of Industry, Science and Resources, AusIndustry – 02 6213 7394

Cooperative Research Centre for Renewable Energy \$1.5 million in 2000-01

The centre researches four clearly defined and linked programmes: power generation, energy efficiency, energy storage and power conditioning. These are all essential elements of efficient and cost-effective renewable energy delivery systems. The research focusses on a number of sources of energy including photovoltaics, solar-thermal, electric windows and wind.

Website: www.acre.murdoch.edu.au **Contact:** CRC for Renewable Energy – 08 9360 6620

Efficiency Standards for Power Generation \$0.6 million in 2000-01

The objective of the Efficiency Standards for Power Generation Programme is to encourage fossil fuel generators to move towards best practice plant performance and to reduce the greenhouse intensity of energy supply. The Government has provided \$4.1 million for the five-year period beginning 1998-99.

Website: www.greenhouse.gov.au/markets **Contact:** Australian Greenhouse Office, Sustainable Energy Group – 02 6274 1978

Energy Performance Codes and Standards \$2.2 million in 2000-01

Codes and Standards for Housing and Commercial Buildings

The Government is continuing to work towards the introduction of minimum energy performance requirements in the Building Code of Australia. Following the publishing of studies quantifying the problem and describing the scope of the building code change exercise, plus extensive consultation with stakeholders, the Government is implementing a code change programme that will deliver both economic and environmental benefits to Australia. Significant advances are continuing to be made on energy efficiency of Australian buildings through the support industry best practice initiatives.

Contact: Australian Greenhouse Office, Sustainable Energy Group – 02 6274 1978

Codes and Standards for Domestic Appliances and Industrial Equipment

In a joint initiative with state and territory governments, the Australian Greenhouse Office is encouraging the manufacture and purchase of energy efficient household appliances and commercial and industrial equipment. Improvements in product design, the development of Minimum Energy Performance Standards, and energy labelling have an important role to play. Funding of \$4.4 million over four years commencing in 1998 has been provided to undertake these initiatives.

Contact: Australian Greenhouse Office, Sustainable Energy Group – 02 6274 1978

Raising Consumer Awareness in Energy Efficient Housing

This initiative of the Building and Construction Action Agenda aims to raise consumer awareness of energy efficient housing. The programme will complement the voluntary initiatives being undertaken by industry including the introduction of minimum energy standards into the Building Code of Australia.

Contact: Department of Industry, Science and Resources – 02 6213 7277

Energy Efficiency in Government Operations \$1.3 million in 2000-01

The Government Operations Programme will receive \$6.6 million over the five years 1998-99 to 2002-03 to improve energy efficiency in Commonwealth operations.

Contact: Australian Greenhouse Office, Government Operations- 02 6274 1888

Accelerating Energy Market Reform

The Government will pursue reform of energy markets particularly regarding energy market trading pools and the monitoring of renewables measure. The Accelerating Energy Market Reform Measure aims to lower the rate of emissions growth by improving the economic efficiency of energy supply. The measure will expand energy market reforms to extend electricity reform, deliver integrated and compatible national frameworks for gas and electricity by 2002, and, with the states, develop the means to identify greenhouse intensity of energy sources in energy market trading pools by 2001. The Australian Greenhouse Office works closely with the Department of Industry, Science and Resources, which has lead responsibility for this measure.

Website: www.greenhouse.gov.au/markets/reform/
Publication: Allen Consulting Group Pty Ltd and McLennan Magasanik Associates Pty
Ltd, 1999. Energy Market Reform and Greenhouse Gas Emission Reductions: A report to the

Department of Industry, Science and Resources

Contact: Department of Industry, Science and Resources – 02 6213 7921

Energy Efficiency Best Practice \$2.5 million in 2000-01

This voluntary programme involves government working with industry to maximise reductions in greenhouse gas emissions and encourage energy efficiency benchmarking and best practice.

Website: www.isr.gov.au/resources/netenergy/domestic/bpp
Publication: Energy Efficiency Investment in Australia
Contact: Department of Industry, Science and Resources, Energy Efficiency Best Practice
- 02 6213 7871

Environmental Strategy for the Motor Vehicle Industry

The Government is implementing a range of measures under the Environmental Strategy for the Motor Vehicle Industry aimed at reducing greenhouse gas emissions from the motor vehicle fleet. The Commonwealth Government is also working closely with the states and territories through the National Greenhouse Strategy to reduce greenhouse gas emissions from the transport sector.

Website: www.greenhouse.gov.au/transport **Contact:** Australian Greenhouse Office, Sustainable Transport – 02 6274 1888

Compressed Natural Gas Infrastructure \$2.3 million in 2000-01

The Government established the Compressed Natural Gas Infrastructure Programme in 1998-99, and has doubled the allocation of funds to this programme to \$7.6 million over four years. The objective of the programme is to support the development of a network of compressed natural gas refuelling stations in selected areas where support by local organisations has been proven. The aim is to encourage fleet operators, particularly light commercial vehicles, to switch to compressed natural gas. Following the completion of a National Priority Analysis Study in early 2000, up to 20 publicly accessible refuelling sites should be established around Australia by 2002 in addition to the 12 existing sites.

Contact: Australian Greenhouse Office, Alternative Fuels Team - 02 6274 1389

Domestic Greenhouse Policy \$1.5 million in 2000-01

The Domestic Greenhouse Policy Branch contributes to developing and implementing domestic greenhouse gas emission mitigation consistent with Government priorities. Activities include inputs to developing a package of new greenhouse abatement measures, assessing proposals for major projects, and analysing impacts on industry of various options for domestic emission trading.

SCIENCE AND RESEARCH

National Greenhouse Science \$4.1 million in 2000-01

The Greenhouse Science Programme underpins Australia's greenhouse response: it is vital to understanding greenhouse gas influences on climate change, developing mitigation options and managing environmental, economic and social responses to climate change. The United Nations Framework Convention on Climate Change requires scientific effort, which is critical to Australia's continued standing in international negotiations and the global scientific community. Australian greenhouse research produces scenarios of climate change for Australian regions, helping to identify positive and negative climate change impacts and to develop adaptation strategies.

Contact: Australian Greenhouse Office, Greenhouse Inventory and Science Team – 02 6274 1039

Geological Disposal of Carbon Dioxide \$0.1 million in 2000-01

This research project, funded in conjunction with the oil and gas industry, offers the Government an opportunity to evaluate the potential for domestic geological disposal of carbon dioxide and knowledge of the likely costs and benefits of such actions. Environmental, social and economic implications of geological disposal will also be explored.

Contact: Australian Greenhouse Office, Policy and Planning Section – 02 6274 1966 **Website:** www.greenhouse.gov.au/media/geodisc.pdf

Human Impact on Climate Change \$1.2 million in 2000-01

The Australian Nuclear Science and Technology Organisation is applying its expertise in nuclear techniques to investigate the influence of human activity on global environmental change and its possible effects on future climate change. Records will be extended back to pre-colonial times to produce a history of natural climate variability. The character and source of aerosol particles, currently a large uncertainty in greenhouse induced climate change, will be determined. Results will contribute to the modelling and predicting of future climate change and extreme weather events.

Website: www.ansto.gov.au **Contact:** Australian Nuclear Science and Technology Organisation, Environment Division – 02 9717 3209

CSIRO Research \$25.5 million in 2000-01

CSIRO is Australia's largest single performer of research related to the atmosphere and to greenhouse. The latter research ranges from understanding the underlying nature and science of climate change through to options for mitigation of greenhouse gas emissions, sink-related matters and many aspects of the impacts of, and adaptation to, climate change.

Bureau of Meteorology Research Centre

The Bureau of Meteorology Research Centre conducts research on the meteorology of the Australian region and on the global climate system to improve our understanding of and ability to predict weather and climate. It also undertakes greenhouse research, contributing to the scientific assessment of climate change.

Website: www.bom.gov.au/bmrc **Contact:** Bureau of Meteorology Research Centre – 03 9669 4444

Atmospheric Monitoring

The Bureau of Meteorology monitors Australia's weather and climate, and provides meteorological and related services which benefit Australia. The Bureau monitors global atmospheric composition, most notably via the Cape Grim Baseline Air Pollution Station, operated jointly with CSIRO. The Bureau also issues UV forecasts, air quality advice and seasonal climate outlooks.

Website: www.bom.gov.au **Contact:** Bureau of Meteorology – 02 6274 1764

Biospheric Sources and Sinks for Greenhouse Gases \$0.5 million in 2000-01

The Bureau of Rural Sciences helps ensure that the best scientifically based information is available to meet Australia's international greenhouse obligations. This is achieved by working with state and Commonwealth agencies to develop nationally consistent data sets and models which can be used to manage sinks and sources of biospheric greenhouse gases, and to predict the likely impact of policy decisions on emission levels.

Website: www.brs.gov.au **Publication:** National Carbon Accounting System Expert Workshop Report 23-25 June 1998 **Contact:** Bureau of Rural Sciences – 02 6272 4347

Coastal Climatology

The Australian Institute of Marine Science conducts research to gain a clearer picture of climate change and variability in tropical Australia. Researchers are interpreting the skeletal records of corals for historical climatic records of rainfall and temperature. These studies will allow researchers to link present assessments of our ecosystems' sensitivity to climate variations with the potential effects of climate changes in the future. Other research includes the role of tropical marine ecosystems as carbon sinks and the threat to coral reefs from more acidic water as atmospheric carbon dioxide is absorbed into the ocean. (See also Appendix 7 – Oceans.)

Website: www.aims.gov.au **Contact:** Australian Institute of Marine Science – 07 4753 4444

OZONE PROTECTION

Ozone Protection and Halon Bank \$4.9 million in 2000-01

The Ozone Protection Programme fulfils Australia's international obligations under the Montreal Protocol on Substances that Deplete the Ozone Layer and enforces the *Ozone Protection Act 1989*. The Commonwealth works in consultation with industry, environmental and community groups, and state and territory governments to develop and implement phase-out strategies for ozone depleting substances such as halons, methyl bromide, hydrochlorofluorocarbons and chlorofluorocarbons. The Commonwealth administers the *Ozone Protection Act 1999* and manages the National Halon Bank, which supports the phase out of halon from the community and industry. The bank provides long-term storage for Australia's essential-use reserve of halon and will assist other countries in the region to develop strategies to meet halon and other ozone depleting substances' phase out targets.

Website: www.ea.gov.au/ozone **Publication:** Revised Strategy for Ozone Protection in Australia 1994 **Contact:** Environment Australia, Environment Protection Group – 02 6274 1481

Ozone Protection Reserve \$0.5 million in 2000-01

The Ozone Protection Reserve, which holds funds received as licence and activity fees under the *Ozone Protection Act 1989*, is used for expenditure on administration and enforcement of the Act and for information programmes to support the phase out of ozone depleting substances.

Website: www.ea.gov.au/ozone **Contact:** Environment Australia, Environment Protection Group – 02 6274 1481

Ozone Protection Act

Australian Federal Police provide assistance, as requested, to other agencies with primary responsibility to investigate breaches of the *Ozone Protection Act 1989*.

Contact: Australian Federal Police - 02 6275 7586

AIR QUALITY

Air Pollution in Major Cities \$4.1 million in 2000-01

The Air Pollution in Major Cities Programme, funded under the Natural Heritage Trust, aims to reduce the impact of air pollution in urban areas from the six major air pollutants: oxides of nitrogen, particles, ozone (photochemical smog), carbon monoxide, oxides of sulfur and airborne lead. Initiatives include implementation of the Ambient Air Quality National Environment Protection Measure, development of the diesel vehicle emissions National Environment Protection Measure and the Clear the Air suite of projects including the Fuel Quality Review.

Website: www.environment.gov.au/epg/air_water.html#air
Publication: Clear the Air – Natural Heritage Trust Projects to Improve Urban Air Quality
Contact: Environment Australia, Environment Protection Group – 02 6274 1581

/ 02 6274 1890

Air Quality Management \$0.4 million in 2000-01

The Air Quality Management Programme funds projects that minimise the impact of air pollutants on the environment and human health. In the past this programme has funded lead abatement activities, including the national lead in paint campaign. In 2000-01 it will investigate ways of encouraging the uptake of ultra-low sulfur diesel and promoting the air quality benefits to be gained from implementing intelligent transport systems.

Contact: Environment Australia, Environment Protection Group – 02 6274 1890

Appendix 7 – Oceans

Table A7.1: Oceans – New Measures and Programme and Tax Expenditure Estimates

This table lists activities in the order that they appear in the following text. 'na' denotes that spending cannot be precisely identified and it does not mean that spending is not

occurring.

Description	1999-00	2000-01	2001-02	2002-03	2003-04
	\$m	\$m	\$m	\$m	\$m
PROGRAMME AND TAX EXPENDITURE ESTIM	MATES				
Australia's Oceans Policy					
National Oceans Office	9.2	11.2	12.1	_	_
Marine Environment Protection					
Coastal Acid Sulfate Soils	0.9	1.4	1.6	_	_
Antifouling	0.4	0.2	0.3	_	_
Ballast Water Mitigation	0.3	0.4	0.4	_	_
National Environment Protection Measure for Marine and Estuarine Water Quality	0.6	0.5	0.3	_	_
National Moorings	0.7	0.6	0.6	_	_
Coasts and Clean Seas					
Clean Seas	18.6	12.2	15.0	0.7	0.5
Coastcare	5.2	5.3	5.3	_	_
Marine Species Protection	2.6	1.8	1.2	_	_
Capacity Building	0.4	1.0	0.5	_	_
Coastal and Marine Planning	2.8	2.2	0.4	_	_
Coastal Monitoring	1.2	1.5	0.6	_	_
Marine Protected Areas (State Waters)	2.6	1.2	0.9	0.7	0.7
Marine Protected Areas (Commonwealth Waters)	2.6	2.4	3.3	0.9	0.9
Marine Waste Reception Facilities	0.7	1.2	_	_	_
Australian Coastal Atlas	0.5	0.3	_	_	_
Introduced Marine Pests	1.4	0.7	0.4	_	-
Fisheries Action	3.6	2.7	2.0	0.1	-
Ocean Environment Protection					
Sea Dumping and Sea Installations	0.5	0.3	0.3	0.3	0.3
Dumping of Hazardous Waste at Sea	na	na	na	na	na
National Oil Spill Atlas	1.1	0.2	0.2	0.2	0.2
Environmental Impacts of Petroleum Operations	0.1	0.1	0.1	0.1	0.1
Bureau of Meteorology ^(a)	0.6	0.5	0.5	0.5	0.5
Marine Agencies					
Australian Quarantine and Inspection Service	1.3	0.3	0.3	0.3	0.3
Australian Geological Survey Organisation	na	na	na	na	na
Great Barrier Reef Marine Park Authority	15.8	14.6	14.8	13.8	13.8
Australian Maritime Safety Authority	4.3	4.0	4.0	4.0	4.0
Coastal and Offshore Surveillance and Response	153.2	na	na	na	na
International Activities					
Regional and International Environmental Protection	0.2	0.2	0.2	na	na
Marine Resource Management					
Marine Wildlife	1.4	0.9	0.9	0.9	0.9
Australian Fisheries Management	na	19.4	19.7	20.1	20.4

Table A7.1: Oceans — New Measures and Programme and Tax Expenditure

Estimates (continued)

Estillates (continued)					
Description	1999-00	2000-01	2001-02	2002-03	2003-04
	\$m	\$m	\$m	\$m	\$m
Sustainable Fisheries Management	0.5	1.0	0.7	_	_
Sustainable Fishing and Aquaculture	1.3	1.3	na	na	na
Breach of Commonwealth Fisheries Legislation	na	na	na	na	na
Deterring Illegal Fishing in Australia's Subantarctic Waters	3.9	4.0	4.1	4.2	-
Southern Shark Fishery Industry Development(b)	2.6	-	-	_	_
Commission for Conservation of Southern Bluefin Tuna	0.3	0.3	0.3	0.3	0.3
Demersal and Pelagic Fisheries	0.2	0.2	na	na	na
Marine Research					
Fisheries Resources Research Fund	0.3	0.1		_	_
Fisheries Research and Development Corporation	3.0	3.0	3.0	3.0	3.0
Australian Institute of Marine Science	25.0	26.1	26.2	27.4	26.6
Australian Nuclear Science and Technology Organisation	0.6	0.6	na	na	na
CSIRO Research	24.2	24.2	28.6	3.8	-

⁻ denotes nil; na denotes not available; .. denotes not zero, but rounded to zero

AUSTRALIA'S OCEANS POLICY

National Oceans Office \$11.2 million in 2000-01

Australia's Oceans Policy has a budget of \$50 million over three years, and will set in place the framework for integrated and ecosystem-based planning and management for all Australia's marine jurisdictions. The regional marine planning process will build on existing effective sectoral and jurisdictional mechanisms, promote ecologically sustainable development of the resources of Australia's oceans, and encourage internationally competitive marine industries, while ensuring the protection of marine biological diversity and other whole-of-government oceans policy initiatives. The regional marine planning process will complement the Marine Environment Protection Programme administered through the Department of the Environment and Heritage and funded through the Natural Heritage Trust.

Website: www.ea.gov.au/marine/ Publication: Australia's Oceans Policy Contact: National Oceans Office – 03 6221 5002

⁽a) Estimates of appropriation-based Bureau of Meteorology expenditure attributable to oceanographic monitoring, research and service provision in support of environmental objectives.

⁽b) This programme will continue in 2000-01 using carry-over funding from 1999-2000.

MARINE ENVIRONMENT PROTECTION

Coastal Acid Sulfate Soils \$1.4 million in 2000-01

The disturbance and exposure of acid sulfate soils has led to a reduction in inshore water quality, habitat degradation and loss of biodiversity. The Coastal Acid Sulfate Soils Programme supports projects that demonstrate management techniques for handling areas prone to acid sulfate soil problems that result in damage to coastal and marine systems.

Website: www.ea.gov.au/marine/ocepoly/cassp.html
Publication: Australia's Oceans Policy, Coastal Acid Sulfate Soils Programme – Guide to First
Round Project Applications
Contact: Environment Australia, Marine Group – 02 6274 2005

Antifouling \$0.2 million in 2000-01

The Antifouling Programme aims to help implement the Commonwealth Government's proposed ban on Tributyltin. Tributyltin has been associated with significant environmental harm to aquatic organisms, particularly molluscs, including commercial oyster species. The programme is working with industry to support the development and availability of cost-effective, environmentally friendly and safe alternatives to Tributyltin-based antifoulants.

Contact: Environment Australia, Marine Group – 02 6274 1919

Ballast Water Mitigation \$0.4 million in 2000-01

The Ballast Water Mitigation Programme aims to protect the Australian marine environment from the harmful effects of introduced marine species. The programme provides financial assistance and support for developing and implementing a range of policies and management measures that focus on preventing the introduction and spread of exotic marine species.

Website: www.ea.gov.au/marine/marine_pests/main.html
Publication: Report of the Joint SCC/SCFA National Taskforce on the Prevention and
Management of Marine Pest Incursions
Contact: Environment Australia, Marine Group – 02 6274 1486

National Environment Protection Measure for Marine and Estuarine Water Quality \$0.5 million in 2000-01

This measure will address the decline in marine and estuarine water quality, which is regarded as one of the most serious threats to Australia's marine and coastal

environments. The joint Commonwealth-State-Territory National Environment Protection Council is developing national marine and estuarine water quality standards.

Contact: Environment Australia, Marine Group – 02 6274 1919

National Moorings \$0.6 million in 2000-01

The National Moorings Programme aims to assist with the installation of public moorings to protect sensitive marine areas from the impacts of anchor damage. The programme provides financial assistance to the states and the Northern Territory, the Great Barrier Reef Marine Park Authority and Commonwealth marine protected areas.

Website: www.ea.gov.au/marine/ocepoly/moorings_program.html **Contact:** Environment Australia, Marine Group – 02 6274 1078

COASTS AND CLEAN SEAS

Coasts and Cleans Seas is the marine and coastal component of the Natural Heritage Trust, with a budget of \$51.8 million from 2000-01 to 2001-02. Its programmes address major marine, estuarine and coastal management issues at the local, regional and national levels. Coasts and Clean Seas emphasises partnerships between communities, scientific organisations, governments and industry, to undertake coastal monitoring and planning, to protect and restore coastal water quality and marine and coastal biodiversity, and to promote ecologically sustainable use of coastal and marine resources.

Website: www.ea.gov.au/net/ccs.html **Publication:** *Guide to Coasts and Clean Seas Applications 2000-01* **Contact:** Environment Australia, Marine Group – 02 6274 1919

Clean Seas \$12.2 million in 2000-01

The Clean Seas Programme focusses on on-site work using best-available or innovative approaches to reduce pollution from stormwater and wastewater at source. The reuse of water is encouraged as a means for promoting sustainable development and reducing demands on potable water.

Website: www.ea.gov.au/marine/cleanseas/main.html **Contact:** Environment Australia, Marine Group – 02 6274 1919

Coastcare \$5.3 million in 2000-01

Coastcare encourages local communities, including local industries, to adopt a sense of stewardship for coastal and marine areas by providing opportunities and resources for residents, volunteers, business and interest groups to participate in on-ground coastal management. The programme also supports community identification of natural and cultural heritage resources and facilitates interaction between the community and government agencies with responsibility for managing coastal areas.

Website: www.ea.gov.au/marine/coastcare **Publication:** Coastcare Information Kit **Contact:** Environment Australia, Marine Group – 02 6274 1919

Marine Species Protection \$1.8 million in 2000-01

The Marine Species Protection Programme aims to protect marine species from human disturbances. The programme supports management activities that reduce the incidental death of marine species; reduce or manage the effects of disturbance on marine species; and reduce adverse environmental impact on the key habitats of marine or marine dependent species.

Website: www.ea.gov.au/marine/species_protection/msp_program.htm
Publication: Guide to Coasts and Clean Seas Applications 2000 – 2001
Contact: Environment Australia, Marine Group – 02 6274 1919

Capacity Building \$1.0 million in 2000-01

The Capacity Building Programme focusses on enhancing managers' understanding of, and capacity to manage, coastal and marine environments. The programme aims to build an understanding of best environmental practice among coastal and marine managers; improve the availability of targeted professional development; and enhance community understanding and management skills.

Contact: Environment Australia, Marine Group – 02 6274 1919

Coastal and Marine Planning \$2.1 million in 2000-01

The Coastal and Marine Planning Programme aims to improve management of potential and existing pressures on coastal zone environments such as increased recreational use, expanding urban development and increased port activities. Strategies include changes to local planning instruments, protocols between managing agencies and community participation in the planning process.

Website: www.ea.gov.au/marine/marine_planning/main.html **Contact:** Environment Australia, Marine Group – 02 6274 1919

Coastal Monitoring \$1.5 million in 2000-01

The Coastal Monitoring Programme assists coastal managers and the wider community to identify significant threats to key coastal environments and habitats and to assess the effectiveness of policies designed to protect them.

Website: www.ea.gov.au/marine/marine_monitoring/main.html **Contact:** Environment Australia, Marine Group – 02 6274 1919

Marine Protected Areas (State Waters) \$1.2 million in 2000-01

The Marine Protected Areas Programme aims to promote the conservation of marine biodiversity and the ecologically sustainable use of marine resources through the establishment of a National Representative System of Marine Protected Areas. It assists the states and the Northern Territory to develop and implement strategies to establish the representative system, to implement ecosystem surveys, and to develop information systems and education strategies.

Website: www.ea.gov.au/marine/marine_protected/main.html **Contact:** Environment Australia, Marine Group – 02 6274 1919

Marine Protected Areas (Commonwealth Waters) \$2.4 million in 2000-01

The National Representative System of Marine Protected Areas programme selects, identifies, declares, plans and manages marine protected areas in Commonwealth waters, and promotes multiple use and cooperative relationships with stakeholders.

Website: www.ea.gov.au/marine/marine_protected/main.html **Contact:** Environment Australia, Marine Group – 02 6274 1919

Marine Waste Reception Facilities \$1.2 million in 2000-01

The Marine Waste Reception Facilities Programme aims to reduce maritime sources of marine pollution. The programme supports the installation of best practice demonstration facilities for receiving shipping and boating wastes at ports, marinas and boat harbours owned by the private sector, state and territory governments, or local governments. It addresses waste streams such as garbage, sewage, oily and other liquid wastes, and slipway wastes.

Website: www.ea.gov.au/marine/frameset/involve/fs_involve_coastclean_main.html
Publication: ANZECC, 1997. Best Practice Guidelines for Waste Reception Facilities at Ports,

Marinas and Boat Harbours in Australia and New Zealand
Contact: Environment Australia, Marine Group – 02 6274 1919

Australian Coastal Atlas \$0.3 million in 2000-01

The Australian Coastal Atlas is an Internet-based mapping tool for resource managers and the general public to locate and map information about Australia's coastal and marine environments. The atlas uses Internet technology to directly access databases and documentation held by Commonwealth, state and territory agencies. The national facility is being developed through partnerships with state and Northern Territory marine and coastal agencies.

Website: www.ea.gov.au/marine/coastal_atlas Contact: Environment Australia, Environmental Resources Information Network, Portfolio Strategies Group – 02 6274 1262

Introduced Marine Pests \$0.7 million in 2000-01

The Introduced Marine Pests Programme aims to protect the Australian marine environment from the harmful effects of introduced marine species. The programme supports the development and implementation of a range of policies and management measures that focus on preventing the introduction and spread of exotic marine species.

Website: www.ea.gov.au/marine/marine_pests/main.html
Publication: Report of the Joint SCC/SCFA National Taskforce on the Prevention and
Management of Marine Pest Incursions, 1999
Contact: Environment Australia, Marine Group – 02 6274 1919

Fisheries Action \$2.7 million in 2000-01

The Fisheries Action Programme aims to rebuild Australia's fisheries to more productive and sustainable levels. A key objective is to develop an awareness among all resource

users and the wider community of important fisheries issues, the sources of fisheries habitat problems and the actions required to remedy them.

Website: www.affa.gov.au/fisheries/action_program/index.html **Publication:** Fisheries Action Programme Information Sheet **Contact:** Agriculture, Fisheries and Forestry—Australia – 02 6272 4413

OCEAN ENVIRONMENT PROTECTION

Urban Stormwater Initiative

See Appendix 5 – Environment Protection.

Sea Dumping and Sea Installations \$0.3 million in 2000-01

Environment Australia administers the *Environment Protection (Sea Dumping) Act 1981* (the Sea Dumping Act) and the *Sea Installations Act 1987* (the Sea Installations Act). permits under the Sea Dumping Act are required to dump any matter or construct artificial reefs at sea. A permit or exemption certificate under the Sea Installations Act is needed to install or operate a sea installation.

Website: www.ea.gov.au/marine/publications/seadump.html **Publication:** *ANZECC Interim Ocean Disposal Guidelines*, 1998 **Contact:** Environment Australia, Marine Group – 02 6274 1919

Dumping of Hazardous Waste at Sea

The Australian Federal Police assist other agencies with primary responsibility to investigate incidents of dumping of hazardous waste at sea.

Contact: Australian Federal Police - 02 6275 7586

National Oil Spill Atlas \$0.2 million in 2000-01

The Australian Maritime Safety Authority (AMSA) completed the development and commissioning of a National Oil Spill Atlas in December 1999, with the active participation of the states and the Commonwealth. The atlas expanded the state-based coastal resource atlas to provide a national uniform database system for oil spill incidents to protect Australia's coastal environments. Future expenditure by AMSA will be for the continual refinement of the National Oil Spill Atlas as well as training required for personnel in the use of the atlas.

Website: www.amsa.gov.au/me/natplan/toolbox/osra.htm **Contact:** Australian Maritime Safety Authority – 02 6279 5040

Environmental Impacts of Petroleum Operations \$0.1 million in 2000-01

The Resource Access Section of the Department of Industry, Science and Resources develops policy and provides advice on marine and land access issues impacting on the petroleum industry. Its advice enables marine and land access regimes to take appropriate account of petroleum resource development needs and the principles of ecologically sustainable development.

Publication: Australia's Oceans Policy **Contact:** Department of Industry, Science and Resources – 02 6213 7934

Bureau of Meteorology \$0.5 million in 2000-01

The Bureau of Meteorology coordinates monitoring of ocean and sub-surface temperatures, waves and swell, and of the marine atmosphere to improve understanding and prediction of Australian weather and climate. The Bureau of Meteorology Research Centre and CSIRO have established the Joint Australian Facility for Ocean Observing Systems to incorporate ocean data into operational analysis and prediction systems. This facility will also help Australia participate in the international Global Ocean Observing Systems and the Global Climate Observing System, which aim to ensure that the observations and information needed to address climate-related issues are obtained and made available to all.

Website: www.bom.gov.au **Contact:** Bureau of Meteorology – 02 6274 1764

MARINE AGENCIES

Australian Quarantine and Inspection Service \$0.3 million in 2000-01

The Australian Quarantine and Inspection Service's ballast water management programme supports measures to minimise the threats posed by the introduction and spread of exotic marine pests by vessels. It develops and implements preventative measures such as border controls, risk management systems and research to reduce the introduction and spread of marine pests.

Website: www.aqis.gov.au/docs/ballast/maritime99.htm

Publication: Action Plan for Minimising the Risks to Australia from the Introduction and

Translocation of Marine Pests by Vessels

Contact: Agriculture, Fisheries and Forestry—Australia – 02 6272 4975

Australian Geological Survey Organisation

The Australian Geological Survey Organisation's Marine Zone Geoscience Research Group aims to increase knowledge of the marine zone of Australia and its island territories in order to improve resource management and environmental protection in the marine zone. Project areas include the law of the sea, seabed mapping and characterisation, and urban and coastal impacts.

Website: www.agso.gov.au

Contact: Australian Geological Survey Organisation, Petroleum and Marine Division - 02 6249 9342

Great Barrier Reef Marine Park Authority \$14.6 million in 2000-01

The Great Barrier Reef Marine Park Authority is responsible for managing one of the world's premier natural resources in partnership with Commonwealth and Queensland government agencies. It undertakes a wide range of activities to ensure the protection, wise use, understanding and enjoyment of the Great Barrier Reef and its World Heritage values through the care and development of the Great Barrier Reef Marine Park.

> Website: www.gbrmpa.gov.au **Publication:** Great Barrier Reef Marine Park Authority Annual Report 1998-99 Contact: Great Barrier Reef Marine Park Authority, Information Support Group – 07 4750 0700

Australian Maritime Safety Authority \$4.0 million in 2000-01

The Australian Maritime Safety Authority (AMSA) is a statutory authority responsible for maritime safety and primarily funded by the shipping industry from levies and fees. It also receives Commonwealth funding for search and rescue operations. AMSA spent around \$4.3 million in 1998-99 on work with state governments, shipping, oil and exploration industries to implement the National Plan to Combat Pollution of the Sea by Oil and Other Noxious and Hazardous Substances. This money was raised from levies on shipping.

> Website: www.amsa.gov.au **Contact:** Australian Maritime Safety Authority – 02 6279 5099

Coastal and Offshore Surveillance and Response

The Australian Customs Service provides air and marine based surveillance information to a number of government agencies. Customs undertakes regular surveillance of marine conservation areas as well as Australia's Coral Sea and Indian Ocean territories. Customs reports to relevant agencies about significant wildlife or sea life concentrations or mortality, oil pollution or other environmental damage.

Publication: Australian Customs Service Annual Report 1998-99 **Contact:** Customs, Coastwatch – 02 6275 6666

INTERNATIONAL ACTIVITIES

Regional and International Environmental Protection \$0.2 million in 2000-01

Australia supports international and regional coastal and marine initiatives through a range of institutions and programmes. Priorities include meeting Australia's international commitments relating to the marine environment; promoting and implementing the international aspects of Australia's Oceans Policy; integrated coastal and oceans management; pollution prevention; and marine biodiversity conservation.

Website: www.ea.gov.au/marine **Contact:** Environment Australia, Marine Group – 02 6274 1919

MARINE RESOURCE MANAGEMENT

Marine Wildlife \$0.9 million in 2000-01

The Marine Wildlife Programme aims to increase the protection of marine wildlife by supporting international activities and implementing legislative and policy initiatives to reduce hazards to marine wildlife. The programme supports Australia's involvement in the International Whaling Commission, and provides financial assistance to projects that implement Environment Australia's legislative obligations and policy initiatives to protect native marine wildlife, especially threatened or listed marine wildlife.

Website: www.ea.gov.au/marine/species_protection/main.html **Contact:** Environment Australia, Marine Group – 02 6274 1919

Australian Fisheries Management \$19.4 million in 2000-01

Australian Fisheries Management Authority (AFMA) is the Commonwealth statutory body responsible for the day-to-day management of Commonwealth fisheries resources. AFMA is charged with maintaining and managing the sustainable use of Commonwealth fisheries resources on behalf of the Australian community and key stakeholders.

Website: www.afma.gov.au **Contact:** Australian Fisheries Management Authority – 02 6274 5029

Sustainable Fisheries Management \$1.0 million in 2000-01

The Government is committed to removing the exemption whereby wild-caught fish could be exported without regulatory controls under the *Wildlife Protection (Regulation of Exports and Imports) Act 1982.* It is anticipated that assessment of the ecological sustainability of export fisheries management arrangements will commence in the second quarter of 2000.

Contact: Environment Australia, Marine Group – 02 6274 1919

Sustainable Fishing and Aquaculture \$1.3 million in 2000-01

Agriculture, Fisheries and Forestry—Australia promotes the sustainable development of Australian fisheries and aquaculture by providing integrated scientific advice on the costs and benefits of fisheries to human society and to the environment.

Website: www.brs.gov.au
Publication: 1998 Fisheries Status Reports
Contact: Agriculture, Fisheries and Forestry—Australia – 02 6272 5893

Breach of Commonwealth Fisheries Legislation

The Australian Federal Police assist the Australian Fisheries Management Authority to investigate possible contravention of Australian fishing regulations.

Contact: Australian Federal Police – 02 6275 7586

Deterring Illegal Fishing in Australia's Subantarctic Waters \$4.0 million in 2000-01

Patrols and other activities are undertaken in Australia's remote subantarctic waters to protect our valuable fisheries resources by preventing illegal, unregulated and unreported fishing.

Contact: Agriculture, Fisheries and Forestry—Australia – 02 6272 3847 Australian Fisheries Management Authority – 02 6272 4895

Southern Shark Fishery Industry Development

The Government will carry out an industry development programme for the southern shark fishery to assist the sustainable development of the industry. The programme will help implement an individual transferable quota management regime for the fishery.

There will be a 35 per cent reduction in school shark catches to meet stock conservation concerns.

Contact: Agriculture, Fisheries and Forestry—Australia – 02 6272 4141

Commission for the Conservation of Southern Bluefin Tuna \$0.3 million in 2000-01

The objective of the Commission for the Conservation of Southern Bluefin Tuna is to ensure, through the appropriate science and management, the conservation and maximum sustainable catch of southern bluefin tuna.

Contact: Agriculture, Fisheries and Forestry—Australia – 02 6272 4813

Demersal and Pelagic Fisheries \$0.2 million in 2000-01

The Demersal and Pelagic Fisheries project of the Bureau of Rural Sciences promotes the sustainable development of Commonwealth-managed demersal (sea-floor) and pelagic (water-column) fisheries through the provision of accurate, timely and relevant scientific advice to policy makers, management agencies, industry and other clients.

Website: www.brs.gov.au **Contact:** Agriculture, Fisheries and Forestry—Australia – 02 6272 4015

MARINE RESEARCH

Fisheries Resources Research Fund \$0.1 million in 2000-01

The Fisheries Resources Research Fund provides financial assistance to organisations to conduct research into fisheries issues of public interest, including environmental issues and ecosystem protection. This funding is proportional (0.25 per cent) to the gross value of production of fisheries.

Publication: Fisheries Resources Research Fund Annual Report 1998-99 **Contact:** Agriculture, Fisheries and Forestry—Australia – 02 6272 5293

Fisheries Research and Development Corporation \$3.0 million in 2000-01

The Fisheries Research and Development Corporation is a national organisation responsible for planning, funding and managing research and development programmes relating to the Australian fishing industry. Its revenue comes from a range of sources, including unmatched funds from the Commonwealth Government equivalent to 0.5 per cent of the average gross value of fisheries production.

Website: www.frdc.com.au

Publication: Fisheries Research Development Corporation Annual Report 1998-99 Contact: Agriculture, Fisheries and Forestry—Australia – 02 6272 5293

Australian Institute of Marine Science \$26.1 million in 2000-01

The Australian Institute of Marine Science (AIMS) promotes the conservation and sustainable development of Australia's marine resources and supports internationally competitive Australian industries. The institute conducts scientific research to improve understanding of marine systems and biodiversity with the aims of developing a capability to predict the behaviour of complex tropical marine systems and capturing the benefits of biodiversity. Research will focus on improved understanding of tropical marine ecosystems to enable prediction of climate impacts, conservation of biodiversity, and mitigation of human impacts in the tropical marine and coastal zones. AIMS will also pursue economic and social benefits through marine biotechnology and will explore the marine resources of Northern Australia.

Website: www.aims.gov.au

Contact: Australian Institute of Marine Science – 07 4753 4490

Australian Nuclear Science and Technology Organisation \$0.6 million in 2000-01

The Australian Nuclear Science and Technology Organisation uses radiotracing and nuclear analysis for biological risk assessments through the study of biogeochemical processes that affect the transport, fate, bioavailability and impact of pollutants in aquatic environments with a particular emphasis on biological cycling, bioaccumulation and biotoxicity of heavy metals and radionuclides.

Website: www.ansto.gov.au/ansto/environment1/index.html
Contact: Australian Nuclear Science and Technology Organisation, Environment Division
- 02 9717 9216

CSIRO Research \$24.2 million in 2000-01

CSIRO's environmental research into Australia's oceans and coastal zones aims to provide knowledge and understanding to improve the sustainable use and management of the marine environment. Research areas include exploration of the Exclusive Economic Zone to assist planning for sustainable use; knowledge and tools for marine conservation management; sustainable management of coastal rivers and estuaries; management tools for estuaries and coastal waters; strategies and tools for managing regional marine ecosystems; stock and risk assessments and tools for sustainable fisheries; managing environmental impacts of aquaculture; role of oceans in climate systems, and marine climate impacts; and management of the oceanographic research vessel *Franklin*.

Website: www.csiro.au – and follow links to marine sector **Contact:** CSIRO Marine Sector – 03 6232 5441

Appendix 8 – Australian Heritage and Antarctica

Table A8.1: Australian Heritage and Antarctica – New Measures, Programme and Tax Expenditure Estimates

This table lists activities in the order that they appear in the following text. 'na' denotes that spending cannot be precisely identified and it does not mean that spending is not occurring.

Description	1999-00	2000-01	2001-02	2002-03	2003-04
	\$m	\$m	\$m	\$m	\$m
NEW MEASURES					
Interim Sydney Harbour Federation Trust	_	-	_	_	_
PROGRAMME AND TAX EXPENDITURE ESTI	MATES				
National Heritage Activities ^(a)	7.7	6.9	7.0	7.0	7.0
National Heritage Places Strategy					
Australian Heritage Places Inventory					
National Historic Agencies Coordination Programme					
Commonwealth-owned Heritage					
Memoranda of Understanding					
Australian Council of National Trusts					
State Administration for Cultural Heritage in China					
Indigenous Heritage					
National Heritage Grants and Programmes					
Federation Funding	27.0	13.1	4.9	_	-
Cultural Heritage Projects	8.0	5.9	4.1	_	-
Grants in Aid to National Trusts	0.9	8.0	0.8	8.0	0.8
Grants in Aid for Historic Events and Famous People	••				
Historic Shipwrecks	0.5	0.4	0.4	0.4	0.4
Norfolk Island Penal Settlement	0.4	0.4	0.4	0.4	0.4
ATSIC Heritage Protection	3.9	3.6	na	na	na
Committee of Review for Commonwealth-owned Heritage Properties	_				_
Australian Federal Police	na	na	na	na	na
World Heritage					
World Heritage Area Management(b)	14.9	15.7	15.7	10.0	10.0
Antarctica					
Australian Antarctic Programme ^(c)	98.0	100.3	102.0	103.6	104.7
Mawson's Huts	na	na	na	na	na
Australian Geological Survey Organisation	na	na	na	na	na

⁻ denotes nil; na denotes not applicable; .. denotes not zero, but rounded to zero

⁽a) This figure includes items listed under National Heritage Activities.

⁽b) The figures for 1999-2000 to 2001-02 include monies allocated by the Natural Heritage Trust.

⁽c) Covers the total cost of operating the Antarctic Programme, which has a major focus on environmental programmes as identified in this appendix.

NEW MEASURES

Interim Sydney Harbour Federation Trust \$4.0 million in 2000-01

The Government will establish a Sydney Harbour Federation Trust to manage five sites around Sydney Harbour once the Department of Defence relocates: North Head, Georges Head, Middle Head, Woolwich Dock and Cockatoo Island. The Trust will have ten years to rehabilitate the sites and return them to the people of Australia.

Contact: Environment Australia, Australian and World Heritage Group – 02 6274 2128

NATIONAL HERITAGE ACTIVITIES \$6.9 million in 2000-01

The Commonwealth is working with state, territory and local governments, and the community, to identify and protect Australia's heritage. Australia's heritage comprises natural, historic and indigenous places that have aesthetic, historic, scientific or social significance or other special values for this and future generations.

Website: www.ahc.gov.au **Contact:** Australian Heritage Commission – 02 6274 2115

National Heritage Places Strategy

The National Heritage Places Strategy represents a key opportunity to reduce duplication and to organise heritage management in a systematic way in Commonwealth, state, territory and local jurisdictions. The Commonwealth will focus on places of national significance, will increase compliance with state laws, and protect heritage in its own lands and waters. Legislation will be introduced to give effect to a new heritage regime.

Contact: Environment Australia, Australian and World Heritage Group – 02 6274 2115

Australian Heritage Places Inventory

In 1999-2000, the Government, in cooperation with the states and territories, continued to develop the Australian Heritage Places Inventory (AHPI), a central metadata repository on the Internet for all statutory heritage registers. During the year, heritage data from all states were entered in the AHPI and made available on the web for participants to test. In 2000-01, the Government will continue to work with the states to enhance the AHPI. Test work on automatically gathering and importing state heritage data into the AHPI will be carried out.

Contact: Australian Heritage Commission – 02 6274 2119

National Historic Agencies Coordination

The programme aims to develop a more efficient and effective system of national heritage administration. It focusses on the historic environment, is long-term, and encompasses several projects. Achievements include accreditation agreements in assessment and listing procedures with another two states, South Australia and Queensland; developing the Australian Heritage Places Inventory; establishing database links with several states and coordinating the Australian Heritage Websites homepage; and national research and publication projects on Federation sites and the Australian Historic Themes Framework.

Contact: Australian Heritage Commission – 02 6274 2138

Commonwealth-owned Heritage

The Commonwealth will undertake a number of initiatives to improve the management of its own heritage places, for example, the Australian Heritage Commission will provide advice to other departments on management arrangements for their heritage properties.

The Commonwealth, in consultation with the states, is developing a joint protocol on Commonwealth heritage properties. This will establish an agreed framework and process for providing advice on the conservation of Commonwealth heritage properties in cases where disposal or major change is contemplated.

Contact: Environment Australia, Australian and World Heritage Group – 02 6274 2128

Memoranda of Understanding

Australian Council of National Trusts

The Australian Council of National Trusts, Environment Australia and the Australian Heritage Commission signed a memorandum of understanding to strengthen working relations in order to promote greater community awareness and protection of Australia's cultural and natural heritage. In 2000-01, the Australian Heritage Commission will continue to work closely with the Australian Council of National Trusts by undertaking joint projects and activities, with the aim of increasing public awareness and appreciation of heritage.

Contact: Australian Heritage Commission – 02 6274 2167

State Administration for Cultural Heritage in China

The Australian Heritage Commission, Environment Australia and the State Administration for Cultural Heritage (China) signed a memorandum of understanding, the first bilateral agreement on cultural heritage cooperation between Australia and China.

The memorandum of understanding identifies exchange of information, research and expertise as areas of cooperation. The State Administration for Cultural Heritage has invited the Australian Heritage Commission to China in 2000-01 to trial the heritage principles that have been developed as part of the memorandum of understanding.

Contact: Australian Heritage Commission – 02 6274 2115

Indigenous Heritage

Environment Australia plays a major role in the protection of indigenous heritage through the administration of the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984.* This legislation provides for the Minister for the Environment and Heritage to make declarations of protection over significant areas and objects that are under threat of injury or desecration, following the receipt from indigenous people of applications for protection.

Contact: Environment Australia, Australian and World Heritage Group - 02 6274 2123

NATIONAL HERITAGE GRANTS AND PROGRAMMES

Federation Funding \$13.1 million in 2000-01

The Commonwealth Government is providing \$70.4 million for the four-year period from 1998-99 to 2001-02 to fund the Federation Cultural and Heritage Projects Programme. Of this, a total of \$9.3 million will go toward heritage conservation and restoration work throughout Australia in 2000-01.

Through the Federation Fund, the Government is providing a further \$3.8 million for heritage conservation and restoration of significant heritage buildings and precincts across Australia in 1999-01. Significant funding will also be provided for the decontamination of Cockatoo Island when the Sydney Harbour Federation Trust is legally established.

Contact: Environment Australia, Australian and World Heritage Group – 02 6274 2185

/ 02 6274 2128

Cultural Heritage Projects \$5.9 million in 2000-01

The Cultural Heritage Projects Programme subsumes the Taxation Incentives for Heritage Conservation Scheme and is providing funds of approximately \$5.9 million per annum for three years. Commencing in 1999-2000, the programme aims to assist local government, community-based non-profit organisations and private owners of heritage places with heritage conservation projects. The programme encourages and enhances community ownership and responsibility for preservation of Australia's heritage and increases funds available for heritage conservation.

Contact: Environment Australia, Australian and World Heritage Group – 02 6274 2185

Grants in Aid to National Trusts \$0.8 million in 2000-01

The Government is providing grants to support activities that increase public awareness, understanding and appreciation of Australia's cultural heritage. The grants also aim to enhance and promote heritage conservation and assist the national trusts to work for heritage protection.

Contact: Environment Australia, Australian and World Heritage Group - 02 6274 2185

Grants for Commemoration of Historic Events and Famous Persons \$0.02 million in 2000-01

This programme works to commemorate people, events and places of national historical significance.

Contact: Environment Australia, Australian and World Heritage Group – 02 6274 2185

Historic Shipwrecks \$0.4 million in 2000-01

Through the Historic Shipwrecks Programme, the Commonwealth Government, in cooperation with the states, the Northern Territory and Norfolk Island, administers the *Historic Shipwrecks Act 1976* to conserve Australia's maritime heritage as a cultural resource of the nation.

Contact: Department of Transport and Regional Services, Regional Support and Self Governing Territories Branch – 02 6274 8091

Norfolk Island Penal Settlement \$0.4 million in 2000-01

The Commonwealth will continue to support the conservation and management of the Kingston and Arthurs Vale Historic Area on Norfolk Island. This area contains one of the finest collections of colonial Georgian buildings in the Commonwealth.

Contact: Environment Australia, Australian and World Heritage Group – 02 6274 2128

Aboriginal and Torres Strait Islander Commission Heritage Protection \$3.6 million in 2000-01

The Aboriginal and Torres Strait Islander Commission addresses heritage and environment issues through a heritage protection programme which provides, where appropriate, for the protection, preservation, acquisition and management of cultural property by the Aboriginal community.

Contact: Aboriginal and Torres Strait Islander Commission – 02 6121 4601

Committee of Review for Commonwealth-owned Heritage Properties \$0.03 million in 2000-01

This project funds assessments of Defence properties to identify and catalogue heritage values across the Defence estate.

Contact: Defence Estate Organisation – 02 6266 7511

Australian Federal Police

The Australian Federal Police assist other agencies to investigate breaches of the *Moveable Cultural Heritage Act 1986*.

Contact: Australian Federal Police – 02 6275 7586

WORLD HERITAGE

World Heritage Area Management \$15.7 million in 2000-01

The World Heritage Management Programme underpins the Commonwealth's cooperative arrangements with the states to ensure that World Heritage property management meets the high standard required. Under the programme, \$15.7 million will be provided for priority management projects in 2000-01. Australia will host the World Heritage Committee meeting in Cairns in December 2000. Australia's major regional initiative is to establish an Asia-Pacific Focal Point to promote the World Heritage Convention. Australia currently has a nomination for the Greater Blue Mountains Area, and is developing nominations for a series of convict sites, Purnululu and an extension to the Riversleigh component of the Australian Fossil Mammal Sites.

Website: www.environment.gov.au/heritage/whu/auswha.html **Contact:** Environment Australia, Australian and World Heritage Group – 02 6274 2015

ANTARCTICA

Australian Antarctic Programme \$100.3 million in 2000-01

The Australian Antarctic Programme seeks to advance Australia's Antarctic interests by active participation in the Antarctic Treaty System, by conducting Antarctic research and by administering and maintaining Australia's presence in the Antarctic and subantarctic region. The cost of carrying out Australia's programmes in Antarctica will be \$100.3 million in 2000-01.

Website: www.antdiv.gov.au **Contact:** Australian Antarctic Division – 03 6232 3209

Antarctic Environment Protection

The Australian Antarctic Division administers the Australian Antarctic Territory and the Territory of Heard and McDonald Islands. Effort is aimed primarily at protecting the environment of these places, and includes administering environmental legislation dealing with environmental impact assessment, and measures for the conservation of flora and fauna. This activity is particularly important with the rapid expansion of tourism to Antarctica.

Contact: Australian Antarctic Division – 03 6232 3209

Environmental Management

Three scientific stations are maintained in Antarctica and one on Macquarie Island. Further improvements in energy efficiency and the use of renewable energy are being investigated for these stations. More efficient packaging will be introduced to reduce further the quantity of waste to be returned to Australia for disposal. Particular attention will be paid to cleaning up abandoned station sites at Wilkes in Antarctica and Heard Island.

Contact: Australian Antarctic Division – 03 6232 3209

Research

The Antarctic region significantly influences the world's major environmental systems. Much of Australia's Antarctic research is directed at improving knowledge of these processes, leading to improved predictions of events in global climate change. Substantial research effort is also directed towards protection of the Antarctic environment and protection of the Southern Ocean ecosystems and marine resources.

Contact: Australian Antarctic Division - 03 6232 3209

Illegal Fishing

The Commonwealth Government will continue its vigilance and efforts to protect the Australian fishing zone adjacent to Heard Island from illegal fishing. The Government will also continue its leading role to advance measures within the Commission for the Conservation of Antarctic Marine Living Resources to curb illegal, unregulated and unreported fishing. Such fishing is seriously depleting fish stocks and the methods used kill large numbers of sea birds including endangered species of albatross.

Contact: Australian Antarctic Division – 03 6232 3209

Science Strategic Plan 2000-05

The Government has approved a Science Strategic Plan for the period 2000-05 to ensure the goals it has set for the Australian Antarctic programme are achieved. The plan aims to integrate and focus the work of all agencies and universities that conduct scientific research in Antarctica under Australia's Antarctic Science Programme.

Website: www.antdiv.gov.au/science/green/green_toc.html **Contact:** Australian Antarctic Division – 03 6232 3209

Mawson's Huts

The Commonwealth will continue to work closely with the Australian Associated Press Mawson's Huts Foundation on the conservation of Mawson's Huts, including finalising a conservation management plan for this site. The Australian Heritage Commission will continue to provide expert advice to assist the Australian Antarctic Division to protect its heritage resources.

Contact: Australian Heritage Commission – 02 6274 2128

Australian Geological Survey Organisation

The Australian Geological Survey Organisation provides geoscience advice to support land use in, and Australian custodianship of, the Australian Antarctic Territory.

Contacts: Australian Geological Survey Organisation – 02 6249 9282 / 02 6249 9409

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