

**INVESTING IN OUR
NATURAL AND
CULTURAL HERITAGE**

**COMMONWEALTH
ENVIRONMENT
EXPENDITURE
2001-02**

STATEMENT BY
SENATOR THE HONOURABLE ROBERT HILL
MINISTER FOR THE ENVIRONMENT AND HERITAGE
22 MAY 2001

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Minister's Foreword

While the Federal Budget provides a snapshot of the financial and economic status of the nation we have increasingly come to question whether the health of our economy can be viewed in financial terms only.

A new wave of thinking now acknowledges that to achieve ongoing economic growth we must respect and properly manage our natural resource base. We must move toward planning for and achieving sustainable economic growth.

To achieve this we need to make the environment a key consideration in all our economic decision making processes. We must acknowledge that respecting and protecting the environment is not an optional add-on to economic growth.

Since coming to office in 1996, the Howard Government has worked hard to integrate environmental considerations into all our decision making processes.

This reflects the growing concern within local communities, the business sector, and the international community about the sustainability of economic activities.

As part of these efforts, the Howard Government has incorporated in all Federal Budgets since 1996 figures on environmental spending across all government portfolios.

This has helped drive a culture change within government that the environment is not just an issue for the Environment portfolio, but a whole-of-government issue.

For the second year running, the Howard Government will invest more than \$1 billion in spending on activities to protect and repair our natural environment.

The 2001-02 Federal Budget continues to build on the Howard Government's key environmental objectives:

- supporting local communities to repair damage already done to our environment;
- encouraging and assisting industry and primary producers to lessen their impact on the environment, thereby preventing further damage;
- improving the environmental health of our major cities, in particular in relation to air quality; and
- protecting our special places, coasts and oceans, native species and unique biodiversity.

All of this is aimed at moving Australia toward truly sustainable management of our natural resources to guarantee our future economic prosperity.

The Howard Government has used the historic \$1.5 billion Natural Heritage Trust – funded to date through the part sale of Telstra – to provide funding to local communities to implement local solutions to local environmental problems.

Already more than 300,000 Australians have been involved in around 10,000 environmental repair projects which have received funding to date of more than \$1.1 billion from the Trust.

It is regrettable to note that the Coalition's commitment to invest this unprecedented sum in community efforts to protect the environment was opposed in the Senate by both the Australian Labor Party and the minor parties.

In 2001–02 a further \$275 million will be invested in this important work through the Natural Heritage Trust.

In addition to this, this year's Budget provides on-going funding for the Trust with a new allocation of \$1 billion over five years.

This new commitment is fitting recognition of the success to date of community-based efforts and will provide increased certainty to volunteers in on-going environmental repair efforts.

The Howard Government believes that our natural environmental problems will not be solved by the Commonwealth alone. In line with the Commonwealth's increased commitment to environmental action, we will be seeking a similar commitment from State and Territory governments through matching dollar-for-dollar funding.

This would provide an increased investment of \$2 billion over the next five years for on-ground environmental repair efforts.

The 2001–02 Federal Budget also delivers on our commitment to improve Australia's performance in managing our natural resource base – how we effectively deal with issues such as land degradation and salinity in our rivers.

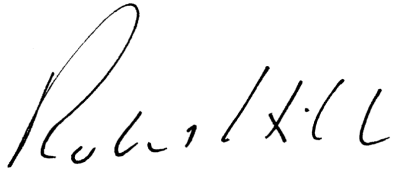
This year's Budget delivers the first instalment of \$65 million of the Prime Minister's \$700 million commitment to a National Action Plan on Salinity and Water Quality. This funding will be targeted to around 20 priority catchment areas across the nation. It will not only be used to restore and repair damage already done but also to influence better practice in natural resource management in these regions.

To reflect the growing environmental problems being faced by our major cities and the resultant impacts on the health and quality of life of their populations, the Government has increased spending on activities to reduce air pollution. Funding has been provided to implement better engine standards for our motor vehicles and better quality fuel to power them – the end result will be cleaner air in our major cities and a safer environment for our families to grow up in. New funding has also been provided to the National Pollutant Inventory to keep the community informed about the emissions to land, air and water of local industry. This, in turn, will influence better policy making at a local level and better practice from industry.

The 2001–02 Federal Budget also continues the unprecedented Commonwealth investment of almost \$1 billion in activities to reduce the rate of growth of our greenhouse gas emissions. The most recent National Greenhouse Gas Inventory figures show that we have made some progress in this regard with the rate of growth of emissions being well below the rate of our economic growth. This comes on top of the Government's newly legislated targets for the increased use of renewable sources of energy by our power supplies. This new law is expected to spark a \$2 billion investment boom in renewable energy projects.

The Budget also provides support for the Government's ongoing work with Australian industry to reduce its usage of natural resources, minimise its waste products and maximise its recycling. Through these efforts we have helped industry translate better environmental performance into better economic results through reduced input and waste costs.

It is a message which will become increasingly important as we strive to achieve truly sustainable development – protecting our environment is an economic benefit not an economic cost.

A handwritten signature in black ink, appearing to read 'Robert Hill'. The signature is written in a cursive, flowing style with a large initial 'R'.

Robert Hill

Chapter 1: Introduction

Scope of the 2001-02 Environment Budget Statement

The Commonwealth Government regards conservation of the environment as one of its most important responsibilities and throughout its period in office has backed its commitment to the environment with substantial funding allocations. In 2001-02 that commitment continues.

In 2001-02 the Government will allocate \$1.8 billion for the Environment and Heritage portfolio and for environmental initiatives across the rest of the Commonwealth Government; around \$100 million more than in 2000-01.

The Government will provide \$1 billion for the further five year extension of the Natural Heritage Trust, commencing in 2002-03. This funding, along with the \$1.5 billion already provided and the \$700 million for the National Action Plan for Salinity and Water Quality, is the largest environmental funding commitment in Australia's history.

This statement documents the Government's spending on environment and environment-related activities for 2001-02 and the years ahead. It is presented as an overview of policy and expenditure not only for the Environment and Heritage portfolio but for the whole of the Commonwealth Government. It also identifies new measures managed by the Environment and Heritage portfolio and, where appropriate, the Agriculture, Fisheries and Forestry portfolio.

Outline

Chapter 2 of this statement contains an overview of the environment-related activities in the 2001-02 Commonwealth Budget, as well as a description of new activities.

Chapter 3 describes the Commonwealth's major strategic directions for protecting the environment, and also includes some items of special interest.

Chapter 4, Key Environment Activities, examines the Government's environment-related programmes in more detail.

Chapter 5 illustrates how the Government is working with the Indigenous and international communities, and the contribution of volunteers to the environment.

Expenditure for environment-related activities undertaken by the Government is listed in Appendix 2.

Structure

To aid the reader, activities reported in this statement are grouped thematically. The themes reflect those to be used in the 2001 State of the Environment (SoE) Report, and are also aligned with the reporting structure of the Environment and Heritage portfolio. This means that the statement can be easily cross-referenced with other

budget publications, particularly the 2001-02 Portfolio Budget Statement for Environment and Heritage, as well as non-budget publications such as the SoE Report. Table 1.1 illustrates the relationship between SoE reporting themes and the outcomes and outputs of the Environment and Heritage portfolio.

Table 1.1: Mapping Environment and Heritage outputs into SoE themes

SoE themes	Environment and Heritage outputs
Atmosphere	Protecting Australia's atmosphere Greenhouse – meeting the challenge of climate change Meteorology – benefiting the environment
Biodiversity	Identifying, protecting and conserving biodiversity Managing Commonwealth national parks and reserves
Coasts and Oceans	Protecting Australia's coasts and oceans
Human Settlements	Operating a world class assessment and approvals system Accelerating improved environmental performance by industry
Inland Waters	Protecting and rehabilitating the environmental values of inland waters
The Land	Conserving, rehabilitating and promoting sustainable land use
Natural and Cultural Heritage	Protecting and conserving Australia's heritage places Advancing Australia's interests in Antarctica ^(a) Integrated measures ^(b)

(a) Antarctica is an additional output that does not map directly to SoE themes. SoE themes relate to the Australian environment.

(b) Integrated measures are those not attributable to any one outcome or output.

Financial data and descriptions of programmes are based on information currently available. Identification of environment expenditure depends on the extent to which spending can be ascribed to environmental purposes, and this varies across programmes. Therefore some expenditure with environmental implications may not be recorded in this statement.

Unless otherwise indicated, all financial information presented in this statement represents the net cost to the Commonwealth. The figures do not include any goods and services tax which may be payable by the Commonwealth and is recoverable as an input tax credit.

Chapter 2: Budget Overview

NEW AND ADDITIONAL MEASURES IN THE 2001-02 BUDGET

This section describes new measures in the 2001-02 Budget and summarises Commonwealth Government expenditure on the environment and environment-related activities. More detailed information is presented in Chapter 3: Strategic Directions and Chapter 4: Key Environment Activities.

New measures announced since the 2000-01 Budget and included in *Budget Paper No. 2. - Budget Measures 2001-02* are listed below. These measures are agreed by the Government and may be funded by new resources or may be funded from existing resources of the Environment and Heritage portfolio.

The Government will provide \$1.24 billion for new measures over the four years commencing 2001-02. The two most important, the further extension of the Natural Heritage Trust and the National Action Plan for Salinity and Water Quality, account for \$1.14 billion of the \$1.24 billion. Twelve new measures, with a combined value of \$100 million over four years, will also be funded.

In addition, the Government will provide an extra \$233 million for the Natural Heritage Trust in each of 2005-06 and 2006-07 and a further \$120 million for the National Action Plan for Salinity and Water Quality between 2005-06 and 2006-07.

Table 2.1 lists measures announced since the 2000-01 Budget and included in the *Budget Paper No. 2 - Budget Measures 2001-02*.

Table 2.1: New measures

Title of Measure – all measures are funded under the Environment and Heritage portfolio unless stated otherwise	2001-02 \$m	2002-03 \$m	2003-04 \$m	2004-05 \$m
Extension of the Natural Heritage Trust – jointly by EA and AFFA ^(a)	-	100.0	233.0	233.0
National Action Plan for Salinity and Water Quality – jointly by EA and AFFA ^(b)	65.0	150.0	190.0	170.0
Queensland East Coast Trawl Restructure Programme ^(c)	-	-	-	-
Wildlife Programmes and Biodiversity Conservation Responsibilities ^(d)	1.6	1.4	1.4	1.2
Administration of the Fuel Quality Legislation ^(e)	0.9	1.7	2.4	2.9
National Pollutant Inventory	1.2	1.3	1.3	1.3
Domestic Greenhouse Policy Development ^(f)	6.2	6.1	6.0	6.0
Greenhouse International Policy and Reporting, and Greenhouse Sinks ^(f)	5.3	5.4	5.5	5.6
Sydney Harbour Federation Trust ^(g)	14.0	-	-	-
Conservation of Rural and Regional Historic Hotels	5.0	-	-	-
Goondwindi Serpentine Water Park	5.0	-	-	-
Management of Aquaculture Impacts	0.5	0.5	0.4	0.4
Townsville Aquarium – Reef Headquarters	4.9	0.5	0.5	0.5
Funding to offset the shortfall in revenue related to the Environmental Management Charge	0.5	0.6	0.3	0.3
Total	110.1	267.5	440.8	421.2

- denotes nil

(a) The figures do not include interest earned by the Natural Heritage Trust of Australia.

(b) The Government provided \$5 million in 2000-01 to the National Action Plan for Salinity and Water Quality.

(c) The Government provided \$10 million in 2000-01. This measure is being fully absorbed within the existing resourcing of the Environment and Heritage portfolio.

(d) Fifty per cent of the funds for this measure are being absorbed within the existing resourcing of the Environment and Heritage portfolio.

(e) This measure is fully absorbed within the existing resourcing of the Environment and Heritage portfolio.

(f) These measures are funded through reordering of priorities within the Australian Greenhouse Office.

(g) This measure has been funded from the Federation Fund allocation.

In addition the Minister for the Environment and Heritage has decided that the following measures are to be funded from existing allocations. Table 2.2 lists those measures that are not in *Budget Paper No. 2 - Budget Measures 2001-02* and are funded by reprioritising existing allocations.

The additional measures total \$17.4 million over four years, consisting of \$6.2 million in 2001-02, \$3.9 million in both 2002-03 and 2003-04 and \$3.4 million in 2004-05.

Table 2.2: Additional measures funded from within existing allocations

Title of Measure	2001-02 \$m	2002-03 \$m	2003-04 \$m	2004-05 \$m
Implementation of the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act) ^(a)	5.0	-	-	-
Gene technology assessments	0.2	0.2	0.2	0.2
Dioxin management	1.0	1.5	1.5	1.0
Cultural Heritage Projects Programme ^(b)	-	2.2	2.2	2.2
Total	6.2	3.9	3.9	3.4

- denotes nil

(a) The Government has indicated that it will consider the ongoing funding required to administer the EPBC Act in the context of the 2002-03 Budget.

(b) This measure is in addition to funds already allocated. Total funding in 2001-02 is \$5.9 million.

To fund measures from existing portfolio resources (listed in Table 2.1 and Table 2.2), equivalent savings of \$31.4 million have been made. Savings over the four years include a budget reinstatement of offsets from an earlier budget (\$16 million), a planned extension to Waterwatch Australia not undertaken (\$3.8 million), operational efficiencies in Parks Australia (\$3.2 million) and funding of the Urban Stormwater Initiative through the Natural Heritage Trust in 2001-02 (\$1 million). A further \$7.4 million savings is achieved from 16 programmes through efficiency measures and reductions in programme funding.

Descriptions of new and additional measures

Managing and protecting Australia's natural resources and wildlife

The sustainable and integrated management of Australia's land and inland water resources is the Government's key environmental priority. Two major new measures, the Natural Heritage Trust extension and the National Action Plan for Salinity and Water Quality, will help achieve this.

The Government is extending the successful **Natural Heritage Trust** with additional funding of over \$1 billion from 2002-03 to 2006-07, in addition to the \$1.5 billion already committed from 1996-97 to 2001-02. This will represent over 11 years' commitment to funding on-ground action to conserve and repair Australia's unique environment. The Trust is leading the world in terms of government delivery of integrated environmental and sustainable agriculture outcomes.

From its inception in 1996-97 the Natural Heritage Trust has been funded from proceeds of the partial sales of Telstra. The extension of the Trust will, for the first time, be funded from consolidated revenue. The Commonwealth Government will seek contributory funding from the States in addition to the Commonwealth funds for the Trust extension.

As at 30 April 2001, \$1.17 billion had been approved for more than 10,300 projects through programmes such as Landcare, Bushcare, Coasts and Clean Seas and Endangered Species.

The funding estimate for the Natural Heritage Trust in 2001-02 is \$275 million.

The Government's strategy when it established the Trust required that a minimum balance of \$300 million remain in the Trust Reserve from 2001-02. Each year, the ongoing interest from this balance will be allocated towards the purposes of the Trust Reserve. This interest will augment the new funding.

Funding to the Trust in 2002-03 will be in the order of \$266 million. This comprises \$100 million from the extension of the Trust, \$130 million from the existing Trust allocation which has been rescheduled from 2000-01 and 2001-02 to allow better project development outcomes, and an estimated \$37 million in interest from the Natural Heritage Trust of Australia Reserve.

Funding from 2003-04 to 2006-07 will be \$233 million per year plus approximately \$20 million interest per year.

The overall direction and types of activities funded under the extended Trust will build on the original Trust outcomes and will be consistent with the objectives of the *Natural Heritage Trust of Australia Act 1997*. The Trust will continue to be jointly managed through the Environment and Heritage and Agriculture, Fisheries and Forestry portfolios.

In October 2000, the Prime Minister announced the **National Action Plan for Salinity and Water Quality**, involving a Commonwealth funding commitment of \$700 million over seven years to address salinity and water quality issues in 21 priority catchments. This funding will be matched by the States resulting in a total package of \$1.4 billion. The funding under the National Action Plan is in addition to Natural Heritage Trust funding.

The National Action Plan will be based on integrated catchment/regional management plans in line with the recommendations of the mid-term review of the Natural Heritage Trust. The management plans will set targets for the maintenance and improvement of the natural resources within these catchments, particularly in relation to salinity, water quality and biodiversity.

In 2001-02 spending will be \$65 million, with the funds jointly managed by the Agriculture, Fisheries and Forestry and the Environment and Heritage portfolios. In 2000-01 work commenced on airborne geophysical mapping to identify salinity deposits and likely areas affected.

To address the problem of overfishing in Queensland fisheries, the Government provided \$10 million in 2000-01 towards the \$20 million **Queensland East Coast Trawl Restructure Programme**, a restructuring package under the East Coast Trawl Fishery Management Plan. Commonwealth funding is matched by Queensland Government contributions.

The programme includes a structural adjustment package for fishing operators for the surrender of their fishing licences and to provide fair and equitable treatment for small, family-run operations. The programme supports a management plan that will

reduce and cap the level of fishing in sensitive ecosystems and help the industry to economic and ecological sustainability. The reduction in fishing pressure on the Great Barrier Reef will protect fish stocks and the sea floor environment.

To enhance Australia's capacity to meet its domestic and international biodiversity conservation responsibilities, the Government will provide \$5.5 million over four years for **wildlife programmes and biodiversity conservation responsibilities**.

Protection of threatened species will be improved through promoting implementation of recovery plans, developing an international protocol for the conservation of endangered seabirds and further developing databases that identify potential impacts of projects on nationally threatened species and ecological communities.

The package will support changes to wildlife trade provisions and support key advisory bodies including the Biological Diversity Advisory Committee. It will enable Australia to participate in key international fora such as the Convention on International Trade in Endangered Species of Wild Flora and Fauna, the Convention on Migratory Species of Wild Animals and the Convention on Biological Diversity, and contribute to the development and implementation of the Global Biodiversity Information Facility.

Managing the impacts of transport fuel and chemicals

The Government is focusing on fuel quality and vehicle emissions and is providing \$8 million over four years from 2001-02 for the monitoring and compliance programme under the *Fuel Quality Standards Act 2000*. The **Administration of Fuel Quality Legislation** package will ensure there are uniform national standards for fuel supplied in Australia, and will protect Australians from emissions from unclean and impure fuel. Clean fuel is necessary for vehicles meeting new stringent emission control standards.

The **National Pollutant Inventory** (NPI) will be extended by the provision of \$5.1 million over four years. The NPI provides information on the types and amounts of pollutants emitted to the air, land and water in Australia. This information is available to all sectors of the community, industry and government. Benefits include better decision making, environmental management and planning, especially through waste minimisation and cleaner production programmes.

Meeting the challenge of climate change

The Government will provide \$24.2 million over four years for **domestic greenhouse policy development**. The funding will support the analysis and development of cost-effective greenhouse gas abatement policies for Australia, including the reduction of emissions from key energy supply and transport sectors. This will continue the implementation of commitments under the National Greenhouse Strategy.

The Government will provide \$21.7 million over four years for **greenhouse international policy and reporting, and greenhouse sinks** initiatives. It will enable the Australian Greenhouse Office (AGO) to continue Australia's involvement in the

development of the international climate change agenda. The funding is to evaluate progress towards Australia's commitments under the United Nations Framework Convention on Climate Change and targets under the Kyoto Protocol.

The two measures are funded through reordering priorities within the Australian Greenhouse Office.

Protecting Australia's cultural and historic heritage

The Government is redefining its involvement in heritage management in Australia to ensure that places with national and international significance are protected for future generations.

The Government will provide \$14 million funding in 2001-02 to the **Sydney Harbour Federation Trust** for security, maintenance of sites and development of plans for the management of the Trust's six Harbour sites. Development of the plans will involve extensive public consultation as well as assessments and surveys for site remediation and environmental management, building works and for the natural and cultural values to be considered in planning for future uses. Funding will also provide for administration of essential maintenance and repair works, safety and security of Trust properties, and services and facilities to enable public access.

The Government will provide \$5 million in grants in 2001-02 to restore and preserve **historic hotels in rural and regional Australia**. The grants will be paid only to hotels without gaming machines, and the social, economic and regional benefits of restoration will be taken into account.

The Government will provide a \$5 million grant to develop the **Goondiwindi Serpentine Water Park**, a natural heritage and recreational facility at Serpentine Lagoon at Goondiwindi, Queensland. This will provide a recreational venue to replace Boobera Lagoon which will be closed to powerboats when a declaration under the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* comes into effect in 2002.

Protecting the Great Barrier Reef and its Marine Park

The Government will provide \$1.7 million over four years from 2001-02 for the **management of aquaculture impacts**. This will enable the Great Barrier Reef Marine Park Authority (GBRMPA) to implement, efficiently and easily, regulations for the management of aquaculture, particularly prawn farming, in areas adjacent to the Great Barrier Reef Marine Park.

Funding of \$6.4 million over four years will allow the refurbishment and an ongoing operational subsidy for the **Townsville Aquarium – Reef Headquarters**. This will enhance visitor facilities and ensure that health and safety standards are maintained.

The Government will provide funding of \$1.7 million over four years to the GBRMPA to **offset a shortfall in revenue from the Environmental Management Charge (EMC)**. Through the EMC, visitors are contributing to the maintenance of the Great Barrier

Reef environment. However, concessional visitor charges have resulted in lower than anticipated revenue.

Additional measures

In 2001-02, \$5 million will be provided for the **implementation of the *Environment Protection and Biodiversity Conservation Act 1999*** (EPBC Act). This will ensure that the Department of the Environment and Heritage is able to effectively implement the EPBC Act and develop on-line systems to provide environmental information to the community and to industry, reducing its compliance costs. Funding is initially \$5 million in 2001-02. The Government will consider funding in the 2002-03 Budget after an assessment of servicing the EPBC Act.

To ensure that **gene technology** is developed in an environmentally safe way, \$0.8 million over four years is being provided to support the statutory role of the Minister for the Environment and Heritage in providing environmental advice to the Gene Technology Regulator under the *Gene Technology Act 2000*.

To meet its commitment to manage the impacts of **dioxins** and related toxic combustion by-products, the Government will provide \$5 million over four years, commencing in 2001-02. The Government is currently working with the States and Territories to develop a national dioxins programme.

The **Cultural Heritage Projects Programme** will foster partnerships of local government and community based organisations and individuals so that they can better work together to conserve and restore significant Australian cultural heritage sites. In each of 2002-03, 2003-04 and 2004-05, \$2.2 million will be provided.

SUMMARY OF COMMONWEALTH ENVIRONMENT EXPENDITURE

Commonwealth environment expenditure undertaken by the Environment and Heritage and the Agriculture, Fisheries and Forestry portfolios is shown in Table 2.3.

Table 2.3: Environment expenditure by EA and AFFA

Description	2000-01 \$m	2001-02 \$m	2002-03 \$m	2003-04 \$m	2004-05 \$m
Environment and Heritage portfolio ^(a)					
Outcome 1: The environment, especially those aspects that are matters of national environmental significance, is protected and conserved	587.5	696.1	460.3	407.3	355.1
Outcome 2: Australia benefits from meteorological and related science and services (Bureau of Meteorology)	9.3	9.2	9.1	9.0	9.0
Outcome 3: Australia's interests in Antarctica are advanced (Australian Antarctic Division)	103.2	100.7	102.5	104.9	106.7
Agriculture, Fisheries and Forestry portfolio	182.1	260.8	na	na	na
Natural Heritage Trust extension – joint EA/AFFA initiative ^(b)	-	-	100.0	233.0	233.0
Total	882.1	1066.8	671.9	754.2	703.8

(a) Figures in Table 2.3 present estimated expenditure for environment outcomes on an accrual basis with outyear estimates in outturn prices (the prices expected in future years). The figures include corporate overheads, which have been allocated across outputs and outcomes.

(b) The Natural Heritage Trust extension funds have not yet been divided between EA and AFFA. The figures do not include interest earned by the Natural Heritage Trust of Australia.

The Commonwealth's environment expenditure for all portfolios by environmental theme is summarised in Table 2.4. The expenditure listed in Table 2.3 is also included in totals in Table 2.4. The breakdown of these figures is provided in more detail in Appendix 2.

Table 2.4: Environment expenditure (all portfolios) by theme

Description	2000-01 \$m	2001-02 \$m	2002-03 \$m	2003-04 \$m	2004-05 \$m
The Atmosphere					
Atmosphere	28.9	26.7	22.9	17.6	17.7
Greenhouse	117.4	245.8	238.7	188.6	135.0
Meteorology	11.3	11.3	11.2	9.0	9.0
Biodiversity	154.6	150.8	62.6	25.2	25.6
Parks and reserves	93.0	70.6	57.7	57.2	58.4
Coasts and Oceans	156.8	152.4	111.1	71.0	71.1
Human Settlements					
Environmental Assessments and Approvals	14.4	15.1	9.0	8.2	8.3
Industry	120.0	140.7	104.5	89.1	63.7
Inland Waters	121.8	89.8	57.9	16.5	10.5
The Land	241.8	248.7	361.4	324.5	247.4
Natural and Cultural Heritage	65.9	63.8	16.3	16.3	6.0
Antarctica	103.2	100.7	102.5	104.9	106.7
Integrated Measures	^(a) 299.3	^(b) 307.6	96.8	97.0	94.2
Natural Heritage Trust Extension – Joint EA/AFFA Initiative ^(c)			100.0	233.0	233.0
Total	1528.4	1624.0	1352.6	1258.1	1086.6

(a) This figure includes approximately \$200 million for Australia's overseas aid programme.

(b) This figure includes approximately \$210 million for Australia's overseas aid programme. There are no estimates available for this activity for the years beyond 2001-02.

(c) The Natural Heritage Trust extension funds have not been allocated across EA and AFFA or to individual programmes. The figures do not include interest earned by the Natural Heritage Trust of Australia.

Summary of Natural Heritage Trust expenditure

Natural Heritage Trust estimated expenditure on programmes is summarised in Table 2.5. Programme expenditure figures are also provided in Appendix 2.

Table 2.5: Natural Heritage Trust funding^(a)

Description of Programme	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Air Pollution in Major Cities	1.3	1.5	2.4	2.9	5.0	4.1	1.3	18.5
Australia's Oceans Policy	–	–	–	1.5	4.8	8.5	5.2	20.0
Bushcare	3.7	22.2	50.2	81.6	100.0	^(b) 83.8	4.8	346.3
Coasts and Clean Seas	–	8.6	20.2	28.1	33.0	24.4	2.4	116.8
Endangered Species	2.0	2.1	6.9	5.8	5.6	5.5	–	27.8
Farm Forestry Programme	–	2.8	6.5	11.9	14.5	9.2	2.3	47.2
FarmBis: Advanced Property Management Planning	0.4	0.3	2.6	5.6	5.9	–	0.1	15.0
Fisheries Action	–	1.7	2.2	3.2	3.1	2.1	0.7	13.0
Landcare Tax Credits	–	–	0.5	0.4	2.9	4.9	49.2	57.9
Murray-Darling Basin 2001	3.8	27.5	35.0	43.0	50.7	35.0	22.8	217.7
National Feral Animal Control	3.7	3.1	1.6	2.0	5.2	2.7	0.9	19.2
National Land and Water Resources Audit	1.3	2.4	11.8	9.8	11.4	5.4	2.4	44.4
National Landcare ^(c)	10.2	30.1	48.5	48.8	63.5	31.2	14.2	246.5
National Reserve System	0.4	2.9	11.2	11.4	32.2	^(b) 20.0	6.0	84.2
National River Health	0.1	1.6	1.7	2.6	7.6	1.8	–	15.4
National Rivercare	–	5.9	14.3	19.1	24.4	14.9	4.4	82.9
National Weeds	2.1	1.3	1.6	0.9	4.6	4.8	13.2	28.5
National Wetlands	0.5	1.6	1.6	3.8	5.7	3.8	0.1	17.1
Riverworks Tasmania	1.8	2.6	0.3	4.2	–	–	–	8.8
Waste Management Awareness	0.2	0.6	0.7	1.0	2.4	1.1	–	6.0
Waterwatch Australia	0.2	2.2	2.4	3.1	2.9	2.6	–	13.4
World Heritage	4.7	10.7	10.0	8.6	9.7	8.9	–	52.5
Total	36.3	131.4	232.1	299.4	395.1	274.7	129.9	1499.0
NHT Extension	–	–	–	–	–	–	100.0	100.0
NHT Reserve interest	–	–	–	–	–	–	36.6	36.6
Total	36.3	131.4	232.1	299.4	395.1	274.7	266.5	1635.6

– denotes nil

(a) This table shows estimates proposed to the Natural Heritage Trust Ministerial Board for approval. 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 2000-01 prices. For 1996–97 to 2001–02, interest from the Reserve is included in programme funding.

(b) This figure includes part of the expenses reported in Appendix 2 under Cape York Peninsula.

(c) Natural Heritage Trust funding only. The National Landcare Programme also receives appropriations under the *Natural Resources Management (Financial Assistance) Act 1992*. In 2000–01, this amounted to \$36.8 million and will be \$38.5 million in 2001-02.

Chapter 3: Strategic Directions

PRIORITIES FOR 2001-02

The Commonwealth aims to protect and conserve Australia's unique natural and cultural heritage within a national framework of sustainable development.

Priorities for 2001-02 are:

- address Australia's land, water and biodiversity problems focusing on the critical issue of salinity;
- meet the challenge of climate change;
- manage Australia's coasts and vast ocean territory;
- refine legislation and institutional arrangements;
- encourage business to be leaders in sustainability; and
- enhance heritage protection.

The emphasis is on targeted and strategic initiatives to bring industry, the community and governments together to achieve desired environmental, economic and social outcomes.

This chapter summarises major initiatives. Detailed information can be found in Chapter 4: Key Environment Activities.

Addressing Australia's land and water resource problems

The Commonwealth is working with the States and Territories towards sustainable and integrated natural resource management.

Natural Heritage Trust

The Government addresses conservation and sustainable management of our natural resources through the Natural Heritage Trust.

The Government will provide a further \$1 billion for a five-year extension of the Trust from 2002-03 to 2006-07.

The Natural Heritage Trust provides a comprehensive, integrated approach to environment protection, sustainable agriculture and natural resource management across Australia. The experience gained from the Trust has helped to develop the National Action Plan on Salinity and Water Quality.

According to the mid-term review of the Trust, since it was established in 1997 some 300,000 Australians have been involved in Trust activities. The catalytic effect of Commonwealth funding is substantial, with community and State investment estimated to be in the order of \$3 for every dollar provided by the Commonwealth through the Trust.

The Natural Heritage Trust provides most of the funding for the following major activities in 2001-02:

- Land management — the National Landcare Programme (\$69.7 million) and the National Land and Water Resources Audit (\$5.4 million);
- Inland waters — the Murray-Darling 2001 Programme (\$35 million) and the National Rivercare Programme (\$14.9 million);
- Biodiversity — the Bushcare Programme (\$83.8 million) and the National Reserve System Programme (\$20 million); and
- Coasts and oceans — the Coasts and Clean Seas initiative (\$24.4 million).

With the additional \$1 billion funding, the Government will strengthen the Trust's investment focus on the environment, sustainable agriculture and natural resource management, and will simplify the Trust's delivery.

The additional funding will be supplemented by interest income generated from the minimum balance of the Trust in the Natural Heritage Trust of Australia Reserve as required by the *Natural Heritage Trust of Australia Act 1997*. The income can be spent according to the purposes of the Reserve.

The extension of the Trust for a further five years will build on the success of the current work.

Details on Trust funding are in Table 2.5 in Chapter 2: Budget Overview and in individual environmental themes addressed in Chapter 4: Key Environment Activities.

Improving water quality and tackling salinity

More than five million hectares of land in Australia are at risk from salinity caused by rising water tables. Credible projections suggest that this could rise to 17 million hectares by 2050. This problem has been addressed through on-ground action funded under the Natural Heritage Trust, and through research and the development of information resources such as the National Land and Water Resources Audit which provide nationwide assessments of land, vegetation and water resources.

The Government recognised, however, that more action was needed and in October 2000 it announced the \$700 million National Action Plan for Salinity and Water Quality to target salinity and water quality problems in priority catchments. Under the plan, integrated catchment/regional management plans will set targets for the maintenance

and improvement of the natural resources, including biodiversity, in the priority catchments.

The Government recognises that community support is essential and will work with stakeholders to develop and implement the plan. The plan will also assist the development of knowledge, skills and managerial networks.

The National Action Plan complements existing strategies, such as the Murray–Darling Basin Salinity Strategy, and augments the work of the Murray–Darling Basin Commission.

The Lake Eyre Basin Agreement between the Commonwealth Government and the Queensland and South Australian Governments was signed in October 2000. The agreement provides a framework for the cooperative management of water and related natural resources associated with cross-border river systems in the Lake Eyre Basin, and for the protection of dependent aquatic ecosystems.

Environment Australia is improving the protection of wetland sites of national and international significance that are subject to the international Convention on Wetlands (Ramsar, Iran 1971). A specific focus is better planning and management.

Meeting the challenge of climate change

The Government is committed to cost-effective greenhouse gas abatement policies. It is important that strong economic growth and job creation are secured while Australia meets its international greenhouse commitments. A national public information campaign is under way to encourage all Australians to help reduce greenhouse emissions.

The Australian Greenhouse Office is responsible for Australia's response to the greenhouse effect.

The Commonwealth has committed almost \$1 billion to the reduction of greenhouse gas emissions, including nearly \$800 million from the Measures for a Better Environment package. The \$400 million Greenhouse Gas Abatement Programme supports large-scale cost-effective abatement focusing on the first commitment period of the Kyoto Protocol, 2008-2012.

The *Renewable Energy (Electricity) Act 2000* will promote the use of renewable energy, fostering an estimated \$2 billion in investment and leading to an additional 9,500 GWh of stationary energy being derived from renewable sources by 2010. This will raise the contribution of renewable energy sources to around 12 per cent of Australia's total electricity supply.

The Government is examining emissions-trading design options and has given in-principle support to the development of a voluntary early crediting programme. This programme would be aimed at helping industry to deal more effectively with the

inherent uncertainties in greenhouse policy development and to hedge against potential future emission liabilities by investing in early low-cost abatement.

Operating a world class assessment and approvals system

Under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) the Commonwealth Government is for the first time addressing the national environmental significance of development proposals. The Government is now examining many proposals where previously such proposals would have proceeded without Commonwealth scrutiny. The processes have also been simplified.

The Government is seeking to improve EPBC Act processes as it gains greater experience with the Act and proposed changes include:

- inclusion of a new heritage regime making heritage a national environmental significance trigger;
- incorporation of a new wildlife protection regime covering imports and exports; and
- development of a regime for managing access to biological resources in Commonwealth areas.

Protecting Australia's coasts and oceans

The Government will protect marine wildlife and biological diversity and improve the management of marine, coastal and estuarine resources.

Australia's Oceans Policy will protect the marine environment and foster the sustainable development of Australia's marine resources. The National Oceans Office in Hobart was established to coordinate implementation of the policy.

Central to the policy is the development of regional marine plans based on broad-scale marine ecosystems. The scoping paper for the South-East Regional Plan was launched in early 2001. Work to be undertaken in 2001-02 will include biological, economic and social assessments, and consultations with stakeholders. During 2001-02 work will also start on the next regional marine plan.

The Government wants to achieve the sustainable use of Australia's fisheries. Under the EPBC Act, strategic environmental impact assessments of new management plans for Commonwealth fisheries will be undertaken. Within five years similar assessments will be made of those Commonwealth fisheries that do not have a management plan.

The Commonwealth has committed \$10 million to the \$20 million Queensland East Coast Trawl Restructure Programme. The programme will have major benefits for marine biodiversity, including that of the Great Barrier Reef World Heritage Area.

Improving the environmental performance of industry

A key goal is eco-efficiency. Eco-efficiency reduces the use of resources and cuts pollution, waste and production costs. The Government has developed a programme of voluntary agreements with industry associations to encourage sustainability.

The proportion of waste oil being properly disposed of will be increased by product stewardship arrangements. A levy-benefit system managed by the Australian Taxation Office is assisting the transition to the new arrangements between 2000-01 and 2003-04.

Initiatives involving the financial sector encourage industry to adopt environmental management practices and public reporting regimes, rather than merely complying with regulations. This promotes the incorporation of environmental considerations in lending, investment and insurance decisions.

Progress is being made in minimising waste. The National Packaging Covenant concentrates on used packaging material. Other measures to reduce diesel vehicle emissions and manage toxic air pollutants are being developed.

The Government is working to support a sustainable and internationally competitive environment industry that can exploit domestic and export business opportunities. An Environment Industries Action Agenda will identify business opportunities and promote growth in environment industries.

Protecting Australian and World Heritage places

New Commonwealth heritage legislation will, for the first time, identify, list and protect places of national significance and those heritage places owned or leased by the Commonwealth. The regime will complement the heritage provisions of the EPBC Act and the World Heritage Programme.

Promoting sustainable development

The World Summit on Sustainable Development, a 10-year review of the 1992 United Nations Conference on Environment and Development, will be held in 2002. The Government will ensure that:

- wider opportunities to achieve sustainability across the world and in Australia are identified and pursued;
- the outcomes of the summit will enable the international community to take the sustainable development agenda forward;
- there is better integration of the economic and social dimensions of sustainable development with the environment; and
- all sectors and groups share in the benefits of sustainable development.

Chapter 4: Key Environment Activities

This chapter describes environment activities to be undertaken by the Commonwealth over the next few years. Activities are classified by State of the Environment (SoE) reporting themes and by outputs of the Department of the Environment and Heritage. Grouping activities in this way allows for the cross-referencing of this statement with other Budget and non-Budget publications.

Australia's first SoE Report was published in 1996. The second national report will be published later this year. SoE themes addressed in this statement are the Atmosphere; Biodiversity; Coasts and Oceans; Human Settlements; Inland Waters; the Land; and Natural and Cultural Heritage.

The Department's outputs are aligned with SoE themes, but the additional categories of Greenhouse; Meteorology; Parks and Reserves; Environmental Assessment and Approvals; Industry; and Antarctica further differentiate aspects of the environment so that the Government's activities are described in a logical, easy-to-follow manner.

Many of the activities described in this chapter address issues relating to more than one of the environmental themes. Activities that could not be logically attributed to a particular theme have been addressed under Integrated Measures.

THE ATMOSPHERE

Protecting Australia's atmosphere

The Government has taken decisive measures in recent years to protect the atmosphere, and will continue working to improve the quality of air in urban areas and to ensure the recovery of the ozone layer.

The Government's standards for air quality, whether already established or under development, represent world best practice in dealing with the threat air pollution poses to our health. The focus is now on fuel quality and vehicle emissions, transport options that reduce pollution without impacting on access and mobility, management of wood heater emissions and the monitoring and management of fine particle pollution.

Air quality issues confronting our towns and cities are being addressed through a comprehensive package of programmes underpinned by research and public education. One such initiative is the Air Pollution in Major Cities Programme which is funded under the Natural Heritage Trust. The aim of this programme is to reduce the six major air pollutants (oxides of nitrogen and sulfur, particles, photochemical smog, carbon monoxide and airborne lead) through implementation of the National Environment Protection Measure on ambient air quality, and through the development of national fuel quality standards. With fuel quality standards in place, the

Government will develop a compliance and enforcement strategy under the fuel quality standards legislation.

Addressing air toxics and indoor air quality

The impact of air toxics is a significant environmental issue. These are gaseous, aerosol or particulate pollutants which are present in the air in low concentrations but which may be a hazard to human, plant or animal life. They are emitted from a wide range of sources, especially combustion processes. Motor vehicles are a dominant source. While all Australians are exposed to some level of air toxics, the highest concentrations are found in urban areas.

National strategies to manage air toxics and indoor air quality are considered in the *State of Knowledge Report on Air Toxics and Indoor Air Quality*. This report provides a basis for informed community debate on management options for the major air toxics.

Reduction of ozone depleting substances

Australia continues to lead the world in phasing out and managing ozone depleting substances. The Government supervises the orderly phase-out of these substances in accordance with Australia's commitments under the Montreal Protocol on Substances that Deplete the Ozone Layer. For example, the National Halon Bank collects and safely disposes of surplus halon, formerly widely used in fire extinguishers, while maintaining a reserve of halon until the year 2030 for essential uses.

The Government also maintains a solar ultraviolet (UV) radiation monitoring network covering major population centres. The network has been designed to assess the impact of the depletion of the ozone layer on UV radiation levels and the consequences for human health.

Case study — Integrated management of transport emissions

Transport activities are the most significant contributor to urban air pollution in Australia, with road vehicles the dominant source of transport pollutants (89 per cent). The Government has taken an integrated approach which involves Environment Australia working with the Department of Transport and Regional Services, the Department of Industry, Science and Resources and the National Road Transport Commission to tackle the emissions problem. Studies demonstrate that the initiatives devised under this approach will have a considerable impact on reducing the levels of the six major air pollutants.

Continued

Case study — Integrated management of transport emissions (continued)

The main focus to date has been on improving the emissions performance of vehicles. New vehicle emission standards are being progressively aligned with the most stringent international standards. Methods are being devised to ensure that the gains obtained from the new standards will be maintained throughout a vehicle's life. The Government is also determined to make vehicle fuels cleaner. The *Fuel Quality Standards Act 2000* will regulate the quality of fuel in Australia to enable new vehicle technologies to operate effectively. The first set of standards to be developed, for petrol and diesel, will be followed by standards for liquefied petroleum gas, dieselohol and biodiesel.

The Government is also addressing the level of vehicle use and is looking at ways to encourage and develop sustainable transport: alternative transport approaches which reduce car dependency without limiting mobility or access to transport. The outcomes being sought will improve air quality while offering more transport choices and improving the quality of community life. The Government intends to encourage sustainable transport through partnerships with communities, local governments and businesses to implement locally generated solutions.

Contact: Environment Australia - Atmosphere and Sustainable Transport Branch –
(02) 6274 1625

Greenhouse – meeting the challenge of climate change

The Government has allocated almost \$1 billion to the reduction of greenhouse gas emissions, most of it from the Measures for a Better Environment package established under *A New Tax System*. Cost-effective greenhouse gas abatement measures are being pursued to ensure that Australian industry remains competitive while still enabling Australia to meet international greenhouse commitments. A national public information campaign has been mounted to encourage all Australians to help reduce emissions.

The Australian Greenhouse Office, the world's first dedicated greenhouse office, is advancing Australia's greenhouse response. The office administers a broad range of programmes, including the promotion of least-cost abatement opportunities in partnership with business and the community, and the development of renewable energy alternatives.

There are significant Government incentives for the establishment of cooperative abatement partnerships involving the public and private sectors. The \$400 million Greenhouse Gas Abatement Programme supports projects that deliver cost-effective, large-scale and sustained reductions in greenhouse gas emissions. The Government also assists participating organisations in quantifying emissions and achieving abatement. Programmes include the Greenhouse Challenge, a joint initiative between the Government and over 500 companies; Cities for Climate Protection, a partnership between the Government and over 100 local councils; and Household Greenhouse Action, which encourages greenhouse initiatives at the household level.

Encouraging renewable energy

The Government is working closely with industry and the community to achieve efficiencies in the use of non-renewable energy sources and to promote the development and use of renewable alternatives. Up to \$17.7 million in venture capital, to be matched by non-government sources on a two-to-one basis, will be provided to assist companies and other incorporated bodies that are commercialising research and development in renewable energy technologies. In addition, \$55.6 million has been allocated to promote renewable energy initiatives with strong commercial potential.

Grants of up to \$180 million will offset the cost of replacing diesel-powered electricity generators, used by many households in rural Australia, with renewable energy technologies such as solar and wind. A further \$31 million will assist householders and community organisations who install photovoltaic systems.

Reducing vehicle emissions

To tackle vehicle emissions, funding of \$75 million has been allocated to encourage Australia's heavy commercial vehicle and bus fleets to use compressed natural gas or liquefied petroleum gas. Additionally, a grant scheme for alternative fuels is available for road transport operators and a network of compressed natural gas refuelling stations is being developed. So far 19 public refuelling sites, from Queensland to South Australia, have been established.

To raise consumer awareness about fuel efficiency, and increase demand for fuel-efficient cars, the Government requires that all new cars sold in Australia from 1 January 2001 carry a fuel consumption label. Greenhouse gas emissions from Australia's motor vehicles will be reduced by improved technologies and fuels, and by increased fuel efficiency in the government vehicle fleet.

Developing greenhouse sinks

The expansion of Australia's terrestrial greenhouse sinks – in which carbon dioxide is captured in vegetation – is occurring through a number of programmes. Plantations for Australia: the 2020 Vision aims to treble Australia's plantation estate between 1996 and 2020. Several Natural Heritage Trust programmes, including Farm Forestry, Bushcare and Landcare, encourage sustainable forestry and vegetation management. In addition, Bush for Greenhouse encourages greater private investment in revegetation.

Research

A number of eminent research bodies, including the CSIRO, the Bureau of Meteorology Research Centre, the Australian Institute of Marine Science and the National Tidal Facility, are working cooperatively on research related to climate change. The areas of research range from understanding the underlying nature and science of climate change through to options for mitigation of greenhouse gas emissions. The development of the National Carbon Accounting System will provide a complete accounting and forecasting capability for human-induced, land-based carbon sources.

International leadership

The Government is funding aid projects that abate emissions and facilitate adaptation to climate change as part of assisting developing countries to reduce poverty. Under the International Greenhouse Partnerships Programme, 14 greenhouse gas mitigation projects are under way with eight developing countries in Asia, the South Pacific, South America and Africa.

Case Study — Mandatory Renewable Energy Target

The Mandatory Renewable Energy Target is designed to increase the amount of electricity in Australia being generated from renewable energy sources. The target is to generate 9,500 gigawatt hours a year from renewable sources by 2010. As a guide, that is about the same as Tasmania's entire annual electricity consumption. The *Renewable Energy (Electricity) Act 2000*, which implements this measure, came into force on 1 April 2001. A Regulator has been appointed to ensure that the requirements of the measure are met, including overseeing the implementation of the legislation, determining penalties for non-compliance and conducting audits.

Under the new system, producers of renewable energy will receive certificates for the energy they generate. These can then be sold to wholesale energy purchasers, who in turn will surrender them to the Renewable Energy Regulator to discharge their liability to increase the amount of renewable energy in the total energy supply. Eligible renewable sources include solar photovoltaic, solar thermal, wind, ocean and river (tide, wave, current) and some forms of geothermal and biomass energy.

The target for this measure is to reduce greenhouse gas emissions by 2010 by up to seven million tonnes carbon dioxide equivalent, and raise the contribution of renewable energy sources to around 12 per cent of Australia's electricity supply. Meeting the target is expected to generate \$2 billion in investment and assist in further developing the renewable energy industry.

Contact: Office of the Renewable Energy Regulator – (02) 6274 1416

Meteorology – benefiting the environment

The Commonwealth's meteorological activities directly benefit Australia's communities and industries, particularly agriculture. The aim is to improve forecasts, reduce the social and economic impact of natural disasters and improve our understanding of this part of the world. A range of activities is undertaken by the Bureau of Meteorology to meet this aim: national atmospheric, oceanographic and hydrological monitoring, research and service provision; and international activities.

National activities

A comprehensive national climate data archive is continually updated for national and international use in climate research, modelling and prediction. This work contributes significantly to the National Greenhouse Strategy and increases our understanding of the global climate system. It helps Australia to meet its international obligations and

provides scientific support for Australia's participation in international climate change negotiations. The research contributes substantially to scientific assessment by the Intergovernmental Panel on Climate Change.

Under the Natural Heritage Trust's Clear the Air initiative, the Bureau of Meteorology, the CSIRO and State environment protection agencies collaborate on research and development efforts to improve atmospheric quality. As a result, residents of major cities now have access to daily advice about current and prospective air pollution and air quality.

Initiatives in the fields of marine meteorology and oceanography are essential to the sound management of Australia's precious marine and coastal environment and natural resources. Key activities include providing forecasting and warning services and responding to marine pollution emergencies. Our understanding of the ocean and its interaction with the global climate is improved by continuing research studies of Southern hemisphere oceans, wave modelling and prediction, and implementation of the Australian aspects of the Global Ocean Observing System and the United Nations Environment Programme's Global Action Plan for the Ocean.

The gathering of extensive hydrometeorological and water resource data represents a vital service to industry and the community. It provides the basis for advice on the planning and management of Australia's water resources, the circulation of water (both in the atmosphere and on land) and the rainfall statistics of storms. Cooperative research activities explore rainfall information, the application of radar rainfall information to water resources management, flood forecasting and the impact of climate change on water resources.

International activities

Australia plays a key role in the provision of meteorological and related environmental services in the Asia-Pacific region. The Government contributes to the fulfilment of its regional responsibilities by assisting the National Meteorological Services of several developing countries. The Bureau of Meteorology advises meteorological services in South-East Asia on the potential dispersion of airborne matter following certain events, such as volcanic eruptions, forest fires and the release of radioactive material. The Government works with the international community to raise awareness of climate change and related issues through the Global Observation to Benefit the Environment project. This is an international network of school students who study environmental issues, take environmental observations and share data with the international scientific community.

Australia's aid programme is funding the third phase of a sea level and climate monitoring project which aims to provide an accurate long-term record of sea levels in the South Pacific for partner countries and the international scientific community.

Case study — Air quality prediction

The Australian community justifiably regards air quality as a key environmental issue. As part of its continuing efforts to improve air quality, the Government has implemented a project aimed at providing daily forecasts of air quality in Australia's cities. The project is funded through the Air Pollution in Major Cities Programme under the Natural Heritage Trust.

The project currently provides daily predictions of the distribution of key air pollutants in Melbourne and Sydney, although ultimately it can be extended to other capital cities and include a bigger range of air pollutants. The initial demonstration period, from August to December 2000, showed that the system gave accurate and useful simulations of air flow and pollution distribution on a scale of a few kilometres. In particular, it was shown that detailed information on the hour-by-hour development of pollution build-ups can be displayed graphically on the Internet to augment the air quality forecasting and management services of State environment protection authorities.

Continuing improvements to the system will ensure that it remains a world-class facility providing valuable public information on air quality in local neighbourhoods.

Contact: Bureau of Meteorology Research Centre – (03) 9669 4444

BIODIVERSITY

Identifying, protecting and conserving biodiversity

The protection and conservation of Australia's biodiversity is one of the Government's highest environmental priorities. Australia's immense biodiversity is internationally renowned and the country is recognised by scientists as being one of only 17 mega-diverse countries in the world. Protecting and conserving this unique environmental asset requires commitment and a multi-faceted approach. The Government's comprehensive package of biodiversity programmes includes legislative protection, on-ground action and a sustained research effort to build a better understanding of Australia's biological resources. Some of these programmes are outlined below, although initiatives which benefit biodiversity are featured across many of the environment themes in this document. Activities related to marine biodiversity are addressed under the Coasts and Oceans theme.

Legislative protection

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) enables the Commonwealth to join with the States and Territories to provide a national scheme of environment protection and biodiversity conservation. It provides for biodiversity conservation by protecting threatened species, threatened ecological communities and migratory species. This year the Government will introduce legislation to incorporate

the *Wildlife Protection (Regulation of Exports and Imports) Act 1982* (under which the Government regulates trade in native species) into the EPBC Act. This will provide improved protection to species and continue the process of legislative reform.

The EPBC Act also provides for continuous improvement in biodiversity conservation, establishing expert advisory bodies to advise the Minister for the Environment and Heritage. The Biological Diversity Advisory Committee, for example, provides advice on the performance of the Government's programmes in promoting biodiversity conservation and advises on ways to promote biodiversity conservation through improved business practices. It also advises the Australian and New Zealand Environment and Conservation Council on priorities for action under the National Strategy for the Conservation of Australia's Biological Diversity.

On-ground action

The Natural Heritage Trust's Bushcare Programme addresses the long-term decline in the extent and quality of Australia's native vegetation. The programme provides financial assistance to the community to undertake native vegetation projects, funds a national network of extension officers and provides for community education and training to support on-ground efforts. In 2000-01, 890 projects were funded under the Bushcare Programme.

One of the highlights of the Bushcare Programme this year will be the Flora for Fauna project, an initiative involving the Nursery Industry Association of Australia. Flora for Fauna will encourage Australians, particularly in urban areas, to develop a deeper interest in protecting and conserving their local environment. Flora for Fauna will show families, schools and other groups in the community how they can change their gardens – and the way they garden – to use Australian plants that support and attract wildlife.

Programmes are in place to reduce the damaging impact of feral animals and weeds on the environment and primary production. The National Weeds Programme aims to reduce the impact of weeds of national significance, prevent the introduction of new pest plants through revised quarantine assessment procedures, and assess the potential for existing pest plants to become weeds of national significance. An alert list of other introduced weeds with the potential to cause significant environmental damage also has been developed. The main focus of the National Feral Animal Control Programme in 2001-02 will be on improved management of feral cats, rabbits and foxes. Approximately \$500,000 will be spent on continuing research into a biological control for cane toads to reduce their impact on native wildlife.

Research

The Government is committed to improving knowledge and understanding of biodiversity. Scientists from the CSIRO are working closely with community, industry and government groups to provide large-scale, integrated solutions to biodiversity issues. Current work focuses on identifying and naming new species; managing the threat of pests, weeds and diseases; identifying the functional role biodiversity plays in the ecosystem; and identifying possible uses for Australia's vast biological resources.

This might include extracting natural pharmaceuticals from insects, or cultivating native species for sale as bush tucker.

The Australian Biological Resources Study provides taxonomic knowledge necessary for the conservation and sustainable use of Australia's biodiversity. The study assists research on Australia's organisms through grants and training schemes. It also publishes books on Australia's flora and fauna, and supports the Australian Biodiversity Information Facility.

Australia commences its first full year of membership of the Global Biodiversity Initiative in 2001–02. The initiative is a network of biodiversity databases and information technology tools. It enables users to navigate and put to use the world's vast quantities of biodiversity information to produce national economic, environmental and social benefits.

Case Study — Revolving funds

The Government is committed, under the Bush for Wildlife initiative (funded through the Bushcare Programme), to coordinating and supporting revolving funds nationally. The basic concept of the revolving fund initiative is modelled on the Trust for Nature (Victoria) operation. It represents an innovative approach to achieving nature conservation on private land. Revolving funds involves purchasing private land with significant conservation values, placing a unique site agreement (such as a covenant) on the conservation values, and then reselling the land to a buyer committed to managing for conservation. Proceeds from sales are then reinvested (revolved) in the fund.

The Government is providing funds to proponents who can demonstrate that they are capable of managing a revolving fund strategically and in a manner consistent with principles which have been developed to cover property selection and purchase, long-term legal protection of conservation values, sale of properties, enhancement of the capital base, and stewardship support for ongoing management.

Funding of \$500,000 was provided to the Trust for Nature in 1999-2000 to expand its existing revolving fund operation. Around \$2 million should be provided in 2000-01 to catalyse revolving fund operations in other States. Another \$2 million has been allocated in 2001-02 to further encourage revolving fund activity in other States.

Contact: Environment Australia –
Natural Heritage Trust and Biodiversity Policy Branch – (02) 6274 2325

Managing Commonwealth national parks and reserves

The Commonwealth is a leader in natural and cultural heritage conservation, establishing and managing protected areas and building land-management partnerships with Indigenous Australians.

The overall aim is to establish a comprehensive and representative system of land-based, ecologically significant parks and reserves. This objective is partly addressed through the National Reserve System Programme, which encourages all landholders to add ecologically significant land to the reserve system, and to develop and implement best practice management standards. It also provides incentives for Indigenous people to participate through the voluntary declaration of protected areas on their lands.

The Government is directly responsible for ten land-based parks and reserves. These include the unique island ecosystems of Cocos (Keeling) Islands, the Christmas Island Territory and the Norfolk Island National Park and Botanic Garden. The Government also manages the marine reserves associated with Christmas Island, Pulu Keeling and Booderee National Parks. In 2001 visitor facilities are being established on Pulu Keeling, and recovery plans are being developed to protect the green parrot on Norfolk Island.

The Government plays a leading role in the development of world best practice park management, participating in the International Union for the Conservation of Nature and Natural Resources and other relevant international groups. Australia also shares expertise with other countries facing similar conservation issues, such as Papua New Guinea and Indonesia.

Joint management

Organisations such as the United Nations consider Australia to be a world leader in joint management arrangements for national parks. Kakadu, Uluru-Kata Tjuta and Booderee national parks are managed jointly with their Aboriginal traditional owners. These parks are managed through Boards of Management, with traditional owners having majority membership. Lease arrangements and a share of revenue are paid to traditional owners for the use of their land. Joint management arrangements provide Aboriginal people with opportunities to be actively involved in land management. This results in improved natural and cultural heritage outcomes and other benefits, such as employment and training. The Government also funds and facilitates initiatives to improve resources, employment and educational opportunities for traditional owners and other Indigenous people living in these national park regions. The success of the joint management initiative has led to consideration of similar arrangements by the States and Territories and overseas governments.

Botanic Gardens

Government funding ensures that the Australian National Botanic Gardens (ANBG) and Booderee Botanic Garden carry out valuable conservation work. The ANBG, in Canberra, features Australia's most extensive collection of native plants, and is used for research into plant classification and biology as well as for public enjoyment and education. Plants threatened in the wild are cultivated to protect them from extinction and to provide information that might assist in their re-introduction to their natural habitat. The ANBG is in the process of finalising its 2001-2007 Plan of Management. The draft plan provides for the ANBG to pursue sponsorships, continue commercial ventures and encourage new commercial partnerships. Once the plan is implemented

the ANBG will have the infrastructure to enable it to create or take advantage of commercial opportunities.

Activities at the Booderee Botanic Gardens, at Jervis Bay, New South Wales, include the display of south-east coastal flora; demonstrations of the Aboriginal use of plants; and support for the use of local native plants in the surrounding region for restoration and rehabilitation purposes.

Case Study — Christmas Island National Park

The remarkable ecology of Christmas Island is internationally significant. Millions of crabs, famous for their annual migration, cultivate the soil of this tropical rainforested island in the Indian Ocean. Many seabirds, including endangered, migratory species, nest and roost in these forests.

Concern that rainforest clearing for phosphate mining was endangering a unique bird species, the Abbott's booby, led to the establishment of Christmas Island National Park. The park now includes 63 per cent of the land area of Christmas Island. Features of the park include habitat for endemic mammal and lizard species, a mangrove swamp and fascinating cave fauna. The adjacent sea, in which coral and fish abound, has been proclaimed a marine reserve within one kilometre of the park.

Parks Australia staff oversee protection of the island's wildlife, both within and outside the national park. About eight years ago staff noticed that crabs were dying in large numbers. Staff and a team of scientists from Monash University discovered that a rapidly spreading infestation of the introduced yellow crazy ant was the cause. The infestation has the potential to wreck the entire Christmas Island ecology. Diligent research and practical design led to the development of a suitable bait to reduce ant activity. With the assistance of industry, this bait was manufactured and delivered for a local team to spread by hand in rugged terrain. This was done in time for the crabs to safely undertake their year 2000 migration, essential to the breeding cycle, across ant infested areas.

In order to conserve the special natural heritage of Christmas Island, staff continue to develop responsive strategies. Research into ant control methods that avoid the use of poisons continues.

Contact: Environment Australia - Parks Australia North, Christmas Island –
(08) 9164 8700

COASTS AND OCEANS

Protecting Australia's coasts and oceans

The release of Australia's Oceans Policy in December 1998 demonstrated the Government's commitment to Australia's ocean environment.

Implementation of the policy is achieved predominantly through regional marine plans, developed by the National Oceans Office as part of a comprehensive ocean-management framework, and through the continued implementation of the principles of ecologically sustainable development by relevant agencies. Regional marine plans will establish an integrated process within which the sustainable use and exploration of Australia's marine resources can be undertaken. The first regional marine plan, now being drafted, covers waters off Tasmania (including Macquarie Island), Victoria, parts of South Australia and south-eastern New South Wales. Other plans will be progressively introduced for various marine regions around Australia over the next few years.

Marine protection

The declining state of many estuaries around coastal Australia is cause for concern. The Government will focus much of its investment under the Natural Heritage Trust's Coasts and Clean Seas initiative and the National River Health Programme on improving coastal and estuarine water quality. Important estuarine wetland areas will be protected under the National Wetlands Programme.

A range of regulatory and other policy measures are in place to protect the marine environment. Under the *Environment Protection and Biodiversity Conservation Act 1999*, strategic environmental impact assessments of all management plans for Commonwealth fisheries are required by 2005. Export oriented fisheries, including State managed fisheries, must be assessed by December 2003 to show that harvesting is undertaken in accordance with ecologically sustainable management arrangements. The Australian Fisheries Management Authority works to ensure the sustainable use and efficient management of Commonwealth fishery resources on a day-to-day basis.

Australia has been at the forefront of international efforts to combat illegal fishing. These efforts led to the Food and Agriculture Organization of the United Nations adopting an international plan of action to prevent, deter and eliminate illegal, unreported and unregulated fishing. Such fishing threatens fisheries in, and adjacent to, the Australian Fishing Zone, particularly Patagonian toothfish in subantarctic waters, orange roughy and southern bluefin tuna.

The Government has provided \$10 million towards the \$20 million Queensland East Coast Trawl Restructure Programme. The programme supports a management plan that will cap and reduce the level of fishing in sensitive ecosystems, including in the Great Barrier Reef World Heritage Area, and require the use of by-catch reduction and turtle exclusion devices. It will help to protect fish stocks and the benthic marine environment.

The Coasts and Clean Seas initiative, funded through the Natural Heritage Trust, supports the conservation, sustainable use and repair of Australia's coastal and marine environments. Programmes under this initiative also address marine waste and debris, and introduced marine pests. They will substantially reduce the adverse impacts of pollution and degradation of coastal and marine waterways, as well as boosting vital conservation efforts along sensitive coastal and estuarine areas.

Part of this initiative is the Fisheries Action Programme, which aims to rebuild Australia's fisheries to more productive and sustainable levels by a range of measures. These include providing funds for projects that focus on collection of data and resource information; raising industry and community awareness; encouraging industry and community participation; and establishing partnerships with government, industry and the community.

Other Government programmes, including the Urban Stormwater initiative and the Cleaning Our Waterways – Industry Partnership Programme, aim to improve the health of urban waterways in major coastal cities, halting pollution before it reaches our oceans. The Government also continues to fund a number of national programmes aimed at protecting marine and coastal environments by engendering community and industry stewardship. National leadership and demonstration projects have brought significant improvements in waterways in a number of urban areas.

Conserving marine resources

Efforts continue to establish a National Representative System of Marine Protected Areas to promote the conservation of marine biodiversity and the sustainable use of marine resources. Five protected areas have been declared since 1996.

Marine biodiversity commitments are being pursued through international fora. The aim is to identify and protect marine biodiversity, partly by developing marine protected areas in international waters.

In 2001 the Government will continue to advocate the formation of the South Pacific Whale Sanctuary as a step towards the creation of a global whale sanctuary. Australia will also continue its participation in the Commission for the Conservation of Southern Bluefin Tuna, the Commission for the Conservation of Antarctic Marine Living Resources, the Indian Ocean Tuna Commission, the Network of Aquatic Centres in Asia Pacific, and the Forum Fisheries Committee of the South Pacific Communities. It will also participate in preparatory work to establish a new commission to manage the tuna and tuna-like species of the western and central Pacific Ocean.

Improving the knowledge base

Research plays an important role in the improved management of our coasts and oceans. The Australian Institute of Marine Science conducts scientific research to improve understanding of marine systems and biodiversity. The aim is to develop a capability to predict the behaviour of complex tropical marine systems and capture the benefits of biodiversity. The CSIRO produces tools and strategies to assist in the sustainable management of fisheries and marine and estuarine ecosystems, and in

improved environmental protection. The Fisheries Research and Development Corporation manages research and development programmes relating to the Australian fishing industry, promoting the commercialisation of research and development results.

The Australian Nuclear and Science Technology Organisation contributes to environmental management through sediment and effluent research. The Defence Science and Technology Organisation undertakes research on biofouling and marine pollution control technologies for ships and submarines.

Case Study — 'One Track for All'

Reconciliation, cultural tourism, disabled access and environment restoration are themes of the 'One Track for All' project being undertaken at the northern headland of Ulladulla Harbour in New South Wales. The Budawang Aboriginal community, assisted by a \$30,000 grant from Coastcare, is building a walking track around the headland that will be accessible by frail and disabled people.

The project will rehabilitate the headland by arresting erosion and eradicating weeds. Wheelchair access trails, heritage interpretive sites and artworks will be installed and lookouts along the track will be used to tell Aboriginal and non-Aboriginal history. Timber carvings, wood burnings and sculptures will feature a range of topics: the traditional lifestyle of Aboriginal people, steamships that plied the coast for whales or came to collect cedar, the settlement of the nearby town of Milton and the arrival of Italian immigrants who formed the mainstay of the fishing industry.

The project is being implemented jointly by the Jirrawich Aboriginal Training Association and Healthy Cities Shoalhaven. Noel Butler, project supervisor and Aboriginal community leader, says the project will generate a better understanding of the area's history and a sense of pride in the headland. 'I believe the more people who are using an area, the better protection it has,' Mr Butler said. 'The more people that can use the place and learn about it, the more that bush gives to them and the more they in turn give back'.

Contact: Environment Australia - Marine Coasts and Wetlands Branch - (02) 6274 1090

HUMAN SETTLEMENTS

Operating a world class assessment and approvals system

The Government continues to reform environment and heritage law in accordance with the 1997 Council of Australian Governments' Review of Commonwealth-State Roles and Responsibilities for the Environment.

Implementing new national legislation

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), the most fundamental reform of Commonwealth environment laws since the first environment statutes were enacted in the 1970s, has its first full year of operation in 2001–02. Under the EPBC Act, the Commonwealth is involved in the environmental assessment and approval of development proposals which may impact significantly upon matters of national environmental significance. These matters are defined in Part 3 of the EPBC Act.

Of the development proposals received as of 30 April 2001 on which a decision has been made, 32 per cent have been determined to require approval from the Minister for the Environment and Heritage. Referrals have been received for offshore petroleum exploration or mining, roads, residential developments, aquaculture developments, tourism ventures, water management, port developments, industrial developments and airports.

Some of the more high-profile development proposals involve the undertaking of a seismic survey near the Great Barrier Reef in Queensland, an irrigated cotton development expansion near the Macquarie Marshes in New South Wales and a nuclear waste repository in South Australia.

The Government has also prepared a package of heritage Bills designed to provide more effective protection for places of national heritage significance. This protection regime is to be incorporated into the EPBC Act. When these Bills are passed by Parliament, places on the National Heritage List will be matters of national environmental significance under the EPBC Act. The Minister for the Environment and Heritage is also discussing with the States, Territories and interested parties a proposal to include greenhouse emissions as a matter of national environmental significance.

A key aspect of the EPBC Act is the development of bilateral agreements that allow for the accreditation of the State and Territory processes and systems by the Commonwealth. This partnership approach ensures best practice assessments will be employed by all jurisdictions in relation to matters of national environmental significance. A bilateral agreement was signed with Tasmania in December 2000. Negotiations with other States and Territories are well advanced.

Case study — Assessment and monitoring of aircraft noise

Airservices Australia has a number of environmental obligations under the *Air Services Act 1995*, Ministerial Directions and relevant Commonwealth and State legislation. Airservices Australia provides information, advice and services, including aircraft noise monitoring services and environmental impact information, in relation to noise from aircraft operations to the Government, industry and communities surrounding airports.

Continued

Case study — Assessment and monitoring of aircraft noise — continued

There has been longstanding community concern that the description of noise exposure for communities surrounding airports is misleading. As a consequence, the Department of Transport and Regional Services is developing a number of new ways to describe aircraft noise. These are based on using everyday language and fewer technical terms. A major discussion paper has been released and a software package is being developed.

Contact: Department of Transport and Regional Services - Airport Operations Branch –
(02) 6274 7993

Accelerating improved environmental performance by industry

The Government is working with Australian companies to improve their environmental performance. It has adopted a two-pronged approach: encouraging improved environmental management practices through partnership arrangements with industry, and taking action to minimise the adverse environmental impacts of hazardous materials and waste products. It is also implementing measures to improve the environmental performance of its own departments and operations.

Partnership activities

A key initiative in this process has been the Business for Sustainable Development Programme which the Government set up last year. Through this programme the Government works with industries to promote eco-efficiency and its benefits for business and the environment, and to minimise waste. Eco-efficiency involves improving the efficiency of industrial practices and processes in order to reduce resource use and wastes. This in turn reduces business costs. So far the Government has entered into eco-efficiency agreements with several major industry associations covering over 350,000 businesses, and will work with these associations over three years to promote eco-efficiency to these industries. Further agreements will be entered into this year. The ultimate aim is to cover all major industry sectors in Australia. Eco-efficiency tools are being developed to help industries assess, improve and report on their environmental performance. This year the Australian Bureau of Statistics will commence national environment management surveys to help target future programmes and policies.

The Government is working with the financial sector to encourage financial institutions to consider environmental management in their lending, investment and insurance decisions. The Government will continue to use economic instruments to support business expenditure on environmental impact studies and pollution control measures.

Environment industries

The need for expertise in environmental management techniques has led to the development of an innovative and rapidly expanding environment industry sector. Through the Environment Industries Action Agenda, the Government will help

Australia's environment industry to grow and take up international opportunities. The Government is actively promoting Australian environment industry capabilities domestically and internationally. One promotional measure is the EnviroNET, an Internet gateway that disseminates Australian solutions to environmental protection problems and promotes Australian companies with environmental expertise to the world.

This year the Government will work with industry in preparation for the 2002 World Summit on Sustainable Development (referred to as Rio+10). This gathering of governments, industry and other relevant parties from around the world will review progress towards sustainable development since the 1992 United Nations Conference on Environment and Development (held in Rio de Janeiro). Australia will promote new approaches and actions to help industries globally to become more sustainable.

The Government and the Ecotourism Association of Australia are working together to develop a national plan for Australia's contribution to the United Nations' '2002 – International Year of Ecotourism'. The plan will encourage initiatives to increase the sustainability of tourism and raise awareness of the principles of ecotourism, including the conservation of the natural environment.

Minimising hazardous materials and waste products

Pollutants and hazardous materials from industrial activities may have national and international impacts. The Government participates in several national and international fora that promote the safe management of wastes, hazardous chemicals and radioactive materials. The National Environment Protection Council, a key Ministerial Council initiative, has developed the National Pollutant Inventory and a range of other environment protection measures. It will work on measures to tackle diesel emissions and toxic air pollutants in the coming year.

Projects are being funded under the Waste Management Awareness Programme that provide national leadership in various waste management issues, including construction and demolition waste and environmental life cycle assessments. To improve the management of waste oil nationally, transitional assistance will be provided over the next three years to help industry to implement product stewardship arrangements. These arrangements aim to increase the quantity of waste oil recycled or re-used, thus minimising the adverse environmental impacts that result from inappropriate disposal.

The Government manages the National Industrial Chemicals Notification and Assessment Scheme and the National Registration Scheme for Agricultural and Veterinary Chemicals. Internationally, Australia participated in negotiations for the Convention on Persistent Organic Pollutants (POPs) and is now considering domestic measures that will achieve the objectives of the convention. It has signed the Rotterdam Convention on Prior Informed Consent and is implementing the interim procedure, that mirrors the convention's obligations, on a voluntary basis. The convention assists all countries to make sound scientific decisions in relation to the import and export of certain hazardous chemicals. In addition, Australia has an important role in the joint Food and Agriculture Organization/World Health

Organization Codex Alimentarius process, as well as other processes run by the Organization for Economic Cooperation and Development, which review and assess agricultural and veterinary (agvet) chemicals on the basis of trade, health and environmental concerns.

Australia's aid programme has funded a project to compile an inventory of POPs in Pacific island countries. Australia is now considering funding a second phase to remove from these countries the particularly hazardous, intractable POPs (mostly industrial chemicals and pesticides) that cannot be safely managed locally, and to transport the material to Australia for safe destruction.

The Government's scientific organisations contribute significantly to the environmental performance of Australian industry. They set standards and provide technical expertise and advice in the management of chemicals, radioactive substances, wastes and hazardous materials. The CSIRO, Australian Nuclear and Science Technology Organisation, Australian Institute of Marine Science, the Supervising Scientist Division of Environment Australia and the Australian Government Analytical Laboratories (AGAL) are investigating and developing technologies that will lead to cleaner and more environmentally sustainable operations in mining, chemical manufacturing, tourism and other industries.

Case Study — Environmental management of agricultural and veterinary chemicals

The Government is working with rural industries to ensure effective environmental management of agvet chemicals at all stages of the supply chain, from production to disposal.

In the production stage, the AGAL provides agvet chemical standards to manufacturing laboratories and conducts national studies of laboratory practices to assist in improving their performance.

Before new agvet chemicals are placed on the market, the Government assesses their impacts on the environment, public health, occupational health and trade under the national registration scheme for agvet chemicals. Older chemicals are also assessed progressively to determine whether they meet current standards.

To promote eco-efficiency throughout the agvet chemicals supply chain, the Government has entered into a three-year agreement with Avcare, the National Association for Crop Production and Animal Health.

Continued

*Case Study — Environmental management of agricultural and veterinary chemicals
(continued)*

The ChemCollect Programme, funded jointly with the States and the Northern Territory, ensures environmentally responsible disposal of agvet chemicals. Through ChemCollect, stockpiles of unwanted agvet chemicals are collected at no cost to primary producers, and the chemicals are then safely destroyed. These chemicals would otherwise pose a risk to human health, the environment and international markets for Australian produce. The programme commenced in 2000 and will be completed during 2002. As at March 2001, 308 tonnes of farm chemicals had been collected. Of these, approximately 10 per cent were persistent organochlorine pesticides. The Government has negotiated the ChemClear programme, which will be run by industry, to provide for long-term collection of unwanted agvet chemicals once ChemCollect is completed.

Contact: Environment Australia – Sustainable Industries Branch – (02) 6274 2737

Greening of Government

In addition to working with the private sector, the Government is aware of the role that the Commonwealth, state and local governments play in the Australian economy and of the importance of 'greening' the government sector as well as other sectors of the economy. The Commonwealth is examining its own operations as part of a wider approach to Ecologically Sustainable Development (ESD). The aim of ESD is to meet the needs of today while conserving our ecosystems for the benefit of future generations.

Australia's transition to sustainability is a critical national priority. Implementing ESD – a responsibility shared by governments, industry, business and the community as a whole – represents one of the greatest challenges facing Australia in the coming years.

The Government recognises that, through its policies and operations, it has a significant effect on Australia's transition to sustainability. For example, the Commonwealth has outlays of approximately \$150 billion annually and employs over 110,000 people. Increasing the efficiency of the Government's resource use has obvious benefits for sustainability.

As part of a wider approach to ESD, the Government is concentrating on 'greening' its own operations. A robust and transparent legislative framework has been established under which the Government, for the first time, must report publicly on its environmental performance. The framework applies to all functions of Government – operational, policy and legislative.

All Government agencies are required by law to report on the extent to which the principles of ESD are adopted in Government processes, and how expenditure contributes to achieving ecologically sustainable development. The Government is also required to report on the effect its policies and operations have on the environment, and the measures taken to minimise any negative effects and improve environmental performance.

The Government also pays close attention to other aspects of its operations that impact on the environment, such as purchasing practices, energy efficiency, reducing greenhouse gas emissions and implementing environmental management strategies.

Some agencies have developed environmental management plans to help them meet the Government's environmental requirements. These identify areas where environmental and financial benefits can be achieved concurrently, assist in meeting monitoring and reporting requirements, and identify strategies for continued improvement. Environment Australia has developed a model environment management system to help other agencies improve environmental performance.

The Government's management of airports demonstrates its commitment to improved environmental management. The *Airports Act 1996* and the Airports (Environment Protection) Regulations have been developed in accordance with best practice standards. They provide for the implementation of environment management systems and the emerging National Environment Protection Measures. Under these arrangements, Airport Environment Officers have been employed to consult with airport stakeholders in regard to their environmental obligations and monitor progress to minimise environmental impacts of airport operations.

All Commonwealth agencies are required to reduce energy consumption by improving the energy efficiency of transport operations, buildings and building-related activities. The *1999–2000 Commonwealth Energy Report* documents a 10.6 per cent reduction in energy usage and a 9.2 per cent reduction in greenhouse gas emissions. Overall the report indicates that the Government is on track to achieve its 2002–03 targets for energy use reductions in buildings. These reductions have resulted in significant energy budget savings.

In the Australian Antarctic Division research continues into alternative energy systems suitable for Antarctic stations. The aim is to reduce or eliminate dependence on fossil fuels and reduce operating costs. The planned introduction of wind turbines at Mawson station should eventually eliminate the use of fossil fuels for heat and power generation.

The scale of the Government's activities, particularly in regard to expenditure, places it in a powerful position to stimulate the more sustainable use of resources throughout the economy. For example, increased demand for products with recycled content will expand the market for recoverable material and decrease the use of virgin materials in production. The Commonwealth's procurement guidelines promote the purchasing of goods and services which ensure the protection of the environment. The Government is also investigating measures such as guidebooks and a procurement helpdesk that will assist staff in implementing these guidelines.

Packaging waste is a major environmental issue in Australia, and the National Packaging Covenant is a key initiative in this important area. It is designed to minimise the environmental impacts of consumer packaging waste, achieve higher levels of recycling and develop economically viable and sustainable recycling collection systems. The Government is fully committed to the covenant and has actively participated in its development and implementation. The Government is a

signatory to the covenant, thus obliging all its agencies to reduce the environmental impact of packaging materials within their sphere of responsibility.

INLAND WATERS

Protecting and rehabilitating the environmental values of inland waters

Declining inland water quality and increasing salinity are major challenges facing Australia, especially rural industries and regional communities. The Government is facing this challenge with a comprehensive suite of programmes aimed at improving the quality of Australia's inland waters and promoting their sustainable use.

The Government released its National Action Plan on Salinity and Water Quality in October 2000. All States and Territories subsequently endorsed it. Under this plan \$1.4 billion will be invested over seven years by the Commonwealth, States and Territories to address salinity, particularly dryland salinity, and deteriorating water quality in key catchments and regions across Australia.

The plan complements other Government initiatives (outlined below) undertaken in partnership with communities and industry to improve the state of Australia's catchments, rivers and wetlands.

Catchments

The Lake Eyre Basin Intergovernmental Agreement, signed in October 2000, provides a framework for the cooperative management of water and related natural resources associated with the cross-border river systems in the Lake Eyre Basin. The *Lake Eyre Basin Intergovernmental Agreement Act 2001* was passed by Commonwealth Parliament on 4 April 2001. The Government is firmly committed to working with the Basin community to ensure the protection of the outstanding natural and cultural values associated with the Lake Eyre Basin.

The Murray–Darling 2001 Programme brings an integrated catchment management approach to the use of the Murray–Darling Basin's water, land and other environmental resources. In 2001–02 the programme will dedicate approximately \$35 million of Natural Heritage Trust funding to improving water quality and the health of riparian (riverbank) land systems, wetlands and floodplains. Through the widespread adoption of sustainable land use and management practices by landholders, including the efficient use of irrigation water, the programme seeks to reduce salinity and waterlogging in irrigated and dryland areas.

In March 2001 the Murray–Darling Basin Ministerial Council agreed to a structural works programme to provide passage for migratory fish from the sea to Hume Dam at a total cost of \$10 million over five years. The council also agreed to a seven-year salt interception capital works programme. The Government will also invest \$75 million

over ten years in water savings works in New South Wales and Victoria to generate additional environmental flows for the Murray River.

The Great Artesian Basin Sustainability initiative is aimed at the partial recovery of artesian pressures in strategic areas of the basin. The works under this initiative are a central part of the comprehensive management framework proposed in the strategic management plan to improve management practices across the basin and achieve sustainable use of the groundwater resource. The partial recovery in pressure and water saved will maintain options for the future use of the resource and result in direct benefits to pastoral industries and to the environment.

Rivers

The National Rivercare Programme works towards the sustainable management, rehabilitation and conservation of individual river systems 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 discharge, controlling stock access to rivers, managing accelerated erosion or build-up of river banks or beds, and contributing to healthy stream and riparian ecosystems.

The National River Health Programme identifies priorities to protect and repair the health of rivers in partnership with State and Territory Governments, research organisations, industry and the community. It consists of two sub-components, the Environmental Flows Initiative and Australia-wide Assessment of River Health. These components assist in the implementation of the Council of Australian Governments' Water Reform Framework. Data generated by river health assessments contributes to the State of the Environment Report and the National Land and Water Resources Audit.

Wetlands

The protection of the 56 wetlands listed as internationally significant under the Ramsar Convention, and other wetlands of national significance, will be improved by the use of better planning and management practices consistent with the Australian Ramsar Management Principles under the *Environment Protection and Biodiversity Conservation Act 1999*.

The conservation, repair and wise use of more than 800 wetlands of national importance across Australia is promoted through the National Wetlands Programme. The programme implements the Commonwealth wetlands policy and supports Australia's obligations under international conventions and bilateral agreements. Initiatives include management plans for all Australian Ramsar sites; a national wetland inventory; the nomination of additional sites to the Ramsar Convention and to the Shorebird Site Network; and support for community wetlands projects. The programme also provides support and advice to BHP's \$2.5 million Revive our Wetlands Programme. This aims to revitalise 100 nationally and internationally significant wetlands around Australia.

The Government, through a programme of national and international cooperation, will advocate the protection of major wetland sites in the East Asian–Australasian flyway, a migratory route used by waterbirds in their cyclical movements between Australia–New Zealand and the Arctic Circle. At least ten new Australian sites will be added to the Shorebird Site Network, established under the Asia–Pacific Migratory Waterbird Conservation Strategy.

Partnerships

The Government continues to implement programmes that rehabilitate and repair our rivers and wetlands through on-ground action and awareness-raising programmes in partnership with other spheres of government, the community and industry. The Waterwatch Australia programme coordinates community water monitoring activities to address water quality. Water monitoring creates an ownership ethic for catchment-wide land and water management. This programme creates links within communities, between local and State governments, and between the business sector and other organisations (as an example, refer to the case study in the Environmental Volunteers section of Chapter 5).

Building the knowledge base

The Government recognises that better management of water quality and quantity for sustainable use requires an integrated understanding of our inland water systems and their condition.

It has adopted a number of science-based strategies for national water reform, sustainable management of coastal rivers and estuaries, urban water quality, and supply and best practice management of irrigated areas. The CSIRO and the Australian Nuclear and Science Technology Organisation have contributed to the ecological management of Australia’s inland waters through the use of nuclear techniques to estimate more accurately the amount of water which can sustainably be extracted from such systems.

The work of the National Land and Water Resources Audit has been undertaken in close cooperation with the States and Territories. This work represents the most comprehensive and freely available up-to-date collection of data and information on Australia’s natural resources, including the issues of availability, management, allocation and efficiency of use of Australia’s surface and groundwater.

Case study — Sustainable management of the Lake Eyre Basin

Following extensive community consultation, the Commonwealth, Queensland and South Australian Governments signed the Lake Eyre Basin Intergovernmental Agreement in October 2000. The agreement provides for the sustainable management of the water and related natural resources associated with the major cross-border river systems of the Lake Eyre Basin. The *Lake Eyre Basin Intergovernmental Agreement Act 2001* was passed by the Commonwealth Parliament on 4 April 2001.

The area covered by the agreement includes the Cooper Creek system (including the Thomson and Barcoo rivers) and the Diamantina River system (including the Georgina River and Warburton Creek). The Lake Eyre Basin includes areas of outstanding natural and cultural heritage value and makes a vital contribution to the economies of South Australia, Queensland and the nation as a whole.

The agreement establishes the Lake Eyre Basin Ministerial Forum to develop, adopt and review policies and strategies related to the management of these river systems. The forum will have access to scientific and technical advice. It will work closely with the Basin community and seek its advice in implementing the agreement.

Contact: Environment Australia - Water Branch – (02) 6274 2223

THE LAND

Conserving, rehabilitating and promoting sustainable land use

The Government recognises that achieving sustainable land management requires integration between biodiversity conservation and sustainable production objectives. Successfully addressing Australia's natural resource management problems requires partnerships between all levels of government, industry and the community.

The Natural Heritage Trust provides an integrated approach to sustainable land and water management and the conservation of Australia's biodiversity. Trust programmes that directly address land management issues include the National Landcare Programme and the National Land and Water Resources Audit. Trust funding in 2001-02 will be complemented by the new National Action Plan for Salinity and Water Quality.

To address national priorities, the Government is placing increasing emphasis on targeted action and improved strategic planning, particularly at the regional level. The National Action Plan for Salinity and Water Quality and other sustainable land management initiatives will support and integrate on-ground action at the landscape level.

Sustainable natural resource management

Two of the most critical issues confronting Australia's environment, rural industries and regional communities are salinity and deteriorating water quality. The National Action Plan for Salinity and Water Quality identifies high priority, immediate actions to address these issues. Funding will be provided to affected regions to implement integrated catchment/regional management plans. Governments will support this regional approach through substantial 'block' funding for strategic actions specified in catchment plans and through the provision of technical assistance, skills training, information and data. Support will also involve the development of pilot programmes for market-based instruments to encourage best practice management, as well as assistance for research and development. Accompanying reforms in land and water management will ensure that actions have long-lasting benefits. In 2001–02 the Government will spend \$65 million implementing the plan.

The Government recognises that growth in Australia's rural industries depends on improving the long-term productivity of natural resources in Australia. The National Landcare Programme, providing \$69.7 million in 2001–02, develops and implements resource management practices that conserve our soil, water and biological resources while promoting community, industry and government partnerships in the management of natural resources.

The Government also recognises that greater competitiveness in the agricultural sector will increase the sector's ability to finance ecologically sustainable farm practices. In 2001–02, \$20.4 million will be provided through the FarmBis Programme to promote sustainability and self-reliance by developing business management skills and communicating the benefits of continuous learning. The Government provides direct funding for training activities such as quality assurance, risk management, rural leadership and natural resource management.

A number of financial incentives promote better land and water management. These incentives include deductions for the cost of conserving and conveying water and for capital expenditure on soil conservation, preventing land degradation and related measures. A tax rebate has also been available for expenditure on landcare works.

Sustainable forest management, plantations and farm forestry

The Government has initiated a comprehensive package of forestry, farm forestry and plantation programmes to ensure the sustainability of forestry industries and reduce Australia's net greenhouse gas emissions.

The Farm Forestry Programme, with funding of \$9.2 million in 2001–02, aims to increase agricultural productivity and sustainable natural resource management by encouraging the incorporation of commercial tree growing for the purpose of wood and non-wood production.

Plantations for Australia: the 2020 Vision aims to build a commercially oriented, internationally competitive and environmentally sustainable plantation sector by trebling the nation's plantation estate over the period 1996–2020. In addition to

offsetting greenhouse gas emissions and producing other environmental benefits, it is intended that the programme will reverse the trade deficit for wood products and stimulate rural development.

Research and information

The Government requires up-to-date information and research data on land management issues as a basis for policy development, and to monitor and review the effectiveness of current programmes and policies.

Improving the forest-related knowledge base underpins the development of sustainable forest policies and initiatives while promoting industry development. The National Forest Inventory is Australia's repository for forest-related scientific spatial information. It ensures Australia's national and international forest reporting requirements are met. The Government is also supporting the development of an Australian Forestry Standard to underpin Australia's efforts in developing a world-class certification system for forest management.

Understanding the sustainable use of natural resources in an integrated way is critical to understanding sustainability issues. The CSIRO undertakes research on a range of land and forest management issues. CSIRO research subjects include sustainable agriculture through changed land use and management practices; degraded landscape management and rehabilitation; tools for sustainable resource use at regional scales; and sustainable native forest management.

Relevant and comprehensive data is required to assess the likely costs and benefits of land and water resource management decisions. The National Land and Water Resources Audit provides data and undertakes analysis to facilitate improved decision-making on land, water, vegetation and natural resource management by building an Australia-wide information base. The audit has seven themes: surface and groundwater management; dryland salinity; vegetation cover and condition; rangeland monitoring; land-use change; capacity to implement change; and waterway, estuarine, catchment and landscape health.

In 2001–02, \$11.3 million has been allocated to the Land and Water Resources Research and Development Corporation which carries out research and development activities relating to the conservation and sustainable management of Australia's land, water and vegetation resources.

Case Study — Murray Land and Water Management Plans

The Murray Land and Water Management Plans project is one of the largest community projects funded by the Natural Heritage Trust. The project aims to involve all the farms in the mid-Murray region of New South Wales (currently 3,090 farms) by 2010. The mid-Murray region, around Deniliquin, covers 948,000 hectares of intensively managed agricultural land and is home to 25,000 people. It is also part of the Murray–Darling Basin, one of Australia's most important agricultural areas and a significant environmental asset.

The community has developed the plans and the first five-year implementation period (1995–2000) has now concluded. The second phase of the project has a more concentrated focus on strategic works at both the farm and district levels. The plans have a 30-year timeframe for implementation and are designed to achieve sustainable land-use systems for the mid-Murray region.

The plans help tackle serious land, water and vegetation management issues, such as preventing the onset of salinity and improving water quality. They form an integrated strategy of farm-level and district-scale works, including education, monitoring, research and development programmes.

The plans are an outstanding example of how a genuine partnership between the community and government can address a complex range of environmental, social and economic problems on a regional scale.

Contact: Agriculture, Forestry and Fisheries Australia –
Natural Resource Management Branch – (02) 6272 4622

NATURAL AND CULTURAL HERITAGE

Protecting and conserving Australia's heritage places

Under the Government's proposed heritage regime, Commonwealth legislation will, for the first time, provide substantive protection for places of heritage significance. The existing legislation is outdated and deficient – for example, it provides a procedural safeguard but no substantive protection for heritage places.

The Government will spend up to \$8.5 million in 2001-02 implementing the new regime, which will provide for the identification and conservation of Australia's most outstanding heritage assets. It will also enable the Government to focus, for the first time, on heritage of national significance, while respecting the role of the States in delivering on-ground management of heritage places.

The new regime will also establish a list of heritage places under Commonwealth control and create an independent expert advisory body, the Australian Heritage Council, to advise the Government on the listing and protection of heritage places.

The regime will build upon the existing framework in the *Environment Protection and Biodiversity Conservation Act 1999* and complement the World Heritage Management Programme that already operates under the Act.

World Heritage

The Government will provide \$15 million to States and Territories in 2001-02 through the World Heritage Management Programme to ensure that World Heritage property management meets the high standard required. The Government is also working with the States to develop World Heritage nominations for the Sydney Opera House and the Purnululu National Park in Western Australia.

An Asia-Pacific World Heritage Forum will be held in Australia in 2001-02 to promote the implementation of the World Heritage Convention in the region and to examine the benefits of World Heritage for economic development. As a major contributor to the World Heritage Convention, Australia will continue its membership and presidency of the World Heritage Committee until the expiration of Australia's term in October this year.

National heritage

The Australian Heritage Commission will continue to identify and conserve the National Estate until such time as the Commonwealth's new heritage legislation is enacted.

Nearly \$4 million will be provided through the Federation Cultural and Heritage Programme for the conservation and adaptive re-use of some of Australia's most important heritage buildings. Funding will also be provided to important national projects through the Federation Fund. The Government will provide grants of \$5 million in 2001-02 to preserve the historic features or attributes of selected buildings through the Conservation of Rural and Regional Historic Hotels measure.

A grant of \$5 million will be provided to the Goondiwindi Town Council to enable the construction of a water park at Serpentine Lagoon. The Goondiwindi Serpentine Water Park is being established to protect natural heritage and provide an alternative recreational venue to Boobera Lagoon which will be closed to powerboats from 2002 in order to better protect its cultural heritage values.

The Government recognises that the identification, conservation and restoration of places of cultural heritage significance in Australia should be undertaken in partnership with local government, community based non-government organisations and private owners of heritage places. In 2001-02 selected organisations and individuals involved in cultural heritage activities will continue to receive funding through the Cultural Heritage Projects Programme.

Grants-In-Aid will be provided to National Trusts to identify, conserve and promote heritage throughout Australia. Funding will continue to be provided for the conservation and management of the Kingston and Arthur's Vale Historic Area on Norfolk Island. Management of the area, which contains one of the finest collections of

Georgian buildings in the Commonwealth, is undertaken in partnership with the Norfolk Island Government.

The Government will create a lasting heritage legacy for Sydney, protecting and managing the unique natural and cultural heritage values of six properties on Sydney Harbour. These properties include the former Artillery School on North Head, Defence lands at Middle Head-Georges Heights, Woolwich Dock, Cockatoo and Snapper islands and Macquarie Light-station. In 2001-02 up to \$14 million will be spent on security, maintenance and in preparing management plans for these properties. The plans will be prepared in consultation with the community. Funding will also provide for public access.

Through the Historic Shipwrecks Programme the Government, in cooperation with the States and Territories, administers the *Historic Shipwrecks Act 1976*. The programme aims to protect and preserve historic shipwrecks and associated relics, and educate the community about this cultural resource.

Indigenous heritage and environment issues will be addressed through programmes providing for the identification, protection, preservation and management of cultural property by Indigenous people. The Government has proposed the Aboriginal and Torres Strait Islander Heritage Protection Bill 1998 to replace the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984*. This will provide an improved Commonwealth regime for processing applications for heritage protection and a system of accreditation of State and Territory Indigenous heritage protection regimes.

Case Study — Regional natural and cultural heritage tourism strategies

Environment Australia will continue the pilot Heritage Tourism Programme initiated by the Australian Heritage Commission to assist regional communities to develop natural and cultural heritage tourism strategies.

This programme recognises that tourism can, if properly implemented, benefit regional economies and protect heritage places by attracting visitors to the authentic heritage of the area. To demonstrate this, a pilot project has been initiated in the Lake Eyre Basin, an area covering almost one-sixth of the Australian continent.

In 2000–01 the commission assisted the communities of the basin, through the Lake Eyre Basin Coordinating Group, to obtain a \$220,000 grant from the Commonwealth's Regional Solutions Programme to develop *Inland Rivers–Outback Tracks: A Heritage Tourism Strategy for Lake Eyre Basin*. The aim of the strategy is to ensure the expansion of tourism in the Basin in a way that protects and sustains its natural and cultural heritage attractions and benefits local communities.

Environment Australia will continue to provide heritage advice and logistical support to the Lake Eyre Basin Coordinating Group during 2001–02 to ensure the strategy is successfully implemented.

Contact: Environment Australia - Identification and Conservation Branch –
(02) 6274 2122

ANTARCTICA

Advancing Australia's interests in Antarctica

As a nation that claims more than 40 per cent of the Antarctic continent, Australia has a vital interest and plays a leading role in the protection of the Antarctic environment.

The Australian Antarctic Division (AAD) manages the Commonwealth's Antarctic Programme. The AAD coordinates and manages the Antarctic science and logistics programmes and undertakes research to ensure that Australia's actions in Antarctica are soundly based. The AAD also promotes Australia's interests within the Antarctic Treaty System and administers the Australian Antarctic Territory and the subantarctic territory of Heard and McDonald Islands.

Antarctic Treaty System

The Government continues to push for international agreements on improvements to the Antarctic environmental protection regime, including measures to improve protection of the marine living resources in the Southern Ocean within the fora of the Antarctic Treaty System.

The Government's Antarctic research programme provides the scientific information necessary to make sound decisions on the management of Antarctic marine living resources. It also underpins Australia's positions in the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR), and decisions taken by that body.

Australia's vigorous efforts continue, through the CCAMLR and other channels, to combat illegal, unregulated and unreported fishing of toothfish in the Southern Ocean. Enforcement and surveillance efforts to combat unrelated and unreported fishing in Australia's territory around Heard and McDonald Islands also continue.

Within the Antarctic Treaty fora, Australia continues to seek progress in the negotiations for an annex to the Madrid Protocol on liability for environmental damage in Antarctica.

Protection

Research efforts into human impacts in Antarctica will continue, including research to reduce environmental impacts from past waste disposal sites and abandoned work sites in Antarctica and on the subantarctic islands.

The Government is also establishing a marine reserve around the World Heritage listed territory of Heard and McDonald Islands. An integrated management plan covering the new marine protected area and the territory will be developed during 2001.

Global climate system

Antarctica plays a central role in the global climate system. Research continues into the dynamic interactions between water, ice and atmosphere that create conditions that are far-reaching in their influence.

The Antarctic Cooperative Research Centre (CRC), based at the University of Tasmania, has as its partners the AAD, the Bureau of Meteorology, the Australian Geological Survey Organisation, the CSIRO Division of Marine Research and the University of Tasmania. In 2001-02 the CRC will continue work on the role of the Southern Ocean in global climate processes which has established the existence of a third major source of dense, high-salt Antarctic bottom water; on developing a technique for estimating distribution of sea-ice thickness; on natural iron levels in Southern Ocean surface waters and iron's role in production of microscopic algae; and on estimating likely changes over coming centuries in the Southern Ocean's carbon dioxide uptake.

Research on the middle atmosphere climate provides data that will help to develop more effective climate models and assist understanding of the region's chemistry, including ozone depletion. The glaciology programme also plays a crucial role in the development of models for thermal exchange between water, ice and atmosphere.

Data collected on Heard Island allow studies into the substantial retreat of glaciers on subantarctic islands to continue. This research has established that the Brown glacier receded some 400m since 1988 and 1.1km since 1947. Further studies to assess the significance of these data to climate change models will be conducted.

Research applications

Antarctic science has practical application to the fields of shipping and navigation, and also supports Australia's international obligation to monitor nuclear tests and atmospheric quality. Much of the marine science work undertaken by the Australian Antarctic Science Programme has direct application to the conduct and management of fishing in Antarctic and subantarctic waters.

Antarctic research in the areas of atmospheric sciences, meteorology, cosmic ray physics, geosciences, life sciences, oceanography and human impacts continues to provide baseline data for future international research and trends in changes in the environment.

Case study — Amery Ice Shelf Ocean Research

A 400m deep borehole, drilled through one of Antarctica's largest ice shelves using a new hot water drilling facility designed and constructed by the AAD, is providing researchers with a rare insight into the dynamics of these gigantic floating ice masses.

Amery Ice Shelf Ocean Research (AMISOR) is a new research project conducted by the AAD and the Antarctic Cooperative Research Centre. The project investigates the interaction between the Amery Ice Shelf and the ocean. The Amery, situated between Davis and Mawson stations, is the largest embayed shelf in East Antarctica. Melting and re-freezing processes occurring at the base of ice shelves modify the characteristics of the ocean, ultimately influencing deep global ocean circulation and global climate systems. Data gathered through the AMISOR project will contribute to our understanding of possible future climate changes.

The project consists of ship and shore based components. Initial measurements were made from on board the Antarctic research and supply vessel, *Aurora Australis*, during its 2000-01 scientific expedition in the waters off the Antarctic coast. Moored instrument strings have been left on site, both in the ocean immediately in front of the shelf and through the 400m access borehole, to record measurements over a complete annual cycle.

Contact: Australian Antarctic Division - Glaciology - (03) 6226 7648

INTEGRATED MEASURES

The Government, in meeting its responsibilities to address environmental issues and maintain the environmental health of the nation, ensures that efforts and resources are fully coordinated to deliver the desired environmental outcomes.

Information

The Government provides valuable environmental information to support decision-making.

Regular State of the Environment (SoE) reports provide timely and accessible information about the condition of the Australian environment. The 2001 SoE report will be presented to the Minister for the Environment and Heritage by 31 December this year. The Environmental Resources Information Network provides public access to a comprehensive range of environmental information.

Vital tools for environmental monitoring and natural resource management, such as remote sensing satellite imagery and mapping services, are provided by the Australian Surveying and Land Information Group.

Australia's Natural Resources Atlas, a key product of the National Land and Water Resources Audit (NLWRA), is now online and information is being progressively added to it. The atlas is accessible free of charge on the internet, at

http://audit.ea.gov.au/ANRA/atlas_home.html. The atlas and the library that underpins it is the most up-to-date and comprehensive collection of information and data on Australia's natural resources available. NLWRA additions to the atlas will be complete in October 2001.

Industry and the environment

Increasing the competitiveness of industry while providing acceptable environmental outcomes is the main focus of the Government's Cooperative Research Centres (CRC) Programme. This aims to strengthen the links between research and its commercial applications, and provides significant environmental and community benefits. Current areas of research include assessing impacts on the environmental and heritage values of the Great Barrier Reef World Heritage Area; investigating issues concerning Australia's inland waterways through the Freshwater Ecology CRC; developing scientific capacities in greenhouse accounting; and developing Australia's sustainable tourism industry.

Community participation

The Government encourages the active participation of all sectors of the community in caring for the health of the environment by raising awareness of environmental issues and providing the tools, opportunities and funding for involvement.

A number of initiatives are funded to promote sustainable development principles and policies within all levels of government. Local Agenda 21 and the Environmental Resource Officer scheme aim to improve environmental management in local government by helping to apply sustainable development principles and practices.

Environment Australia undertakes a range of education activities to raise awareness of environmental issues and the opportunities for community-based involvement. In 2001 this work will be extended by a number of measures. These include the environmental education national action plan, *Environmental Education for a Sustainable Future*, the ongoing work of the National Environmental Education Council and initiatives such as the National Environmental Education Network.

Local communities also have access to legal advice on environmental issues through the network of Government-funded Environmental Defenders' Offices.

Employment

A number of the Government's employment programmes have a positive environmental focus, providing training and work experience in environment, land and heritage projects.

An example is the Aboriginal and Torres Strait Islander Commission's (ATSIC) Community Development Employment Projects scheme. This provides employment and training opportunities to Indigenous communities while contributing to the development of joint management regimes for areas of high conservation value. Also, under the Government's Mutual Obligation – Work for the Dole initiative, eligible job

seekers are given the opportunity to undertake a range of community projects. Many include an environmental focus.

Environmental health

The Government supports a number of environmental health initiatives, both domestically and internationally. The Department of Health and Aged Care implements environmental health policies to reduce community exposure to environmental hazards, with a particular emphasis on sensitive and disadvantaged populations. It works closely with ATSIC to address specific environmental health issues confronting Indigenous communities.

The Department also supports environmental health activities undertaken by the World Health Organization to ensure that health and environment issues are an integral part of national development policies.

International

Many environmental challenges are highly complex and do not respect national boundaries. The Department of Foreign Affairs and Trade promotes solutions to international environmental issues consistent with Australia's economic, trade and environmental interests. Australia's overseas aid programme assists developing countries to reduce poverty and achieve sustainable development.

The Government also seeks to advance its environmental and sustainable development agenda through the development of relationships with environmental agencies overseas.

More information on Australia's involvement in international environment-related activities is presented in Chapter 5.

Chapter 5: The Government in Partnership

The Government recognises that solutions to environmental problems require cooperation between governments, industry and the community. Chapter 5 acknowledges the contributions of Australia's environmental volunteers and the Indigenous community and outlines some of the international environment-related activities that Australia is involved in.

ENVIRONMENTAL VOLUNTEERS

The work of volunteers is crucial to the protection and conservation of Australia's environment. Throughout Australia many thousands of volunteers devote their time and effort to valuable environmental work. On Natural Heritage Trust projects alone, more than 300,000 people have worked on almost 10,000 projects since 1996. With 2001 having been declared the International Year of Volunteers by the United Nations, now is an appropriate time to acknowledge and encourage the extraordinary contribution made by environmental volunteers.

Funds are provided under the Natural Heritage Trust for the essential materials that enable the volunteer movement to be as effective as it is. Funding pays for seedlings, fencing and similar items, as well as supporting volunteer coordinators, but the volunteers provide the hard work and the dedication. Without them many practical projects that are making a positive, lasting and measurable difference to Australia's environment might not have been achieved.

Volunteer work includes planting trees, collecting seeds, cleaning up rubbish, monitoring the quality of our waterways and surveying wildlife populations. Volunteers are the backbone of many of the Government's environment programmes, among them Bushcare, Coastcare, Waterwatch Australia, the Threatened Species Programme, Landcare and Rivercare. Volunteers also work on Indigenous land management projects, at national parks and at the Australian National Botanic Gardens, and collect data for the Bureau of Meteorology.

Case study — A century of rainfall records

One rural Victorian family has been collecting weather data continuously for over a century. Three generations of the family have been involved in record keeping, and the Bureau of Meteorology holds rainfall records taken by family members as long ago as 1899.

June Hill's grandfather established a farm at Colbinabbin in 1858, and Mrs Hill continues the family tradition of rainfall record keeping on the property. She is one of 6,200 volunteers across Australia who keep daily rainfall records. Such weather volunteers provide vital assistance to the Bureau of Meteorology by contributing to the provision of weather forecasting and warning services and helping to maintain the national climate record.

In July 2000 Mrs Hill received a Rainfall Excellence Award from the Bureau to commemorate the keeping of rainfall records at Colbinabbin for 100 years. Only some 40 families across Australia share this distinction. Mrs Hill's father, Mr Christian Toedteberg, was awarded a posthumous award in 1972 for recording daily rainfall for more than 50 years.

While automated weather stations have replaced many of the tasks previously undertaken by volunteers, those volunteers provide valuable data that promotes better understanding of Australia's weather and climate and makes predictions more accurate.

Contact: Bureau of Meteorology – Executive and International Affairs Branch –
(03) 9669 4534

Case study — School groups watching over the water

Sydney school students from Cranebrook High and Penrith High are keeping a close watch on the health of Penrith Lakes and the nearby Nepean River as part of the Natural Heritage Trust's Waterwatch Australia programme.

The Cranebrook group began monitoring only recently, but Penrith High has been active in this area since 1990. Science and geography students from the school have collected over 200 sets of water quality data, which are recorded and stored in the Waterwatch database.

The New South Wales Department of Land and Conservation interprets the data. If any problems are found with water quality, solutions are suggested by the Department and implemented by the school.

The Natural Heritage Trust has provided \$60,000 over the past three years to fund a Waterwatch coordinator's position within the Department. Waterwatch coordinators help volunteers liaise with local governments, water authorities, industry and other organisations to discuss water quality issues in their catchments and to develop strategies to deal with these issues.

Contact: Environment Australia – Water Branch – (02) 6274 2223

Environmental volunteering will be the focus for Australia's World Environment Day celebrations on 5 June this year. Environment Australia is providing community resources to raise awareness of the scope of environmental volunteering activities and the impressive contribution that volunteers make to the environment, and to tell people how they can become volunteers.

Community organisations, local governments, schools and other groups will be encouraged to focus their World Environment Day events on activities which recognise the work of environmental volunteers.

To mark the International Year of Volunteers, botanists at the Australian National Botanic Gardens are developing a daisy called *Helichrysum Helping Hand*. It is expected that the project, being conducted with Volunteering Australia, will result in 10,000 seedlings flowering by spring this year. The seedlings will be sold through volunteering organisations throughout Australia.

WORKING WITH THE INDIGENOUS COMMUNITY

The development of working partnerships between the Government and Aboriginal and Torres Strait Islander people is a further step towards reconciliation and sustainable environmental management. Indigenous participation in the protection of Australia's natural and cultural environment is vital. The *Environment Protection and Biodiversity Conservation Act 1999* reflects this. Three of its seven objectives refer to the key involvement of Indigenous people, who also have a voice in the operation of the Act through the Indigenous Advisory Committee (IAC). The IAC is made up of 12

Aboriginal and Torres Strait Islander people with expertise in traditional land management, conservation and cultural heritage management.

Environment Australia has developed a Reconciliation Action Plan in response to the work of the National Council for Aboriginal Reconciliation. The plan reflects the Commonwealth's approach to developing and maintaining strong working relationships with Indigenous people. It identifies Environment Australia's current and planned activities, procedures, policies and areas of responsibility associated with reconciliation.

An example of successful working partnerships with Indigenous people is the joint management of national parks. Indigenous involvement has significantly improved the management of Kakadu, Uluru-Kata Tjuta and Booderee national parks, as described in the 'Managing Commonwealth national parks and reserves' section of Chapter 4.

Managing the environment

The Government is implementing other approaches to promoting and recognising the contribution of Aboriginal and Torres Strait Islander values in environmental management. For example, the Indigenous Land Management Facilitators Programme has encouraged the participation of Indigenous Australians in Natural Heritage Trust programmes. There is also a range of activities designed to protect areas and heritage of significance to Aboriginal and Torres Strait Islander people. The Indigenous Protected Areas (IPAs) Programme has led to the declaration of 13 IPAs on Aboriginal lands covering more than 3.16 million hectares. Indigenous heritage is being protected through a variety of programmes, including the Heritage and Environment Programme administered by ATSIC.

Another important component of the partnership approach being implemented by Environment Australia is the Indigenous Career Development and Recruitment Strategy, which facilitates the direct employment of Aboriginal and Torres Strait Islander people. This reflects the proactive approach the Government is taking in developing essential working relationships with Indigenous Australians.

WORKING WITH THE INTERNATIONAL COMMUNITY

Many environmental issues are highly complex and transcend national boundaries. Tackling global environmental and sustainable development challenges often causes significant social and economic issues to arise in consequence. Confronting such issues requires a cooperative and coordinated approach by the international community. Recognising this, the Government works cooperatively in international fora to progress integrated solutions to regional and international issues. This involves Australian engagement in international policy debates and negotiating fora. It also involves building and maintaining strong relationships of trust and mutual support with a range of countries so that ideas and knowledge can be freely shared and areas of common interest explored. A range of Commonwealth agencies – including Environment Australia, the Department of Foreign Affairs and Trade, and AusAID –

are closely involved in these efforts, reflecting the breadth of Australia's international environmental role and interests.

In 2001–02 the Government is focusing on a number of international initiatives designed to achieve concrete environmental and sustainable development outcomes. Some of these are outlined below.

International fora and agreements

The World Summit on Sustainable Development is to be held in Johannesburg in September 2002. It will be a landmark international event convened to review and reinvigorate the commitments made at the 1992 United Nations Conference on Environment and Development (the summit is therefore referred to as Rio+10). The meeting will focus on improving progress and stimulating action towards achieving sustainable development worldwide.

Australia recognises that climate change is a global challenge that requires a worldwide response. Australia continues to work with other countries in seeking equitable and cost-effective solutions for addressing climate change. Australia is pursuing this objective through high level international negotiations, as well as supporting the establishment of collaborative projects, workshops, training courses and studies with other countries.

Australia has played a leading role in international efforts to protect and conserve natural and cultural places of international significance since it ratified the World Heritage Convention in 1975. The Government hosted and chaired the successful meeting of the World Heritage Committee in Cairns in December 2000. It was at this meeting that the Greater Blue Mountains Area was listed as Australia's fourteenth World Heritage Property, resulting in the enhanced protection of one million hectares of unique bushland. During 2001–02 Australia will continue to be proactive in heritage conservation, providing support for initiatives in the Asia–Pacific region through Australia's Asia–Pacific Focal Point for World Heritage. Initiatives will include placing specialist support staff in regional countries and convening an Asia–Pacific heritage ministerial forum.

The Government has led international efforts to protect several particularly important and threatened animal species. For example, Australia has led the development of an international Agreement on the Conservation of Albatrosses and Petrels since 1997. The text of the agreement was finalised in Cape Town, South Africa, in February 2001. Australia is confident that all participating countries will be in a position to sign the agreement during the course of 2002.

The Government is also committed to achieving a permanent international ban on commercial whaling. Australia and New Zealand jointly proposed the development of a South Pacific Whale Sanctuary at the July 2000 meeting of the International Whaling Commission (IWC) in Adelaide. The Government will continue to pursue establishment of the sanctuary at the IWC meeting in July 2001 as a step toward the creation of a global whale sanctuary.

Environmental projects and partnerships

The Global Environment Facility (GEF) is an international trust fund which provides grants to international organisations such as the United Nations Environment Programme, the World Bank and the Asian Development Bank. The grants facilitate strategic and catalytic activities which will improve global environmental outcomes in ozone protection, climate change, biodiversity and international waters. Australia is currently a member of the council of the GEF and will contribute in the order of \$50 million to the next replenishment of the fund in 2002.

Australia's overseas aid programme assists developing countries to achieve sustainable development by addressing the economic, social and environmental dimensions of development in an integrated manner. The aid programme focuses on the Asia-Pacific region, with significant assistance also provided to international development institutions. One such activity being supported by the programme is the Coral Reef Management and Rehabilitation Project, which aims to protect and rehabilitate coral reefs in Indonesia.

In keeping with Australia's particular focus on environmental issues and activities of importance to our region, Australia is the largest bilateral donor to the South Pacific Regional Environment Programme (SPREP). SPREP is a cooperative effort through which the governments of Pacific island nations work with each other to address shared environmental management issues, ranging from community education on endangered species through to disposal of hazardous wastes and effective participation in global climate change negotiations.

Australia also provides support directly to SPREP's Pacific island members at the national level, complementing the work undertaken in SPREP. For example, Environment Australia is undertaking a forests and conservation project in Papua New Guinea which is designed to assist relevant government agencies in Papua New Guinea to identify policy priorities and develop technical capacity in biodiversity and forest assessments, and land-use planning. The project is based on planning tools developed through the Australian Regional Forests Agreement process.

Following very positive bilateral discussions early this year, Australia and South Africa aim to develop a bilateral environmental action plan during 2001-02. The plan, which is based on a recognition of common environmental interests, challenges and experiences, will promote closer cooperation between the two countries in the fields of environmental protection, sustainable natural resource management and the establishment of new ecologically-based industries and enterprises.

Preparations are under way for a high-level environment business delegation visit to China in 2001 to promote the achievements of Australia's environment industries. The visit's primary aim is to highlight Australia's capabilities in the areas of 'green' buildings, waste-water treatment, flood mitigation, solid-waste management and technologies demonstrated at the 2000 Olympics, which are now recognised internationally as the 'Green Games'. The delegation will visit Beijing, Hangzhou and Guangzhou.

Appendix 1: Environment Activities by Portfolio

Table A1.1: Environment Activities by Portfolio

Portfolios	Major environmental responsibilities
Agriculture, Fisheries and Forestry	Natural resource management policy, integrating environmental considerations with a broad range of natural resource management programmes.
Australian Bureau of Agricultural and Resource Economics	Economic research to enhance the competitiveness and sustainability of Australia's primary and manufacturing industries and the quality of the Australian environment.
Australian Fisheries Management Authority	Ensures the sustainable use and efficient management of Commonwealth fisheries resources.
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> .
Bureau of Rural Sciences	Provides scientific advice to government in support of more sustainable Australian agricultural, food, fisheries and forestry industries.
Land and Water Resources Research and Development Corporation	Research to improve the management of Australia's land and water resources and the vegetation it supports.
Murray-Darling Basin Commission	Manages the Murray River and the Menindee Lakes system, and advises the Murray-Darling Basin Ministerial Council.
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.
Australian Government Solicitor	Provision of legal services on environmental matters to Commonwealth departments and agencies.
Communications, Information Technology and the Arts	Radio frequency and electromagnetic energy research and information.
Defence	Management of the environment and heritage attributes of the Defence estate, particularly training areas.
Education, Training and Youth Affairs	Provision of Green Corps (Young Australians for the Environment), environmental education materials and professional development to teachers, and support for research and research training.
Australian Research Council	Promotion of higher education research (including environmental research).
Employment, Workplace Relations and Small Business	Administers the National Industrial Chemicals Notification and Assessment Scheme.
Environment and Heritage	Primarily responsible for environmental policy, with a broad range of environmental programmes.
Australian Antarctic Division	Research on marine and terrestrial biology, atmosphere, ice-atmosphere interactions and climate change, and protection of the Antarctic environment.
Australian Greenhouse Office	Coordinates domestic climate change policy and manages the delivery of major new and existing Commonwealth greenhouse programmes.
Australian Heritage Commission	Values and conserves natural and cultural heritage places.
Bureau of Meteorology	Atmospheric, oceanographic and hydrological monitoring, research and service provision.

Continued

Table A1.1: Environment Activities by Portfolio (continued)

Portfolios	Major environmental responsibilities
Director of National Parks	Responsible for managing Commonwealth protected areas.
Great Barrier Reef Marine Park Authority	Protection, wise use, understanding and enjoyment of the Great Barrier Reef.
Sydney Harbour Federation Trust	Conservation and management of heritage properties in Sydney Harbour.
National Oceans Office	Implementation of Australia's Oceans Policy.
Family and Community Services	Promoting landcare involvement through Child Care Benefits.
Finance and Administration	Monitors Commonwealth environment 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	Overseas aid programmes supporting Australia's national interests through sustainable development activities in developing countries.
Australian Centre for International Agricultural Research	Achieves more productive and sustainable agricultural systems, for the benefit of developing countries and Australia, through international agricultural research partnerships.
Health and Aged Care	A range of environmental health activities as well as contributions to chemical assessments.
Australian Radiation Protection and Nuclear Safety Agency	Protecting the health of the environment from the effects of radiation.
Interim Office of the Gene Technology Regulator	Managing the potential risks of gene technology to the environment.
National Health and Medical Research Council	Helps to ensure the quality of Australia's drinking water.
Immigration and Multicultural Affairs	Monitors the relationship between the environment and population change.
Industry, Science and Resources	Industry development policies and programmes covering science research and development, innovation, technology diffusion and business networks. Also a major funder of environmental research.
Australian Geological Survey Organisation	Geological research to aid in the management of Australia's environment and natural resources.
Australian Institute of Marine Sciences	Research for the sustainable use and protection of Australia's marine environment.
Australian Surveying and Land Information Group	Provides fundamental geographic information for environmental monitoring and natural resource management.
Australian Nuclear Science and Technology Organisation	Environmental applications using ANSTO's nuclear expertise and facilities.
Commonwealth Scientific and Industrial Research Organisation	Major contributor to environmental research in Australia.
National Standards Commission	Participates in the development of international standards for a wide range of environmental measuring instruments.
Prime Minister and Cabinet	Responsible for providing general environmental policy advice. However, it does not administer any environmental programmes itself.
Reconciliation and Aboriginal and Torres Strait Islander Affairs	Contributes to the development of Indigenous heritage policy.
Indigenous Land Corporation	Indigenous land management programme.
Aboriginal and Torres Strait Islander Commission	Aboriginal heritage programmes.

Continued

Table A1.1: Environment Activities by Portfolio (continued)

Portfolios	Major environmental responsibilities
Transport and Regional Services	Primarily responsible for transport policy integrating environmental considerations and for Commonwealth land management functions in Australia's external territories.
AirServices Australia	Manages aviation environmental issues under the <i>Air Services Act 1995</i> .
Australian Maritime Safety Authority	Manages the National Plan to Combat Pollution of the Sea by Oil and other Noxious and Hazardous Substances.
National Capital Authority	Manages national land required for the special purposes of Canberra as the national capital.
Treasury	Contributes to the development of environment policy.
Australian Bureau of Statistics	Development of environmental accounts and reporting of environment statistics.
Australian Taxation Office	Administers a range of environment-related taxes, levies, deductions and rebates.
Productivity Commission	Addresses environmental issues in its public inquiries and research.

Appendix 2: Environment Expenditure

Appendix 2 aims to show all Commonwealth expenditure directly attributable to environmental activities. However, expenditure on environmental activities 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 environment-related 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 spent on environmental activities. Nor do figures include general funding to tertiary educational bodies that may be applied to environmental research or training.

Figures have been provided for activities with an environment or heritage benefit as their primary or secondary goal. Environment 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 2001-02 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.

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 2002-03 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.

Natural Heritage Trust programmes can include funding from outside the Trust. Some programmes have departmental allocations in addition to Trust funds. There may also be corporate and divisional overheads included in the expenditure.

Table A2.1: Environment Activities - Programme and Tax Expenditure Estimates

This table lists activities under the theme sections as used in Chapter 4. 'na' denotes that spending cannot be precisely identified but it does not mean that spending is not occurring. *The outyears (2002-03 onwards) do not reflect the extension of funding of \$1 billion over 5 years for the Natural Heritage Trust. The Commonwealth will be seeking matching funding for the extension of the Trust from the States and Territories.* NB: contact details for agencies can be found in Table A3.1, and full contact details with regards to each particular programme listed in Table A2.1 can be found on the following website – www.ea.gov.au/about/budget/2001/.

Division / Agency	Description	2000-01 \$m	2001-02 \$m	2002-03 \$m	2003-04 \$m	2004-05 \$m
ATMOSPHERE						
Protecting Australia's atmosphere						
ANSTO	Investigation of the Impact of Anthropogenic Activities on the Atmosphere	0.7	0.8	0.8	0.8	0.8
ARPANSA	Environmental Radioactivity Monitoring	0.3	0.5	0.5	0.5	0.5
ARPANSA	Measurement of Solar Ultraviolet Radiation Environment	0.3	0.3	0.3	0.3	0.3
CSIRO	Air Pollution: Assessment and Links to Human Health	3.9	3.9	4.0	na	na
DoTRS	National Bicycle Strategy	na	na	na	na	na
EA-EQD	Air Pollution in Major Cities Programme (includes NHT)	5.0	4.1	1.3	-	-
EA-EQD	Air Quality Management	0.7	-	0.7	0.6	0.6
EA-EQD	Air Toxics	2.2	1.4	-	-	-
EA-EQD	Administration of the Fuel Quality Legislation ^(a)	-	1.0	1.8	2.5	3.2
EA-EQD	In-Service Vehicle Emissions Testing Programme	0.7	10.2	10.2	10.2	9.7
EA-EQD	Ozone Protection Programme	14.6	4.0	2.8	2.2	2.1
EA-EQD	Ozone Protection Reserve	0.5	0.5	0.5	0.5	0.5
TOTAL		28.9	26.7	22.9	17.6	17.7
Greenhouse - meeting the challenge of climate change						
AGO	Alternative Fuels Conversion Programme	10.6	20.0	20.0	20.0	4.4
AGO	Bush for Greenhouse	1.5	1.1	1.1	-	-
AGO	Cities for Climate Protection	3.2	2.7	2.7	-	-
AGO	Compressed Natural Gas Infrastructure	1.7	1.8	-	-	-
AGO	Diesel and Alternative Fuels Grants Scheme	na	na	na	na	na
AGO	Emissions Trading	1.5	-	-	-	-
AGO	Energy Efficiency in Government Operations	1.3	1.1	1.1	-	-
AGO	Energy Performance Codes and Standards	2.8	2.4	2.4	-	-

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

(a) The figures for this new measure include corporate overheads.

Table A2.1: Environment Activities - Programme and Tax Expenditure Estimates (continued)

Division / Agency	Description	2000-01 \$m	2001-02 \$m	2002-03 \$m	2003-04 \$m	2004-05 \$m
AGO	Environmental Strategy for the Motor Vehicle Industry	0.9	-	-	-	-
AGO	Establishment of the Office of the Renewable Energy Regulator	1.6	1.7	1.7	1.5	-
AGO	Generator Efficiency Standards	0.5	0.7	0.7	-	-
AGO	Greenhouse Challenge	7.4	7.5	6.2	-	-
AGO	Greenhouse Gas Abatement Programme	6.8	97.0	109.0	112.0	75.2
AGO	Greenhouse International Policy and Reporting, and Greenhouse Sinks ^(b)	-	^(b) 6.2	^(b) 6.1	^(b) 6.0	^(b) 6.0
AGO	Domestic Greenhouse Policy Development ^(b)	-	^(b) 5.3	^(b) 5.4	^(b) 5.5	^(b) 5.6
AGO	Greenhouse Science Programme	3.8	4.1	4.1	-	-
AGO	Household Greenhouse Action	1.8	0.3	-	-	-
AGO	Mandatory Targets for the Uptake of Renewable Energy in Power Supplies	0.3	0.5	0.5	-	-
AGO	National Carbon Accounting System	5.6	1.2	2.1	-	-
AGO	Renewable Energy Commercialisation	4.7	5.2	8.6	-	-
AGO	Renewable Energy Equity Fund	2.8	3.1	3.1	2.8	2.8
AGO	Renewable Energy Internet Site	..	..	..	-	-
AGO	Renewable Energy Showcase	3.6	-	-	-	-
AGO	Supporting Development and Commercialisation of Renewable Energy	2.1	6.9	7.0	10.0	-
AGO	Supporting Photovoltaic Systems	18.2	9.0	3.8	-	-
AGO	Supporting Renewable Remote Power Generation	5.8	51.4	37.4	37.2	47.5
AGSO	Geological Disposal of Carbon Dioxide	na	na	na	na	na
Australia Post	Greenhouse Challenge Programme	0.1	..	..	..	..
CSIRO	Climate Change and Variability: Impacts and Adaptation	2.9	3.0	3.0	na	na
CSIRO	Climate Change at Global and Regional Scales	4.0	4.1	4.1	na	na
CSIRO	Direct Greenhouse Mitigation	1.1	0.9	0.9	na	na
CSIRO	Energy End Use Efficiency in Industry, Transport and Buildings	0.1	0.1	0.1	na	na
CSIRO	Greenhouse Gases, Science, Sources and Sinks	6.4	6.5	6.5	na	na
CSIRO	Mining Technologies for Reduced Environmental and Greenhouse Impacts	1.9	1.9	2.0	na	na
CSIRO	Options for Carbon Dioxide Sequestration	0.3	0.3	0.3	na	na
CSIRO	Renewable Energy Technologies	2.7	2.1	2.1	na	na
DIMA	Energy Efficiency in the New DIMA Building and the Environmental Management System	na	na	na	na	na
DoTRS	Investigation of Opportunities to Reduce Greenhouse Gas Emissions Using Intelligent Transport Systems	..	..	-	-	-

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

(b) These figures are included in overall funding for the Australian Greenhouse Office.

Table A2.1: Environment Activities - Programme and Tax Expenditure Estimates (continued)

Division / Agency	Description	2000-01 \$m	2001-02 \$m	2002-03 \$m	2003-04 \$m	2004-05 \$m
DoTRS	National Greenhouse Strategy – Measure 5.14 'Modal Shift'	0.1	-	-	-	-
DoTRS	Workbook for Transport Sector Projects Under Kyoto Protocol Emissions Reduction Mechanisms	na	na	na	na	na
ISR	Domestic and International Greenhouse Policy	2.3	2.3	2.3	2.3	2.3
ISR	Energy and Environmental Technology Information Centres	0.6	0.7	-	-	-
ISR	Energy Efficiency and Best Practice	2.5	2.5	2.5	-	-
ISR	Improving Energy Efficiency in Commonwealth Operations	0.5	0.3	0.3	-	-
ISR	International Greenhouse Partnerships	na	na	na	na	na
ISR	Renewable Energy Action Agenda	0.2	na	na	na	na
ISR	Renewable Energy Equity Fund	3.0	3.1	3.1	2.8	2.8
NCA	Energy Efficiency Asset Management	0.1	-	-	-	-
	TOTAL	117.4	245.8	238.7	188.6	135.0
	Meteorology – benefiting the environment					
BOM	National Activities ^(c)	8.4	8.3	8.2	8.1	8.1
BOM	International Activities ^(c)	0.9	0.9	0.9	0.9	0.9
CSIRO	Prediction of Climate Variability	2.0	2.1	2.1	na	na
	TOTAL	11.3	11.3	11.2	9.0	9.0
	BIODIVERSITY					
	Identifying, protecting and conserving biodiversity					
AFFA	Animal and Plant Quarantine	6.4	6.4	na	na	na
AFFA	Environment Impact of Locust Control	0.1	0.2	0.2	0.2	0.1
AFFA	Exotic Plant Pest Response Programmes	0.9	-	-	-	-
AFFA	Monitoring and Surveillance for Exotic Plant Pests	0.5	0.5	-	-	-
AFFA	National Weeds Programme (includes NHT) – Agricultural Component	0.6	3.0	12.2	-	-
AFFA	Plant Health Emergency Preparedness and Response Planning	1.3	1.3	1.3	1.3	1.3
BRS	National Feral Animal Control Programme (includes NHT) – Agricultural Component	1.3	1.2	0.5	-	-
CSIRO	Biodiversity Knowledge and Informatics	5.7	5.8	5.9	na	na
CSIRO	Conservation and Use of Biodiversity	4.1	4.2	4.2	na	na
CSIRO	Ecological Sustainability at Regional to National Scales	1.8	1.8	1.8	na	na
CSIRO	Ecosystem Sustainability at Farm to Catchment Scale	2.3	2.3	2.3	na	na
EA-NHD	Biodiversity Convention and Strategy	3.2	4.4	3.6	4.1	4.1

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

(c) These are estimates of appropriation-based expenditure attributed to environmental objectives.

Table A2.1: Environment Activities - Programme and Tax Expenditure Estimates (continued)

Division / Agency	Description	2000-01 \$m	2001-02 \$m	2002-03 \$m	2003-04 \$m	2004-05 \$m
EA-NHD	Bushcare (includes NHT)	94.8	73.4	0.1	0.1	0.1
EA-NHD	Cape York Peninsula (includes NHT)	4.7	15.1	9.2	-	-
EA-NHD	Endangered Species Programme (includes NHT)	7.6	12.2	5.5	5.5	5.5
EA-NHD	Legislation Implementation – Biodiversity Convention and Strategy	0.9	0.5	0.5	-	-
EA-NHD	Legislation Implementation – Wildlife	0.6	0.4	0.5	0.4	0.5
EA-NHD	National Feral Animal Control Programme (includes NHT) – Environmental Component	3.9	3.0	1.0	0.6	0.6
EA-NHD	National Weeds Programme (includes NHT) – Environmental Component	4.1	1.9	1.0	-	-
EA-NHD	Natural Heritage Trust Policy	1.3	1.1	1.1	1.1	1.1
EA-NHD	Wildlife Management	1.7	3.1	3.1	3.3	3.6
EA-NHD	Wildlife Protection	1.7	4.3	3.9	3.9	3.9
EA-NHD	Wildlife Programmes and Biodiversity Conservation Responsibilities ^(d)	na	na	na	na	na
EA-PARKS	Australian Biological Resources Study	5.0	4.6	4.6	4.6	4.7
NCA	Management of Remnant Native Vegetation and Endangered Species	0.1	0.1	0.1	0.1	0.1
	TOTAL	154.6	150.8	62.6	25.2	25.6
	Managing Commonwealth national parks and reserves					
EA-PARKS	Commonwealth Parks and Reserves ^(e)	60.6	54.9	55.7	56.8	58.0
EA-PARKS	National Reserve System Programme (includes NHT)	32.0	15.3	1.6	-	-
EA-PARKS	International Policy	0.4	0.4	0.4	0.4	0.4
	TOTAL	93.0	70.6	57.7	57.2	58.4
	COASTS AND OCEANS					
	Protecting Australia's coasts and oceans					
AFFA	Commission for the Conservation of Southern Bluefin Tuna	0.5	0.5	0.5	0.5	-
AFFA	Deterring Illegal Fishing in Australia's Sub-antarctic Waters	4.0	4.1	4.2	-	-
AFFA	Fisheries Action Programme (includes NHT)	3.6	2.3	0.9	-	-
AFFA	Fisheries Research and Development Corporation	3.0	3.0	3.0	3.0	3.0
AFFA	Fisheries Resources Research Fund	0.2	0.2	-	-	-
AFFA	Invasive Marine Species Programme	0.3	0.3	0.3	0.3	0.3

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

(d) Expenditure for this programme is reported under Endangered Species Programme, Legislation Implementation – Wildlife, National Feral Animal Control Programme – Environmental Component, National Weeds Programme – Environmental Component, Wildlife Management, and Wildlife Protection.

(e) This activity includes the following programmes: Australian National Botanic Gardens, Booderee Botanic Garden, Jointly Managed National Parks, and National Parks on Island Territories.

Table A2.1: Environment Activities - Programme and Tax Expenditure Estimates (continued)

Division / Agency	Description	2000-01 \$m	2001-02 \$m	2002-03 \$m	2003-04 \$m	2004-05 \$m
AFMA	Sustainable Fisheries Management	10.5	10.7	10.7	10.7	10.7
AGSO	Estuarine Health	na	na	na	na	na
AGSO	Marine Zone Geoscience	na	na	na	na	na
AIMS	Environmental Research for the Use and Protection of Marine Resources	22.6	24.5	25.8	26.5	26.7
AMSA	Environmental Activities	3.7	3.7	3.7	3.7	3.7
ANSTO	Coastal Studies	0.6	0.6	0.6	0.6	0.6
CSIRO	Exploration of the Exclusive Economic Zone to Assist Planning for Sustainable Use	1.4	1.4	1.4	na	na
CSIRO	Knowledge and Tools for Marine Conservation Management	2.7	2.7	2.7	na	na
CSIRO	Management of the Oceanographic Research Vessel <i>Franklin</i>	4.5	4.6	4.6	na	na
CSIRO	Management Tools for Estuaries and Coastal Waters	4.6	4.6	4.7	na	na
CSIRO	Managing Environmental Impacts of Aquaculture	0.5	0.5	0.5	na	na
CSIRO	Role of Oceans in Climate Systems, and Marine Climate Impacts	1.6	1.6	1.7	na	na
CSIRO	Stock and Risk Assessments and Tools for Sustainable Fisheries	6.4	6.4	6.5	na	na
CSIRO	Strategies and Tools for Managing Regional Marine Ecosystems	2.5	2.5	2.6	na	na
Customs	Civil Maritime Surveillance and Response	na	na	na	na	na
Defence	Environmental Research for Navy	0.3	0.3	-	-	-
Defence	Identification of Sites for Navy Underwater Explosives Training	0.1	-	-	-	-
DoTRS	Cocos (Keeling) Islands Sewerage	1.1	3.0	3.1	-	-
DoTRS	Jervis Bay Territory Environmental Testing and Investigations	..	0.1	0.1	0.1	0.1
DoTRS	Jervis Bay Territory Sewerage Treatment	0.1	0.1	0.1	0.1	0.1
EA-MWD	Antifouling Programme (includes NHT)	0.5	0.3	0.1	na	na
EA-MWD	Ballast Water Mitigation (includes NHT)	0.4	0.3	0.1	-	-
EA-MWD	Capacity Building Programme ^(f) (includes NHT)	1.2	0.9	na	na	na
EA-MWD	Clean Seas Programme ^(f) (includes NHT)	15.2	14.9	1.8	na	na
EA-MWD	Coastal Acid Sulfate Soils Programme (includes NHT)	1.0	1.6	1.1	na	na
EA-MWD	Coastal and Marine Planning Programme ^(f) (includes NHT)	0.2	-	-	-	-
EA-MWD	Coastal Monitoring Programme ^(f) (includes NHT)	1.5	0.6	na	na	na
EA-MWD	Coastcare ^(f) (includes NHT)	5.1	5.4	na	na	na
EA-MWD	Introduced Marine Pests ^(f) (includes NHT)	1.7	0.5	-	-	-
EA-MWD	Living Cities – Cleaning our Waterways – Industry Partnership Programme	0.6	2.3	-	-	-

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

(f) This activity is partly or wholly funded under the Coasts and Clean Seas initiative.

Table A2.1: Environment Activities - Programme and Tax Expenditure Estimates (continued)

Division / Agency	Description	2000-01 \$m	2001-02 \$m	2002-03 \$m	2003-04 \$m	2004-05 \$m
EA-MWD	Living Cities – Urban Stormwater Initiative (includes NHT)	4.1	2.8	0.3	-	-
EA-MWD	Marine Protected Areas Programme ^(f) (Commonwealth Waters) (includes NHT)	2.3	3.7	5.9	2.7	2.7
EA-MWD	Marine Protected Areas Programme ^(f) (State Waters) (includes NHT)	2.0	1.7	2.1	1.7	1.7
EA-MWD	Marine Species Protection Programme ^(f) (includes NHT)	4.0	2.9	1.3	1.1	1.2
EA-MWD	Marine Waste Reception Facilities ^(f) (includes NHT)	1.7	0.2	0.1	-	-
EA-MWD	National Environment Protection Measure for Marine and Estuarine Water Quality	0.2	0.2	-	-	-
EA-MWD	National Moorings Programme (includes NHT)	0.9	0.7	0.4	-	-
EA-MWD	Queensland East Coast Trawl Restructure Programme	10.0	-	-	-	-
EA-MWD	Regional and International Environmental Protection	0.3	0.4	0.5	0.5	0.5
EA-MWD	Sea Dumping and Sea Installations	0.7	0.6	0.8	0.9	0.9
EA-MWD	Sustainable Fisheries Management (includes NHT)	2.0	1.7	1.1	0.9	0.9
EA-MWD/SDD	Australian Coastal Atlas ^(f) (includes NHT)	0.3	-	-	-	-
GBRMPA	Care and Development of the Great Barrier Reef Marine Park	14.6	19.8	17.5	17.4	17.7
ISR	Offshore Petroleum Industry, Environment Policy	0.4	0.4	0.3	0.3	0.3
NOO	Australia's Oceans Policy	1.6	1.3	na	na	na
NOO	Coastal and Marine Planning Programme (includes NHT)	2.1	0.8	na	-	-
NOO	Regional Marine Planning	7.4	10.7	na	na	na
	TOTAL	156.8	152.4	111.1	71.0	71.1
	HUMAN SETTLEMENTS					
	Operating a world class assessment and approvals system					
Airservices Australia	Environment Branch	2.3	2.6	na	na	na
ARPANSA	Protection of the Environment from Hazards Arising from the Operation of the Commonwealth's Nuclear Installations	2.3	2.7	2.5	2.5	2.5
DoTRS	Indian Ocean Territories State-level Environmental Services	-	0.3	0.3	0.3	0.3
EA - ALD	Environment Assessment	6.0	5.0	6.2	5.4	5.5
EA - ALD	Implementation of the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act) ^(g)	3.8	4.5	-	-	-
	TOTAL	14.4	15.1	9.0	8.2	8.3

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

(f) This activity is partly or wholly funded under the Coasts and Clean Seas initiative.

(g) Expenditure for the implementation of the EPBC Act is reported in various activities under Biodiversity, Coasts and Oceans, Inland Waters and Heritage outputs.

Table A2.1: Environment Activities - Programme and Tax Expenditure Estimates (continued)

Division / Agency	Description	2000-01 \$m	2001-02 \$m	2002-03 \$m	2003-04 \$m	2004-05 \$m
	Accelerating improved environmental performance by industry					
ACA	Environmental Management System and Energy Efficiency Programme	-	..	-	-	-
AFFA	Agricultural and Veterinary Chemicals	1.1	1.1	1.1	1.1	1.1
AGAL	Environmental Chemical Measurement Infrastructure Support	0.9	0.9	-	-	-
AGAL	Environmental Laboratory Analysis	0.4	0.4	-	-	-
AGSO	Petroleum Environment Advice	na	na	na	na	na
ANSTO	Cleaner Technologies and the Removal of Radioactivity, Arsenic and Other Pollutants from Process Streams	2.0	2.2	2.3	2.3	2.4
ANSTO	Environmental Monitoring within ANSTO's 1.6 km Buffer Zone	0.2	0.2	0.2	0.2	0.2
ANSTO	Environmental Responsibilities Associated with the Replacement Reactor Project	0.5	0.5	0.2	0.1	-
ANSTO	Investigation and Management of Pollutant Transport from Artificial Structures and Systems into the Terrestrial Environment	3.4	3.3	3.4	3.5	3.6
ARPANSA	Development of National Codes of Practice - Radioactivity	0.5	0.5	0.5	0.5	0.5
ARPANSA	Field Measurement of Electromagnetic Radiation	0.2	0.2	0.2	0.2	0.2
ARPANSA	Maralinga Clean-up	na	na	na	na	na
ATO	Tax Deductions for Environmental Impact Statements and Remediation	18.0	18.0	19.0	20.0	21.0
ATO	Product Stewardship Arrangements for Waste Oil	na	na	na	na	na
CSIRO	Clean-up of Contaminated Environments	3.4	3.4	3.4	na	na
CSIRO	Disposal of Petroleum Drilling and Production Wastes	0.9	0.9	0.9	na	na
CSIRO	Ecological Risk Assessment of Genetically Modified Organisms	1.0	0.9	0.8	na	na
CSIRO	Managing Indoor Environmental Quality	1.9	1.9	2.0	na	na
CSIRO	Mineral Processing with Enhanced Sustainability	1.8	1.8	1.8	na	na
CSIRO	Sustainable Manufacturing	4.1	4.1	4.0	na	na
CSIRO	Sustainable Tourism	0.9	0.9	0.9	na	na
DEWRSB	National Industrial Chemicals Notification and Assessment Scheme	0.1	0.2	0.2	0.2	na
DFAT	Persistent Organic Pollutants Convention	na	na	na	na	na
DFAT	Prior Informed Consent Convention	na	na	na	na	na
DHAC	International Programme on Chemical Safety	0.1	0.1	0.1	0.1	0.1
DoTRS	Adelaide Airport Noise Insulation Programme	1.5	15.0	23.7	23.5	-
DoTRS	Christmas Island Mine Site Rehabilitation	na	na	na	na	na

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

Table A2.1: Environment Activities - Programme and Tax Expenditure Estimates (continued)

Division / Agency	Description	2000-01 \$m	2001-02 \$m	2002-03 \$m	2003-04 \$m	2004-05 \$m
DoTRS	Development of New Ways to Describe Aircraft Noise	na	na	na	na	na
DoTRS	Environmental Management at Leased Airports	3.0	3.0	3.1	3.2	3.3
DoTRS	Jervis Bay Territory Water Treatment	0.2	0.2	0.2	0.2	0.2
DoTRS	Sydney Airport Noise Amelioration Programme	35.2	34.1	-	-	-
DoTRS	Transport of Dangerous Goods	na	na	na	na	na
EA-EQD	ChemCollect	6.3	6.8	-	-	-
EA-EQD	Chemical Assessments and Research	2.4	1.9	1.8	1.8	1.8
EA-EQD	Control of Hazardous Waste	1.2	1.1	1.0	0.8	0.8
EA-EQD	Dioxin Management ^(h)	-	1.1	1.6	1.6	1.1
EA-EQD	Gene Technology Assessments ^(h)	1.1	0.6	0.6	0.6	0.6
EA-EQD	Improving the Environmental Performance of Australian Industry	10.2	6.1	5.9	3.9	3.9
EA-EQD	International Chemicals Management	0.3	0.4	0.4	0.2	0.3
EA-EQD	National Environment Protection Council	1.3	1.3	1.4	1.4	1.4
EA-EQD	National Pollutant Inventory ^(a)	3.2	1.7	1.7	1.7	1.6
EA-EQD	Product Stewardship Arrangements for Waste Oil	2.8	15.3	15.2	15.2	12.7
EA-EQD	Waste Management Awareness Programme (includes NHT)	2.4	1.1	-	-	-
EA-SSD	Uranium Mining Supervision and Research ⁽ⁱ⁾	5.9	7.1	6.6	6.6	6.7
IOGTR	Regulation of Gene Technology	na	na	-	-	-
ISR	Environment Industry Action Agenda	0.3	na	na	na	na
ISR	Environmental Impact Assessment for the National Radioactive Waste Repository	1.1	2.2	0.1	-	-
ISR	International Research Alliance for Managing Contaminated Sediments	0.2	0.2	0.2	0.2	0.2
ISR	National Plan for Australia's Contribution to 2002 - the International Year of Ecotourism	..	na	na	na	na
NOHSC	Scientific Assessment and Management of Chemical Risk for People and the Environment	na	na	na	na	na
	TOTAL	120.0	140.7	104.5	89.1	63.7
	INLAND WATERS					
	Protecting and rehabilitating the environmental values of inland waters					
AFFA	Contribution to Salinity Mitigation	3.1	3.2	3.3	3.3	3.4
AFFA	Great Artesian Basin Sustainability Initiative	6.0	7.8	8.0	6.5	-

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

(a) The figures for this new measure include corporate overheads.

(h) The figures for these additional measures include corporate overheads.

(i) Negotiations are under way with ERA to recover some of the costs of this activity.

Table A2.1: Environment Activities - Programme and Tax Expenditure Estimates (continued)

Division / Agency	Description	2000-01 \$m	2001-02 \$m	2002-03 \$m	2003-04 \$m	2004-05 \$m
AFFA	Murray-Darling 2001 Programme (includes NHT)	50.7	35.0	22.8	na	-
AFFA	Murray-Darling Basin Commission	1.2	1.2	1.2	1.2	1.3
AFFA	National Rivercare Programme (includes NHT)	24.4	14.9	4.4	-	-
ANSTO	Application of Nuclear Techniques to the Study of Groundwater and Terrestrial Ecosystems	0.8	0.4	0.4	0.4	0.5
CSIRO	Best Practice Management of Irrigated Areas	3.2	3.2	3.3	na	na
CSIRO	Science Based Strategies for National Water Reform	3.1	3.1	3.1	na	na
CSIRO	Sustainable Management of Coastal Rivers and Estuaries	3.7	3.7	3.8	na	na
CSIRO	Urban Water Quality and Supply	1.9	1.9	1.9	na	na
EA-MWD	Lake Eyre Basin (includes NHT)	-	0.8	-	-	-
EA-MWD	National River Health Programme (includes NHT)	7.3	0.7	na	na	na
EA-MWD	National Wetlands Programme (includes NHT)	6.6	5.4	0.1	..	..
EA-MWD	Regional Water Initiatives	2.7	2.7	2.8	2.8	2.9
EA-MWD	Water Quality (includes NHT)	0.5	0.4	0.5	0.5	0.5
EA-MWD	Waterwatch Australia (includes NHT)	3.3	2.9	..	..	..
EA-SSD	Wetlands Ecology and Conservation	2.8	2.0	1.8	1.8	1.9
NCA	Lake Burley Griffin Management	0.5	0.5	0.5	na	na
	TOTAL	121.8	89.8	57.9	16.5	10.5
	THE LAND					
	Conserving, rehabilitating and promoting sustainable land use					
AFFA	Domestic and International Sustainable Forestry Management	2.2	1.5	-	-	-
AFFA	FarmBis – Skilling Farmers for the Future – Commonwealth/State Component	-	20.4	41.5	57.9	-
AFFA	Farm Business Improvement Programme (FarmBis)	28.5	-	-	-	-
AFFA	Farm Forestry Programme (includes NHT)	14.5	9.2	2.3	-	-
AFFA	Land and Water Resources Research and Development Corporation	11.2	11.3	11.4	11.5	11.6
AFFA	National Land and Water Resources Audit (includes NHT)	11.4	5.4	2.4	-	-
AFFA	National Landcare Programme (includes NHT)	101.1	69.7	53.4	39.9	40.6
AFFA	Plantations for Australia: the 2020 Vision	0.3	0.3	0.3	na	na
AFFA	Tax Rebate for Landcare Works (includes NHT)	2.9	4.9	49.2	na	na

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

Table A2.1: Environment Activities - Programme and Tax Expenditure Estimates (continued)

Division / Agency	Description	2000-01 \$m	2001-02 \$m	2002-03 \$m	2003-04 \$m	2004-05 \$m
AFFA	Vision for Change - National Plan for Women in Agriculture and Resource Management	0.1	-	-	-	-
AFFA/EA-NHD	National Action Plan for Salinity and Water Quality	5.0	65.0	150.0	190.0	170.0
AGD	Model Bushfire Offences	na	na	na	na	na
AGSO	Geographical Information Systems	na	na	na	na	na
AGSO	Mapping Dryland Salinity	na	na	na	na	na
ATO	Tax Deductions for Water Conservation and Amelioration of Degraded Lands	20.0	20.0	25.0	25.0	25.0
BRS	Environmental Assessment and Advice	15.6	15.0	-	-	-
BRS	National Forest Inventory (includes NHT)	0.8	0.6	2.4	-	-
CSIRO	Degraded Landscape Management and Rehabilitation	5.5	5.6	5.6	na	na
CSIRO	Management of Environmental Pests, Weeds and Diseases	4.5	4.5	4.7	na	na
CSIRO	Sustainable Agriculture Through Changed Land Use and Management Practices	3.7	3.7	3.7	na	na
CSIRO	Sustainable Native Forest Management	1.7	1.7	1.7	na	na
CSIRO	Tools for Sustainable Resource Use at Regional Scales	6.3	6.3	6.4	na	na
DoTRS	Norfolk Island Land Initiative	0.1	0.1	0.1	-	-
DoTRS	Regional Flood Mitigation Programme – Environmental Clearances	na	na	na	na	na
DoTRS	Remediation of Land Formerly Owned by Australian National Railways	5.1	2.9	1.1	-	-
EA-PARKS	Indigenous Land Management Facilitators (includes NHT)	1.3	0.6	0.2	0.2	0.2
EA-SDD	International Forests	^(j) 0.8	^(j) 0.2	^(j) 0.2	-	-
	TOTAL	241.8	248.7	361.4	324.5	247.4
	NATURAL AND CULTURAL HERITAGE					
	Protecting and conserving Australia's heritage places					
ATSIC	Heritage Protection and Environment Programme	4.2	na	na	na	na
DoTRS	Kingston and Arthur's Vale Historic Area (Norfolk Island)	0.5	0.5	0.5	0.5	0.5
EA-AWHD	Administration of the <i>Aboriginal and Torres Strait Islander Heritage Protection Act 1984</i>	0.5	0.6	0.6	0.6	0.6
EA-AWHD	Conservation of Rural and Regional Hotels	-	5.0	-	-	-
EA-AWHD	Cultural Heritage Projects Programme ^(h)	5.9	4.9	4.5	4.5	4.5
EA-AWHD	Federation Cultural and Heritage Programme	16.2	3.7	-	-	-

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

(h) The figures for this additional measure include corporate overheads.

(j) This figure is reported as an overhead across all Environment Australia programmes.

Table A2.1: Environment Activities - Programme and Tax Expenditure Estimates (continued)

Division / Agency	Description	2000-01 \$m	2001-02 \$m	2002-03 \$m	2003-04 \$m	2004-05 \$m
EA-AWHD	Federation Fund	8.4	0.1	-	-	-
EA-AWHD	Goondiwindi Serpentine Water Park	-	5.0	-	-	-
EA-AWHD	Historic Shipwrecks Programme	0.4	0.4	0.4	0.4	0.4
EA-AWHD	Other Cultural Heritage Grants	0.8	0.8	0.8	0.8	-
EA-AWHD	World Heritage International Obligations	-	1.3	-	-	-
EA-AWHD	World Heritage Management Programme	15.7	15.0	-	-	-
EA-AWHD	World Heritage Nominations	na	1.2	-	-	-
EA-AWHD	World Heritage: Enhancement of World Heritage Properties	na	2.8	-	-	-
EA-AWHD/AHC	Indigenous Heritage Programme ^(k)	na	na	na	na	-
EA-AWHD/AHC	New Heritage Regime / Register of the National Estate	9.3	8.5	9.5	9.5	-
ISR	Membership of World Heritage Management Committees	na	na	na	na	na
SHFT	Sydney Harbour Federation Trust	4.0	^(l) 14.0	na	na	na
	TOTAL	65.9	63.8	16.3	16.3	6.0
	ANTARCTICA – advancing Australia's interests in Antarctica					
AAD	Maintaining the Antarctic Treaty System and Enhance Australia's Influence in the Antarctic Treaty System	16.3	15.9	16.2	16.6	16.9
AAD	Protecting the Antarctic Environment	41.7	40.7	41.4	42.4	43.1
AAD	Understanding the Role of Antarctica in the Global Climate System	24.9	24.3	24.8	25.3	25.8
AAD	Undertaking Scientific Work of Practical, Economic or National Significance	20.3	19.8	20.1	20.6	20.9
AGSO	Australian Antarctic Southern Profiling Project	na	na	na	na	na
	TOTAL	103.2	100.7	102.5	104.9	106.7
	INTEGRATED MEASURES					
ABS	Provision and Standardisation of Data	na	na	na	na	na
AGD	Drafting Services – Delegated Legislation (Office of Legislative Drafting)	na	na	na	na	na
AGD	Environmental Defenders Offices	0.6	0.6	0.6	0.6	0.6
AGS	Provision of Legal Services to Commonwealth Departments and Agencies	na	na	na	na	na
AGSO	Environmental and Urban Impacts of Geohazards	na	na	na	na	na
ANSTO	Application of Nuclear Related Technologies for the Protection and Enhancement of the Environment	10.7	11.1	11.1	11.4	11.7

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

(k) Funding for the Indigenous Heritage Programme is included in the New Heritage Regime and the Register of the National Estate.

(l) This figure includes \$2.0 million of departmental appropriation plus \$12 million redirected to SHFT from the Federation Fund.

Table A2.1: Environment Activities - Programme and Tax Expenditure Estimates (continued)

Division / Agency	Description	2000-01 \$m	2001-02 \$m	2002-03 \$m	2003-04 \$m	2004-05 \$m
ATC	Promotion of Ecologically Sustainable Development and Impacts of International Tourism	na	na	na	na	na
ATSIC	Community Development Employment Projects Scheme	na	na	na	na	na
ATSIC	Community Housing and Infrastructure and Municipal Services Outputs	na	na	na	na	na
AusAID/ACIAR	Australia's Overseas Aid Programme ^(m)	200.0	210.0	na	na	na
AUSLIG	National Mapping and Geographic Information	⁽ⁿ⁾ 26.2	⁽ⁿ⁾ 25.4	⁽ⁿ⁾ 25.2	⁽ⁿ⁾ 25.5	⁽ⁿ⁾ 24.9
DETYA	Green Corps	22.0	22.5	22.9	23.3	23.8
DETYA (including ARC)	Higher Education Research and Research Training	na	na	na	na	na
DEWRSB	Work for the Dole - Mutual Obligation	na	na	na	na	na
DFAT	International Environmental Negotiations	na	na	na	na	na
DHAC	Environmental Health Section	na	na	na	na	na
DHAC	National Drug Strategy	na	na	na	na	na
DHAC	National Medicines Disposal Programme	1.2	1.3	1.3	1.3	1.3
DHAC	National Response to Passive Smoking in Enclosed Public Places and Workplaces	na	na	na	na	na
DHAC	World Health Organization	2.4	2.4	2.4	2.4	2.4
DIMA	CSIRO Population Scenarios Report	-	..	-	-	-
EA-NHD	Heritage Education	na	na	na	-	-
EA-PCD	Grants to Voluntary Environment and Heritage Organisations	^(j) 1.5	^(j) 1.5	^(j) 1.5	^(j) 1.5	^(j) 1.5
EA-SDD	Australian and New Zealand Environment and Conservation Council	^(j) 0.1	-	-	-	-
EA-SDD	Community Environmental Education	^(j) 1.3	^(j) 1.3	^(j) 1.3	^(j) 1.3	^(j) 1.3
EA-SDD	Environment Resource Officer Scheme	^(j) 0.4	^(j) 0.5	^(j) 0.5	-	-
EA-SDD	Environmental Resources Information Network	^(j) 3.8	^(j) 3.1	^(j) 3.1	^(j) 3.1	^(j) 3.1

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

(j) This figure is reported as an overhead across all Environment Australia programmes.

(m) 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. Figures are indicative estimates only, and are subject to final programming decisions.

(n) Figures include a small proportion of non-environment related funding.

Table A2.1: Environment Activities - Programme and Tax Expenditure Estimates (continued)

Division / Agency	Description	2000-01 \$m	2001-02 \$m	2002-03 \$m	2003-04 \$m	2004-05 \$m
EA-SDD	Intergovernmental	^(j) 0.3	^(j) 0.3	^(j) 0.3	^(j) 0.3	^(j) 0.3
EA-SDD	International Issues	^(j) 0.8	^(j) 0.7	^(j) 0.7	^(j) 0.7	^(j) 0.7
EA-SDD	Local Agenda 21	^(j) 0.3	^(j) 0.2	^(j) 0.2	-	-
EA-SDD	State of the Environment Reporting	^(j) 1.3	^(j) 1.3	^(j) 1.3	^(j) 1.3	-
EA-SDD	Sustainable Development	na	na	na	na	na
FACS	Stronger Families and Communities	-	-	-	-	-
ISR	Cooperative Research Centres	36.2	34.3	33.3	32.5	29.5
NSC	Development of International Standards	na	na	na	na	na
OPC	Drafting Services – Primary Legislation	na	na	na	na	na
	TOTAL	299.3	307.6	96.8	97.0	94.2
	NHT Extension	-	-	100.0	233.0	233.0
	TOTAL ALL ENVIRONMENT ACTIVITIES	1528.4	1624.0	1352.6	1258.1	1086.6

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

(j) This figure is reported as an overhead across all Environment Australia programmes.

Appendix 3: Contact Details of Departments and Agencies

Table A3.1: List of Divisions and Agencies with Website and Contact Details

This table lists generic website and switchboard details for each agency. Full contact details with regards to each particular programme listed in Table A2.1 can be found on the following website – www.ea.gov.au/about/budget/2001/.

Acronym	Division / Agency	Website / Contact
AAD	Australian Antarctic Division	www.antdiv.gov.au (03) 6232 3209
ABS	Australian Bureau of Statistics	www.abs.gov.au (02) 6206 4795
ACA	Australian Communications Authority	www.aca.gov.au (02) 6219 5555
ACIAR	Australian Centre for International Agricultural Research	www.aciar.gov.au (02) 6217 0500
AFFA	Department of Agriculture, Fisheries and Forestry-Australia	www.affa.gov.au (02) 6272 3933
AFMA	Australian Fisheries Management Authority	www.afma.gov.au (02) 6272 5029
AGAL	Australian Government Analytical Laboratories	www.agal.gov.au (02) 6213 6075
AGD	Attorney-General's Department	www.ag.gov.au (02) 6250 6666
AGO	Australian Greenhouse Office	www.greenhouse.gov.au (02) 6274 1888
AGS	Australian Government Solicitor	www.ags.gov.au (02) 6253 7000
AGSO	Australian Geological Survey Organisation	www.agso.gov.au (02) 6249 9111
AIMS	Australian Institute of Marine Science	www.aims.gov.au (07) 4753 4444
Airservices Australia	Airservices Australia	www.airservices.gov.au 1300 301 120
AMSA	Australian Maritime Safety Authority	www.amsa.gov.au (02) 6279 5000
ANSTO	Australian Nuclear Science and Technology Organisation	www.ansto.gov.au (02) 9717 3111
ARC	Australian Research Council	www.arc.gov.au (02) 6284 6600
ARPANSA	Australian Radiation Protection and Nuclear Safety Agency	www.arpansa.gov.au (02) 9545 8333

Continued

Table A3.1: List of Divisions and Agencies with Website and Contact Details (continued)

Acronym	Division / Agency	Website / Contact
ATC	Australian Tourist Commission	www.atc.net.au (02) 9361 1305
ATO	Australian Taxation Office	www.ato.gov.au (02) 6279 7538
ATSIC	Aboriginal and Torres Strait Islander Commission	www.atsic.gov.au (02) 6121 4000
AusAID	Australian Agency for International Development	www.ausaid.gov.au (02) 6206 4000
AUSLIG	Australian Surveying and Land Information Group	www.auslig.gov.au 1800 800 173
Australia Post	Australia Post	www.austpost.com.au (03) 9204 7484
BOM	Bureau of Meteorology	www.bom.gov.au (03) 9669 4000
BRS	Bureau of Rural Sciences	www.affa.gov.au (02) 6272 4282
CSIRO	Commonwealth Scientific and Industrial Research Organisation	www.csiro.au 1300 363 400
Customs	Australian Customs Service	1300 363 263
Defence	Department of Defence	www.defence.gov.au (02) 6265 9111
DETYA	Department of Education, Training and Youth Affairs	www.detya.gov.au (02) 6240 8111
DEWR SB	Department of Employment, Workplace Relations and Small Business	www.dewrsb.gov.au (02) 6121 6000
DFAT	Department of Foreign Affairs and Trade	www.dfat.gov.au (02) 6262 1111
DHAC	Department of Health and Aged Care	www.dhac.gov.au 1800 020 103
DIMA	Department of Immigration and Multicultural Affairs	www.immi.gov.au 13 18 81
DOCITA	Department of Communications, Information Technology and the Arts	www.dcita.gov.au (02) 6271 1000
DoRATSIA	Department of Reconciliation and Aboriginal and Torres Strait Islander Affairs	www.doratsia.gov.au (02) 6271 5111
DoTRS	Department of Transport and Regional Services	www.dotrs.gov.au (02) 6274 7111
EA-AWHD/AHC	Environment Australia – Australian and World Heritage Division/Australian Heritage Commission	www.ea.gov.au (02) 6274 1111
EA-EQD	Environment Australia – Environment Quality Division	www.ea.gov.au (02) 6274 1111
EA-MWD	Environment Australia – Marine and Water Division	www.ea.gov.au (02) 6274 1111

Continued

Table A3.1: List of Divisions and Agencies with Website and Contact Details (continued)

Acronym	Division / Agency	Website / Contact
EA-NHD	Environment Australia – Natural Heritage Division	www.ea.gov.au (02) 6274 1111
EA-PARKS	Environment Australia – Parks Australia	www.ea.gov.au (02) 6274 1111
EA-PCD	Environment Australia – Policy Coordination Division	www.ea.gov.au (02) 6274 1111
EA-SDD	Environment Australia – Strategic Development Division	www.ea.gov.au (02) 6274 1111
EA-SSD	Environment Australia – Supervising Scientist Division	www.ea.gov.au (08) 8982 9100
FACS	Department of Family and Community Services	www.facs.gov.au 1300 653 227
GBRMPA	Great Barrier Reef Marine Park Authority	www.gbrmpa.gov.au (07) 4750 0700
IOGTR	Interim Office of the Gene Technology Regulator	www.health.gov.au (02) 6271 4207
IP Australia	IP Australia	www.ipaustralia.gov.au (02) 6283 2211
ISR	Department of Industry, Science and Resources	www.isr.gov.au (02) 6213 6000
NCA	National Capital Authority	www.nationalcapital.gov.au (02) 6271 2888
NHMRC	National Health and Medical Research Council	www.nhmrc.health.gov.au (02) 6289 1555
NOHSC	National Occupational Health and Safety Commission	www.worksafe.gov.au (02) 9577 9555
NOO	National Oceans Office	www.oceans.gov.au (03) 6221 5000
NSC	National Standards Commission	www.nsc.gov.au (02) 9856 0300
OPC	Office of Parliamentary Counsel	www.opc.gov.au (02) 6270 1400
PM&C	Department of Prime Minister and Cabinet	www.dpmc.gov.au (02) 6271 5111
Productivity Commission	Productivity Commission	www.pc.gov.au (03) 9653 2100
SHFT	Sydney Harbour Federation Trust	(02) 8969 2100
Treasury	Treasury Department	www.treasury.gov.au (02) 6263 2111

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