

1999-2000 Ministerial Statements

Investing in our Natural and Cultural Heritage:
The Commonwealth's Environment Expenditure
1999-2000
(Environment Australia)

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Chapter 1: Strategic Directions

Minister's Foreword

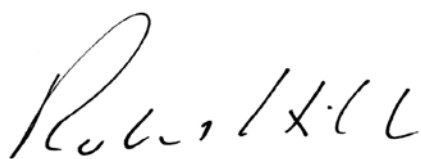
This is the Coalition's first budget since it was returned to office last year and its fourth budget since first elected in 1996. It is a source of satisfaction for it provides the Government with the opportunity to consolidate and expand the achievements of its first term.

In my own portfolio, it allows us to build upon the achievements of the monumental Natural Heritage Trust, the largest single investment in the environment by a Commonwealth Government. The Trust was established with \$1.25 billion from the partial sale of the Government's telecommunications corporation, Telstra. Joint management of the Natural Heritage Trust by Environment Australia and Agriculture, Fisheries and Forestry—Australia has succeeded in better integration of the Government's environment policies.

We intend to provide an additional \$250 million to the Natural Heritage Trust from the sale of the second 16 per cent tranche of Telstra, to allow the trust to operate throughout the life of this Parliament. Most of the trust's funds have been directed to remediation and conservation of our bush environment where environmental problems are most severe. But environmental damage is not confined to the Bush. Our cities also suffer from environmental damage, some of it serious and much of it ugly. Australians also have responsibility for one of the largest ocean territories and longest coastlines in the world. This budget recognises the need to repair some of our worst urban environmental damage and to audit and manage our magnificent marine resources. In so doing it redeems two of our important election pledges.

I will expand the old national estate grants programme into the new cultural heritage projects programme, which will fund the conservation of built and indigenous heritage. It has taken two centuries to inflict what damage we have on our continent. It will take several generations to restore and conserve it.

I am pleased to continue the task.



Robert Hill

Minister for the Environment and Heritage

Key Points:

- The Commonwealth Government will:
- create and provide new funding for the Living Cities Programme of \$50 million over three years to address urban environmental problems. The programme will clean urban air and waterways and improve the management of waste and chemicals;
- provide \$50 million new funding over three years to implement its Oceans Policy;
- add \$250 million to the Natural Heritage Trust from the sale of the second tranche of Telstra to maintain the Trust's funding base during this Parliament;
- through The Natural Heritage Trust continue to provide funding for several programmes important to land and natural resource management. Landcare will receive \$51 million, the Feral Animal Control programme \$2.4 million, and more than \$5 million will be directed to the National Weeds Strategy;
- complete Regional Forest Agreements (RFAs) for nine regions by the end of the year to protect forests and jobs in the forest industry;
- support the protection of Australia's rivers and wetlands, especially the Murray-Darling system, and settle management plans for internationally listed wetlands;
- provide \$31.7 million over five years to rehabilitate the Great Artesian Basin, with emphasis on capping bores;
- expand Australia's national parks and off-reserve, biodiversity conservation through the National Reserve System (NRS); work with the States to stop unsustainable land clearing; support creation of an 'alert list' of introduced plants and animals that are potential threats to the environment; and amend the Quarantine Act so the Environment Minister can advise on environmentally significant quarantine decisions;
- promote the adoption of 'eco-efficiency' and cleaner production and the development of environment accounting standards by the private sector;
- seek to enact as a priority the Environment Protection and Biodiversity Conservation Bill to better protect the environment and reduce intergovernmental duplication;
- provide an additional \$3.4 million over three years to improve surveillance on the Great Barrier Reef; seek Queensland's agreement to expand the Great Barrier Reef Marine Park; and conduct a world heritage assessment to extend the Riversleigh fossil site;
- negotiate with the New South Wales Government to allow a world heritage nomination for the Sydney Opera House and use \$96 million from the Federation Fund to return five harbour foreshore defence sites to Sydneysiders; strengthen protection of Australia's endangered

species; continue to pursue an international ban on commercial whaling and the establishment of a global whale sanctuary; and establish a new Bush for Wildlife initiative from within the Natural Heritage Trust to protect wildlife and wildlife habitat;

- continue the Safeguarding the Future programme to promote the use of renewable energy and reduce the rate of greenhouse gas emissions; and
- establish a new \$4 million Cultural Heritage Projects Programme to conserve and restore places of cultural significance.
- gifts of property with a market value of more than \$5,000 to approved conservation and heritage groups will now become tax deductible regardless of when the property was purchased.
- complete the National Heritage Places Strategy to establish for the first time an overarching national policy, a list of nationally significant places and national standards.

Introduction

Australia's environmental problems are not restricted to regional and rural areas. With urbanisation, population and economic growth come challenges that must be managed to maintain quality of life. Australia's cities have avoided many problems faced by cities in other developed nations. However, there are a number of challenges.

Some Australian cities now face episodes of air pollution comparable to episodes in cities like New York and Tokyo. Many of our urban waterways and marine environments suffer from stormwater run-off and sewage pollution. Remnant vegetation and bushland in urban centres are threatened. Australia's waste per head is the highest in the industrialised world: each year we send more than 14 million tonnes of solid, domestic, commercial and industrial waste to landfill.

Australia also has one of the largest ocean territories and longest coastlines in the world. Our marine environment traverses tropical, sub-tropical, temperate and antarctic zones and contains a rich and unique variety of marine life.

This budget re-directs more resources to the remediation of Australia's urban environmental damage. It also directs more resources to the conservation and sustainable management of our oceans. By doing so it redeems two important pledges made by the Coalition during the last election.

The Government established the Natural Heritage Trust in 1997, which over the first five years will spend \$1.25 billion. It is the single largest investment by a federal government in the environmental future of Australia and it is directly helping communities deal with their environmental problems. This Budget builds on the successes of the Natural Heritage Trust. Restoration of Australia's Bush and urban environments is a task that will take more time than is encompassed in a few terms of a government. It will take generations. The Parliament should recognise this and embrace the challenge.

Highlights of the Government's Achievements

Funding

The Government is providing \$1.25 billion to restore and protect the environment through the Natural Heritage Trust, the largest single investment ever made in Australia's environment. Funding was made possible by the sale of one-third of Telstra.

The investment has allowed a quantum increase in the national effort to conserve Australia's environment and natural resources and in direct support to groups working 'on-the-ground' to protect the environment and promote sustainable agriculture.

Vegetation

Through the Natural Heritage Trust, the Government has allocated \$346 million to the Bushcare programme to restore and enhance native vegetation in rural and urban landscapes. Bushcare is the central component of the national effort to reverse the decline of native vegetation by mid-2001.

The Government has worked with the States to reduce land clearing and protect endangered ecological communities.

The National Park System

The Government has allocated \$85 million to the National Reserve System programme to fund the acquisition of additional land for Australia's national park system. So far, it has approved the acquisition of 1,448,000 hectares.

The Government has emphasised the development of marine reserves in Commonwealth waters. It has declared the world's second largest marine park in the Great Australian Bight and begun to assess five more marine parks.

Australia's World Heritage Areas

The Government has increased funding for State-run, world heritage areas. It has secured world heritage listing for Macquarie Island and the Heard and Macdonald Islands in Australia's sub-Antarctic waters. It has lodged a nomination for the Blue Mountains and initiated world heritage assessments for Australia's major convict sites and Purnululu (the Bungle Bungles) in Western Australia.

Endangered Species

The Government has increased funding for endangered species programmes to protect the 1321 plants and animals considered endangered or vulnerable. It has led the international attempt to protect albatross species in the southern hemisphere and is developing a recovery plan for endangered turtle species.

Forests

The Government has provided funding to add more than 500,000 hectares to the conservation reserve system in Tasmania and two Victorian regions by the RFA process. Through the Natural Heritage Trust the Government is working with Tasmania to secure 90,000 hectares of key forest types in conservation reserves on private land, through the private land component of the RFA. The Government has provided \$81 million to ensure that 12 regions will have RFAs in place by the end of

next year. They will comprise a world-class, national forest reserve system and will secure jobs in the forest sector.

The Coastal and Marine Environment

The Government has provided national leadership and \$125 million to protect our coastal and marine environment from sewage and stormwater pollution, improve coastal planning, increase monitoring and protect marine species. It has increased efforts to improve coastal management, protect marine species, reduce the impact of introduced marine pests and to support the thousands of volunteers who work to protect our coastline through Coastcare.

It has completed development of a national oceans policy which sets a new 'ecosystem-based' framework for the management of our oceans. Through the oceans policy \$50 million has been allocated to develop regional marine plans, increase our scientific understanding of the oceans, and target problems such as acid sulfate soils.

It has established the world's first network of dugong sanctuaries.

It has led world efforts to save whales from extinction. It seeks a total prohibition on commercial whaling and the creation of a global whale sanctuary. Australia and New Zealand have placed formally on the agenda of the International Whaling Commission a proposal for a South Pacific whale sanctuary.

Rivers and Wetlands

The Government has allocated \$314 million from the Natural Heritage Trust to improve the quality and protect the biodiversity of Australia's rivers and wetlands. This includes \$196 million to protect the Murray-Darling, Australia's largest river system.

It also includes increased support for wetland protection, including protection of Australia's 49 internationally listed wetlands.

Air Quality and Waste Management

The Government has provided \$19 million to reduce air pollution in major cities. It has promoted the development of national ambient air quality standards through the National Environment Protection Council (NEPC).

The Government has supported the establishment of a National Pollutant Inventory which requires large companies to report publicly their emissions of 36 pollutants, with 90 pollutants to be reported against after 1 July 2000.

The Government has established a public education programme, Waste Management Awareness, to reduce waste going to landfill. The Government has worked with the construction and demolition industries to identify barriers to 'best practice' waste reduction, established the Clean Hunter Centre as a model for the development of markets for recyclable materials, and developed waste reduction agreements to reduce waste from plastic bottles, newspapers, milk cartons and cans.

Climate Change

The Government has provided \$180 million over a five year period to reduce greenhouse gas emissions. Initiatives include the establishment of the Australian Greenhouse Office, support for the expansion of the renewable energy sector, and the promotion of energy efficiency in the automotive, transport, industrial, building and household sectors.

The Bush for Greenhouse initiative was launched in April 1999, with \$5.5 million aimed at enhancing corporate investment in native vegetation 'sinks'.

Internationally, Australia as a signatory to the Kyoto Protocol is required to reduce the growth of its greenhouse gas emissions to 8 per cent above 1990 levels.

Cape York

The Government has implemented a plan to protect the conservation and cultural values of Cape York, a unique and largely undisturbed part of our continent. It has allocated up to \$40 million to implement the plan.

Heritage

The Government has provided record levels of funding for cultural heritage, including \$70 million from the Federation Fund's cultural heritage projects programme. It is developing Australia's first national heritage places strategy to improve heritage protection.

Environment Laws

The Government has comprehensively reviewed Australia's environment protection laws to develop a regime to increase protection for the environment, reduce intergovernmental duplication and provide greater certainty for stakeholders. The Environment Protection and Biodiversity Conservation Bill, which was introduced into the Parliament in November, establishes a clear role for the Commonwealth in matters of national environmental significance.

The Living Cities Programme

This Budget builds on the work previously done and provides \$50 million over three years to establish the Living Cities Programme. The programme will address problems associated with air quality; urban waterways, waste management, chemicals management, urban vegetation, and coastal water quality.

Improving Air Quality

As a second-stage response to the air pollution inquiry conducted by the Academy of Technological Science and Engineering, the Government will support the development of a national strategy to monitor and manage 'air toxics'. These are pollutants such as dioxins, benzene and formaldehyde which are present at very low concentrations and are known to cause long-term health damage.

They play an important role in smog formation and, in certain circumstances, also can be a significant air pollution problem. Some air toxics found in materials such as paints, adhesives and sealants in new buildings are among the more harmful indoor air pollutants.

The air toxics strategy will monitor, establish the levels of community exposure to, and manage emissions of selected air toxics. The Government also will consider the inclusion of air toxics in a National Environment Protection Measure (NEPM).

Encouraging the Uptake of Compressed Natural Gas

Through the \$180 million Safeguarding the Future programme to reduce greenhouse gas emissions, the Government has allocated \$3.8 million to encourage infrastructure for compressed natural gas (CNG) refuelling networks. Lack of facilities was identified as a major barrier to the uptake of cleaner CNG to replace traditional fuels.

Initial funds were directed mainly to provide facilities in western Sydney. During this Parliament, the Government will double financial support for compressed natural gas refuelling facilities to expand the programme into other urban areas, including Melbourne.

Urban Waterways

Many waterways in our major cities suffer from a range of environmental problems, including pollution from stormwater and sewage and riverbank vegetation loss.

This Budget provides an additional \$25 million over three years to develop existing programmes, such as Rivercare and Waterwatch, to improve the health of urban waterways by reducing pollution and litter and restoring and revegetating river banks.

Improving Waste Management

The Government will continue to support programmes to reduce the amount of waste going to landfill. It will:

- maintain the Waste Management Awareness programme;
- build on the successful Wastewise programme, working with industry to reduce the volume of waste produced;
- support a resource recovery centre programme to establish new regional resource recovery centres modelled on the Hunter centre. The centres will provide expertise and promote re-use of materials by businesses. The programme will provide new employment opportunities in recycling in regional areas; and
- work with the States, local government and industry to finalise a voluntary national packaging covenant supported by an effective kerbside collection scheme and a NEPM.

Improving the Management of Chemicals

It is important that the impact on human settlement of industrial, household and agricultural chemical products is minimised.

As part of Living Cities the Government will establish a 'Chemwatch' programme to assist government, industry and the community to make informed decisions about the impact of these chemicals and improve their management.

Key features of 'Chemwatch' will be:

- Commonwealth leadership in the national collection of disused chemical wastes from farms, starting in outer metropolitan areas; and
- the establishment of a national database of 'agvet' chemical use.

Urban Vegetation

The Natural Heritage Trust has focused on the environmental problems in rural and regional Australia because of serious loss of biodiversity and vegetation and land degradation occurring in those areas.

However, many urban green spaces are suffering from inappropriate development, illegal tree felling, weeds and feral animals, which are threatening many crucial remnants of urban bushland.

The Government will ensure that at least 15 per cent of Bushcare funding is devoted to protecting and rehabilitating urban bushland.

Protecting Our Marine Environment

In 1997 the Government began developing Australia's first national oceans policy. After extensive community consultation, Australia's Oceans Policy was published in December 1998.

Through the Oceans Policy the Government will:

- exercise and protect Australia's rights and jurisdiction over off-shore areas, including off-shore resources;
- monitor and conserve Australia's marine biodiversity, the ocean environment and its resources to ensure ocean uses are ecologically sustainable;
- promote ecologically sustainable coastline development and job creation;
- accommodate community needs and aspirations;
- improve our expertise and capabilities in ocean-related management, science and technology, and engineering;
- discharge Australia's international obligations under the Law of the Seas Convention and other international conventions;
- improve and integrate management arrangements; and
- promote public awareness and understanding.

A total of \$50 million over three years has been allocated to assist in implementing new commitments arising from the Oceans Policy of which the sale of the second, 16 per cent tranche of Telstra will provide \$20 million. These funds are additional to the considerable funding provided by the Commonwealth Government for related marine programmes in areas such as conservation, fishing, marine science, shipping and the surveillance and defence of our marine jurisdiction.

Funds will be provided for a new Regional Marine Planning process, which is the centrepiece of the Government's commitment to implement 'ecosystem-based' marine planning. Through this process, the Government will ensure that the conservation needs of large marine ecosystems are integrated with marine industries and the recreational and cultural aspirations of Australians.

Other measures that will be funded through the Oceans Policy include:

- a new National Oceans Office;
- support for baseline surveys and marine research to underpin the Regional Marine Planning process;
- accelerated development of marine protected areas;

- water quality standards for the marine and estuarine environment;
- improved ballast water management;
- a national moorings programme to protect sensitive marine areas from the impacts of boating;
- increased efforts to address acid sulfate soils; and
- support for the Government's commitment to eliminate the use of tributyltin anti-fouling paint.

Coasts and Clean Seas

These measures build upon the record levels of funding allocated for coastal and marine protection through the Coasts and Clean Seas component of the Natural Heritage Trust.

Coasts and Clean Seas is supporting:

- capital works projects that reduce the impact of sewage and stormwater pollution;
- the protection of marine species;
- improved coastal planning;
- the highly successful Coastcare programme;
- coastal monitoring; and
- projects that target the impact of introduced marine pests.

The Natural Heritage Trust

The Government established the Natural Heritage Trust with \$1.1 billion from the partial sale of its telecommunications agency, Telstra. The objectives of the Natural Heritage Trust are to:

- provide a framework to stimulate strategic investment in our natural environmental capital;
- achieve environmental protection, natural resource management and sustainable agricultural outcomes; and
- provide a framework for cooperation between the community and all tiers of government.

The Natural Heritage Trust Advisory Committee, chaired by Sir James Hardy, was established to advise the Government on maximising environmental benefits.

Spending has been directed through a range of programmes to five major areas of environmental distress: vegetation, rivers, biodiversity, land and coastal and marine environments.

In four years, the Natural Heritage Trust has made significant progress. It has:

- achieved better integration of sustainable agriculture and biodiversity conservation objectives in accordance with the recommendation of the State of the Environment report;

- helped community groups have been able to access significant funds to help them repair their local environments; and
- introduced, refined and streamlined a 'one-stop-shop' application and approval process.

In 1998-99 the Natural Heritage Trust funded more than 3,000 successful projects resulting in a total investment of more than \$260 million.

The Government recognises the importance of maintaining the momentum established through the operations of the Natural Heritage Trust.

So, with the agreement of the Natural Heritage Trust Advisory Committee, it will provide an additional \$250 million to the Trust from the sale of the second, 16 per cent tranche of Telstra, for both Environment Australia and the Department of Agriculture, Fisheries and Forestry.

This will extend current funding through the life of the Parliament and maintain the rate of funding at its historically high 1998-99 levels.

Conserving Biodiversity

The Australian continent and its surrounding seas and islands include an amazing variety of plants and animals, all of which contribute to Australia's astounding biodiversity.

Australia is the only developed nation which has been described as 'mega-diverse'. Our relative isolation means that an unusually large proportion of our wildlife is found nowhere else on the planet.

The past 200 years have seen considerable biodiversity loss, probably the nation's greatest environmental challenge according to the *Australia: State of the Environment 1996* report.

Restoration of Australia's environment is a task that will take more than a few terms of government. It will take generations. All parties should recognise and embrace the objective.

Reforming Commonwealth Legislation

The starting point for biodiversity conservation is a legal framework that identifies the Commonwealth Government's responsibilities.

That approach is embedded in Australia's first comprehensive biodiversity legislation, the Environment Protection and Biodiversity Conservation Bill, introduced into the Parliament last November.

Key features of the Bill are:

- enhanced protection for threatened species and communities;
- stronger, earlier protection for world heritage properties;
- provision for the first time of national, legislative protection for Ramsar wetlands;
- provision for voluntary conservation agreements with landholders for conservation of biodiversity; and
- provision for the first time that regulations may be made to control access to biological resources in Commonwealth areas.

The Government is seeking passage of the Bill in the first half of this year.

National Reserve System

The Government has recognised that the reserve system should include areas representative of Australia's flora and fauna. It has allocated \$85 million from the Natural Heritage Trust to develop a comprehensive, adequate and representative reserve system.

It has:

- approved the purchase of an additional 1,448,000 hectares of high priority and threatened areas;
- recognised the role of the community and landholders in protecting high conservation areas by allowing organisations, such as Birds Australia, to apply for national reserve funds.

These have complemented efforts to create a nationally representative system of marine protected areas in Commonwealth and State waters.

Indigenous Protected Areas

Through the National Reserve System, the Government has supported the development of conservation areas on land owned by indigenous people.

The first Indigenous Protected Area was proclaimed in August 1998, over a property called Nantawarrina in the northern Flinders Ranges of South Australia. Five other Indigenous Protected Areas are scheduled for proclamation in the next 12 months.

The Government will continue to work with traditional owners, indigenous communities and landholders to establish indigenous protected areas.

Bushcare

Over-clearing of native vegetation has caused many environmental problems such as the extinction of plants and animals, loss of precious topsoil, the pollution of many of our rivers, rising saline water tables and increased net greenhouse emissions.

Vegetation loss not only has damaged Australia's environment: ultimately it threatens sustainable farming in many areas.

The Government has established the largest 'off-reserve' native vegetation restoration programme in Australia's history, through the Natural Heritage Trust's \$346 million Bushcare programme and has set itself the goal of reversing the decline of native vegetation by mid-2001.

During the next Parliament, the Government will extend the Bushcare programme for another three years to support large-scale revegetation and bushland conservation projects in cooperation with landholders.

Bushcare will incorporate the Government's election commitment to establish Bush for Wildlife, to establish revolving fund mechanisms throughout Australia to enhance conservation and management of key wildlife habitat and to assist rural and urban dwellers in habitat conservation.

Biological Diversity Advisory Council

In 1996 the Government established the Biological Diversity Advisory Council to advise the Minister and the Australia and New Zealand Environment and Conservation Council (ANZECC) on the implementation of the National Strategy for the Conservation of Australia's Biodiversity.

Members represent the scientific community, industry and conservation organisations, local government and indigenous organisations.

To enhance its role the Council will become a statutory committee under the proposed Environment Protection and Biodiversity Conservation Act.

Australian Biological Resources Study

The Fraser Government established the Australian Biological Resources Study (ABRS) in 1978. It is recognised nationally and internationally for providing fundamental data needed to classify Australia's biodiversity.

Its taxonomic research is a stocktake of Australia's organisms and underpins management and conservation of our resources.

The Government will provide an additional \$4.5 million during the next four years to the ABRS to ensure its Participatory Programme Grant Scheme component is maintained at an appropriate level.

New information technology will allow scientists, Landcare groups, schools and other users to access the database by internet.

Land Clearing

To be successful, revegetation efforts such as Bushcare must be complemented by substantial reductions in land clearing, currently estimated at 350,000 hectares a year.

During the past two years, the Government has used the Natural Heritage Trust Partnership Agreements with the States and Territories to secure support for reducing land clearance.

Bushcare has funded the development and application of an innovative suite of incentives to assist landholders to improve the management of remnant bushland, and to vegetate degraded areas.

States and Territories have committed to better management and protection of native vegetation, including undertakings to:

- preventing any clearing of endangered ecological communities;
- retain and manage native vegetation, including controls on clearing; and
- limit broad-scale clearance of native vegetation, consistent with ecologically sustainable management and bio-regional planning, to areas where regional biological diversity is not compromised.

Importantly, ANZECC will take the lead in developing and implementing a national framework to manage and monitor Australia's native vegetation.

The Government will ensure that commitments made by the States and Territories, which are linked to financial support from the Natural Heritage Trust, are honoured in full.

Funding from the Natural Heritage Trust will assist States and Territories by 2000 to:

- install controls and incentives across all regions and land tenures to reduce the rate of land clearing; limit clearing to instances where regional biodiversity is not compromised; and stop clearing of endangered ecological communities;
- implement projects to revegetate regions that have been over-cleared; and
- provide incentives to better manage grazing, fire, weeds and feral animals to protect the biodiversity values of these ecosystems.

Weeds and Feral Animals

One of the greatest threats to Australia's biodiversity is introduced plant and animal species such as foxes, marine pests and weeds.

The Government will undertake a dual strategy against weeds and feral animals by guarding against expansion of existing pests and imposing stronger controls to help stop the introduction of new ones.

The Minister has approved Australia's first fox and feral cat abatement plans under the Endangered Species Act to coordinate a national response to these threats.

The Government will now support the creation of an 'alert list' of introduced plants and animals in Australia that are not yet out of control but pose a high risk to our environment.

The Government has introduced amendments to the Quarantine Act to strengthen environmental considerations in quarantine decisions.

Ecologically Sustainable Development

Unsustainable, short-term decision-making can threaten Australia's biodiversity and its capacity to ensure future generations benefit from its natural resources.

The Government believes that economic development can be consistent with sound environmental policy. This balance is at the centre of its approach.

Reforming Commonwealth Legislation

The Government has given the principles of Ecologically Sustainable Development (ESD) a legislative basis in the *Natural Heritage Trust of Australia Act 1996*. The Environment Protection and Biodiversity Conservation Bill will expressly implement these principles, including the precautionary principle.

Ecologically Sustainable Development and Industry

The Government supports partnerships with industry for greater 'eco-efficiency', a concept that involves companies becoming economically efficient and ecologically efficient.

The Government has encouraged industry sectors and enterprises to adopt cleaner production practices to reduce pollution, energy and water consumption and minimise waste. The Government is going beyond cleaner production to maximise economic return at the lowest cost to the natural resource base.

During the next Parliament, the Government will:

- continue to work with business to provide practical assistance to facilitate the mainstream adoption of 'eco-efficiency'; and
- assist in the development of methodology for assessing resource use for the full life cycle of industrial activity.

Environmental Economics

Economic incentives and disincentives are necessary to improve business' approach to the environment.

During the next Parliament, the Government will continue to develop economic instruments and incentives. It will:

- create national incentives for native vegetation (carbon) sinks to help repair land degradation and reduce Australia's greenhouse gas emissions;
- undertake further work on the recommendations of the Productivity Commission's inquiry into Ecologically Sustainable Land Management which promote the 'duty of care' expected of land managers;
- ensure that microeconomic reforms continue to address environmental concerns and integrate environmental and economic objectives in Australia's international positions;
- be guided by the National Competition Council, which is reviewing progress under the terms of the national water reform agreement with the States, when considering progress payments to the States later this year; and
- decide whether or not to introduce a domestic emissions trading system for greenhouse gasses.

Promoting Australia's Environment Industries

To achieve ecologically sustainable development Australian industry must have access to leading environmental technology and management. The Government therefore supports Australia's environment technology industries, which offer improved domestic performances and significant export opportunities.

The Government has:

- established an environment industry focus unit to develop opportunities for environment technology and management companies;
- supported the establishment of an environment business forum; and
- provided opportunities for environment management companies through the International Environment Protection programme.

During the Parliament, the Government will:

- continue to promote environment management and technology industries, particularly in the Asia-Pacific region; and
- improve marketing opportunities for environment management companies through an expansion of the environment information network: EnviroNET.

Environmental Protection

During the 1996 election the Coalition promised to overhaul the Commonwealth Government's environment protection laws which had not been reviewed since enactment in the 1970s.

Reforming Commonwealth Legislation

The result of that review was the Environment Protection and Biodiversity Conservation Bill which was introduced into the Senate in November last year.

Under the existing regime Commonwealth involvement in environmental matters is determined by indirect and environmentally irrelevant triggers such as foreign investment and funding decisions. This limits the Commonwealth's contribution to environmental protection and creates unnecessary delay, uncertainty and duplication for industry.

The Bill will ensure, for the first time, that the Commonwealth has direct legislative power relating to matters of national environmental significance.

The Government will seek to enact the Environment Protection and Biodiversity Conservation Bill as soon as possible.

Additionally, during the Parliament, the Government will:

- amend the Wildlife Protection (Regulation of Exports and Imports) Act 1982 to improve protection for endangered species and native species;
- regulate access to genetic resources in Commonwealth areas within two years; and
- introduce legislation to implement the Commonwealth's obligations under the Council of Australian Governments (COAG) agreement in relation to compliance with State environment legislation.

National Environment Protection Council

The Government has ensured the effectiveness of the NEPC, which allows the States and Commonwealth to develop consistent and mandatory environmental protection measures.

As chair, the Government has led the work of the Council, which has:

- established a National Pollutant Inventory which requires large Australian businesses to report publicly emissions of 36 pollutants, with 90 pollutants to be reported against after 1 July 2000;
- developed ambient air quality standards for six major atmospheric pollutants; and
- introduced new measures to track the interstate movement of hazardous waste.

During this Parliament, the Government will address:

- ambient standards for marine and estuarine water quality;
- packaging waste;
- the assessment of contaminated sites; and
- diesel fuel emissions.

Protecting Heritage Places

World Heritage Places

The inclusion of 13 places in Australia on the World Heritage register is testimony to the richness of Australia's biodiversity and cultural landscapes.

The Government increased funding for the management of State-run world heritage places to \$15.7 million in 1998-99, a 50 per cent increase in funding over spending in Labor's final year in office; successfully nominated Macquarie Island and the Heard and Macdonald Islands for world heritage listing; and nominated the Blue Mountains in New South Wales for world heritage listing;

During the next Parliament, the Government will:

- maintain funding near current record levels for the State-managed world heritage areas;
- with the relevant State Governments, conclude the assessment and nomination of Purnululu (the Bungle Bungles) and the Australian convict site serial listing;
- seek to conclude a management and financial agreement with the New South Wales Government to allow nomination of the Sydney Opera House to proceed; and
- assess an extension to the Riversleigh fossil site that includes the pleistocene terraces, such as those at Terrace Site.

Great Barrier Reef

The Great Barrier Reef world heritage area, with Kakadu and Uluru, is one of Australia's best known natural wonders.

The Government has put a high priority on improving the management and protection of the reef.

During the past two years, it has increased the size of the Great Barrier Reef Marine Park by 350 square kilometres with the addition of the Gumoo Woorabuddee area near Shoalwater Bay; announced the extension of the prohibition of mining to the entire reef region; and established the world's first chain of dugong sanctuaries in the southern Great Barrier Reef.

This Budget provides an additional \$3.4 million over three years for increased surveillance and enforcement measures in the park.

The Government will:

- with the agreement of the Queensland Government improve the governance structure of the park authority to establish clearer lines of responsibility, improved engagement with stakeholders and more focus on outcomes;
- maintain the Great Barrier Reef Marine Park Authority as a Commonwealth statutory authority based in Townsville;
- ensure that the Great Barrier Reef Ministerial Council keeps under review the effectiveness of the dugong sanctuary system and, where necessary, considers additional measures to protect dugong;
- implement a strategy to reduce tourist operators' licence latency;
- continue the review of protective arrangements to ensure appropriate levels of protection for all habitat types within the Great Barrier Reef world heritage area;
- require the use of by-catch reduction devices and turtle excluder devices in the reef's world heritage area by 31 March 2000; and
- with the Queensland Government, seek to add further areas to the marine park.

Sydney Harbour Foreshore Defence Sites

The Australian Defence Forces are relocating from a number of defence facilities around Sydney Harbour, including North Head, Middle Head, Georges Heights, Cockatoo Island and Woolwich.

The Government recognises the importance of these sites to the Sydney community for both their natural and cultural values.

The Government has established an interim Sydney Harbour Federation Trust, pending the passage of legislation, to:

- manage, protect and rehabilitate North Head; Middle Head and Georges Heights; Woolwich and Cockatoo Island as Defence relocates from those sites; and
- allow public access to parts of Garden Island.

It has provided \$96 million from the Federation Fund for this purpose.

Protecting Plants and Wildlife

Saving Australia's Endangered Species

More than 1300 species of Australian plants or wildlife are listed as endangered or vulnerable to extinction. On average, 42 species are added to the list each year. One in four native animals is endangered or extinct.

Some scientists are suggesting Australia could lose half of its native bird species in the next hundred years from over-clearing of their habitats.

Endangered species programmes have tended to operate separately from other conservation programmes. The Government has sought to integrate the needs of threatened species into other programmes, such as those funded by the Natural Heritage Trust.

During the next three years the Government will provide \$20.4 million (\$6.8 million in 1999-2000) to endangered species programmes to:

- continue support for the preparation of recovery plans and threat abatement plans;
- help landholders and local community groups develop site recovery plans to control feral animals and weeds threatening endangered species;
- increase the priority given to endangered species in other Natural Heritage Trust programmes, particularly those relating to habitat restoration; and
- provide information about endangered species to regional and catchment community groups so it can be incorporated into regional catchment management strategies.

Commonwealth Legislation Reform

The Government has recognised the importance of providing a strong legislative framework for the protection of endangered species.

The Environment Protection and Biodiversity Conservation Bill now in the Senate will improve protection of endangered species.

Among other things, the bill will:

- include the protection of nationally threatened species and ecological communities as a matter of national environmental significance, ensuring actions that threaten them will trigger Commonwealth assessment and approval requirements;
- recognise in legislation for the first time 'conservation dependent' species and vulnerable ecological communities; and
- require recovery plans for all threatened species and communities, even if they do not occur on Commonwealth areas.

Protecting Australia's Birds

Australia's bird species are a highly visible indicator of our country's biodiversity and many species are at great risk of becoming endangered as a result of land clearing.

The Government has provided more than \$2.6 million for the conservation of Australia's bird species; and provided \$1.2 million to Birds Australia, the nation's leading ornithological organisation, to help its more than 10,000 bird watchers to produce a new Atlas of Australian Birds.

The Government will expand the use of the Natural Heritage Trust to protect bird habitat, through the new Bush for Wildlife initiative.

Albatross

Albatross are among the world's largest and longest living birds. Interaction with humans has led to many albatross species becoming critically endangered.

The Government has adopted a threat abatement plan to reduce the impact of fishing on albatross by 90 per cent over five years and successfully nominated the list of all southern hemisphere albatross species under the Convention on the Conservation of Migratory Species of Wild Animals (the Bonn Convention).

The Government intends to implement the threat abatement plan and seek agreement to complete a regional plan in the southern oceans to implement the Bonn Convention decision, which Australia is developing with New Zealand, South Africa, Chile and Argentina, Uruguay and Brazil.

Wildlife Protection Act

In the past two years, the Government has strengthened protection for Australia's marine wildlife—many of which are found only in Australian waters.

To enhance measures relating to the protection of marine species, the Government has decided to remove the existing blanket exemption of marine fish under the *Wildlife Protection (Regulation of Exports and Imports) Act*.

Following a two-year assessment, only those species that are harvested in accordance with sustainable and ecologically based management arrangements will be exempt from the operation of the Act.

Whales and Dolphins

The Fraser Government ended whaling in Australian waters.

That commitment to protecting whales has been pursued by this Government which seeks the declaration of a global whale sanctuary and an end to all commercial whaling, has obtained the support of the South Pacific nations for a proposal to establish a South Pacific whale sanctuary as an interim step, and provided \$1.6 million over four years for whale conservation projects.

The Government will:

- pursue the creation of a global whale sanctuary;
- work to establish the South Pacific whale sanctuary;
- reinforce protection by legislating to create the Australian Whale Sanctuary and banning capture for live display;
- review the conservation status of all dolphins and porpoises found in Australian waters (including our Antarctic waters) to update their status in the lists of threatened species under Commonwealth legislation; and
- nominate for listing under the Bonn Convention all dolphin and porpoise species inhabiting Australian waters which satisfy prerequisites for listing and develop regional plans for species successfully listed.

Bush for Wildlife

The Government has supported a national network of volunteers to conserve threatened plants and animals with a grant of \$350,000 a year to the World Wide Fund for Nature, now increased to \$500,000 a year.

The Government will increase funding for volunteer support for wildlife conservation through the development of a Bush for Wildlife programme which will be funded from and integrated with Natural Heritage Trust programmes.

The programme will include:

- coordination and support for revolving funds, modelled on the successful Victorian Trust for Nature project, to purchase, fence, covenant and sell properties with nationally significant native vegetation in all jurisdictions;
- continuation of annual tax deductibility to encourage landholders to undertake Landcare and conservation works;
- national coordination and support for State-based Land for Wildlife programmes;
- a backyard conservation scheme that will work primarily with urban communities to engage dwellers in the conservation and management of the precious bushland which remains in urban landscapes;
- adjusted Bushcare grant guidelines to give priority to conservation of the habitat of threatened species and ecosystems; and
- added assistance for community groups and landholders to control weeds, feral animals and other threats to populations of endangered species and ecosystems.

Responding to Climate Change

The Government is committed to international measures to avoid the potentially damaging impacts of the greenhouse effect and to control ozone destroying and greenhouse causing gases.

Supporting International Efforts

In December 1997 Australia was one of 160 countries which agreed to legally binding greenhouse gas emission targets for developed nations. Australia signed the Kyoto Protocol in April 1998.

Through the Kyoto Protocol, the international community endorsed a reduction of greenhouse gas emissions by the developed world of more than 5 per cent of 1990 levels by 2008 to 2012.

The Kyoto conference agreed that Australia should limit the growth of its greenhouse emissions to 8 per cent above 1990 levels in recognition of its unique economic structure and trade profile.

Australia's Domestic Response

The Government is translating international efforts to reduce greenhouse gas emissions into domestic policy.

In November 1997 it announced a five-year, \$180 million programme to meet Australia's greenhouse obligations. That programme, Safeguarding our Future, will improve our environmental performance in a number of other areas, such as air quality.

Principal measures in the programme are:

- support for sourcing energy from renewable resources such as the sun, wind and tides;
- strategies to reduce emissions from cars, industry, and commercial and domestic buildings;
- support for local government to reduce greenhouse emissions;
- tree planting and revegetation through the Plantations-2020 Vision programme and the Bush for Greenhouse programme; and
- establishment of the Australian Greenhouse Office to provide national leadership on greenhouse matters and implement the Government's agenda.

The Government has begun publication of a series of discussion papers on ways that Australia can meet its emissions reduction target.

Protecting the Ozone Layer

The Government supports the international community's efforts to halt damage to the earth's protective ozone layer. Australia has been an influential participant at Montreal Protocol meetings and is a leader in attempts to secure a phase out of all significant ozone depleting substances.

The Government has:

- won recognition from the United Nations Environment Programme as a world leader in ozone protection;
- supported the international phase out by 2005 of methyl bromide, a significant ozone depleting substance used by the agricultural and horticultural sectors. and developed a strategy for its phase-out in Australia; and
- brought the increase of halon 1202 to the world's attention and called for international action at the Working Group to the Montreal Protocol in July 1998.

The Government will continue to support international efforts to protect the earth's ozone layer including:

- encouraging countries to meet their commitment to phase-out all non-essential ozone depleting substances;
- promoting the phase-out of non-essential uses of halon by encouraging countries to develop national or regional halon management strategies based on Australia's mandatory programme;
- progressing the phase-out of CFC use in metered dose inhalers; and

- implementing the phase-out of methyl bromide by developing alternate broad spectrum fumigants.

Protecting Australia's Forests

Regional Forest Agreements

Nearly 20 per cent or 156 million hectares of Australia's land mass is covered by forests and woodlands, which include more than 700 species of eucalypts. Our forests are a major part of our biodiversity, ranging from northern tropical rainforests to the unique karri forests of south-western Australia.

The Government, with the States, has been developing Regional Forest Agreements (RFAs) in 12 forest regions where commercial harvesting takes place. The agreements, which will last for 20 years, will:

- create a world-class forest reserve system that protects the biodiversity, old growth, wilderness and heritage values of our forests according to scientifically developed national criteria;
- ensure that forests are harvested according to principles of ecologically sustainable forest management; and
- provide job security and new opportunities to industries that rely on our native forest resource.

The success of the RFA process has been recognised internationally. It is achieving protection of forests in excess of the 10 per cent recommended by the World Conservation Union and the World Wide Fund for Nature.

This financial year the Government will finalise RFAs in south-east Queensland, Victoria and four regions in New South Wales.

Rivers, Groundwater and Wetlands

Rivers

Through initiatives such as Rivercare, the National River Health Programme, Waterwatch and support for the Murray-Darling Commission, the Government has oversighted improved water flows, sustainable agricultural practices and protection of river ecosystems.

The Government also supports the COAG water reform framework and the commitment towards allocating environmental flows for all river systems by 2001.

The Government will:

- provide \$21.7 million to the Rivercare programme in 1999-2000;
- allocate funding of \$17.2 million during the next three years (\$5.7 million in 1999-2000) to support the National River Health and Waterwatch programmes: This is in addition to the \$25 million being provided for urban waterways.

- continue to drive the COAG water reform process to ensure adequate environmental flows for Australia's rivers; and
- expand the number of water quality monitoring sites on key rivers for use in the National Land and Water Resources Audit and regional and catchment management plans.

Great Artesian Basin Initiative

The implementation of the Great Artesian Basin Strategic Management Plan will benefit from a \$31.8 million Commonwealth contribution over five years from 1999-2000.

This will be invested mainly to repair failing bores and to install pipe water reticulation systems. This will minimise water wastage and return groundwater extraction rates towards sustainable levels, benefiting both water users and groundwater dependent ecosystems.

The Murray-Darling Basin

The Government has supported the rehabilitation of the Murray-Darling basin by committing \$196 million to support the Murray-Darling 2001 Initiative through the Natural Heritage Trust and by maintaining the historic cap on water diversions from the basin, consistent with 1993-94 levels of consumption and development.

The Government will continue to support the rehabilitation and protection of the Murray-Darling. During the next three years it will provide \$124.4 million, including \$43.1 million this financial year.

RiverWorks Tasmania

The Government has provided \$8.75 million from the Natural Heritage Trust for RiverWorks Tasmania to improve the water quality of Tasmania's riverways.

Through RiverWorks Tasmania, it has supported projects to improve the quality of the Derwent, Tamar, Huon, King and Queen Rivers.

The Mount Lyell copper mine in western Tasmania caused particular pollution problems for the King and Queen Rivers and Macquarie Harbour. A further \$7.5 million has been provided from the Trust to address this problem.

Wetlands

The Government will continue to support the national effort to protect Australia's wetlands. Passage of the Environment Protection and Biodiversity Conservation Bill, which includes Ramsar wetlands as one of the matters of national environmental significance, will reinforce the effort.

The Government will seek to:

- finalise management plans for all Ramsar listed wetlands;
- nominate new Ramsar wetlands of international significance to achieve a comprehensive and representative coverage of Australia's most important wetlands;
- lead the development of a multi-lateral Migratory Waterbird Agreement for the Asia-Pacific region, building on the existing agreements for migratory birds Australia has with Japan and China; and

- continue to expand the East Asian-Australian Shorebird Reserve Network, and implement the East Asian-Australian Shorebird Network Action Plan.

Lake Eyre Basin and the Coongie Lakes

The Government has sought to protect the basin during the past two years by:

- signing an historic Lake Eyre Basin Heads of Agreement which will lead to an integrated catchment management agreement;
- providing more than \$500,000 from the Natural Heritage Trust to establish a local community-based Lake Eyre Basin Coordinating committee to oversee preparation of a strategy to conserve the Basin; and
- funding the preparation of a management plan for the Coongie Lakes.

The Government will continue to work to conserve Lake Eyre Basin and the Coongie Lakes.

Community Action and Increasing Our Knowledge

Green Corps

The Government has recognised the enthusiasm of young Australians and their desire to make a direct contribution to the protection of our environment through the establishment of the Green Corps.

The Green Corps has provided an opportunity for 3,600 young Australians to participate, for six-month periods, in 'on-ground' conservation projects and to increase their employment skills and experience.

The Green Corps has:

- planted almost 750,000 trees;
- collected 880 kilograms of seeds have been collected;
- erected 242 kilometres of protective fencing;
- removed 14,500 hectares of weeds; and
- constructed 345 kilometres of walking tracks.

The Government will continue to support the Green Corps.

Environmental Education

A community which is well-informed and capable of taking appropriate actions in support of the environment is fundamental to ecologically sustainable development. Environmental education is an important national activity but it is not just the prerogative of the Commonwealth Government, or other governments for that matter. It concerns everyone in the community.

The Government therefore supports a cooperative national approach in this area. To this end it has initiated a national consultative process to promote discussion of the issues involved. The focal point

for this process is the discussion paper *Today Shapes Tomorrow* which was released by the Federal Minister for the Environment and Heritage, Senator Robert Hill in January this year.

The discussion paper will be followed by a statement on environmental education to be issued by Senator Hill later this year. The statement will set future directions for the environmental education activities of the Environment and Heritage portfolio and also indicate how the Government intends to show national leadership in this area across different sectors. It will give further emphasis to the role of education in achieving an ecologically sustainable future.

The statement will complement the work of the Natural Heritage Trust and related portfolio programmes, playing a significant part in the national effort towards Australia's long-term investment in our environmental resources.

Supporting Conservation and Heritage Organisations

Australians have demonstrated their commitment to the environment by participation in voluntary conservation organisations that exist at local, State and national levels.

The Government has decided to merge the Grants to Voluntary Conservation Organisations programme and the Grants to Cultural Heritage Organisations programme. It will provide \$1.7 million to the new programme this financial year.

State of the Environment Reporting

The acclaimed first national *Australia: State of the Environment 1996* report was published in 1996.

The Government will continue to fund preparation of the second report due in 2001.

National Land and Water Resources Audit

The National Land and Water Resources Audit (NLWRA) will provide a national assessment of Australia's land, vegetation and water resources to support sustainable development.

Key questions have been grouped into seven themes, and projects to trial and demonstrate audit outcomes are underway.

A major part of the audit's work is data collection and officers have been developing protocols with data agencies.

The Government has allocated \$10.5 million to the audit this financial year from a total allocation of \$42 million from the Natural Heritage Trust.

Environment Resources Information Network

The Government will maintain support for the Environment Resources Information Network (ERIN) which, through the Internet, provides the community and policy-makers with access to major environmental databases.

Working with the International Community

The Commonwealth Government can promote significant improvements in environmental protection and practices within its region and at international fora. Australia's expertise and experience are relevant to other nations.

APEC

The Government has tried to ensure that environmental and sustainability issues are integrated into APEC's broad agenda. In particular, it has supported the work of APEC's sustainable development ministers, particularly in relation to sustainable cities.

The Government supports the APEC leaders' decision to make sustainability integral to their approach to increased economic cooperation; and APEC's goal to double the number of cities and local governments that have local Agenda 21 plans by 2003. This is a local programme of sustainable development established by and for local government.

United Nations Environment Programme

The Government has been involved in the attempt to reinvigorate the United Nations Environment Programme (UNEP) and restore it as the principal promoter of environmental outcomes within the United Nations system.

It will continue to do so.

Trade in Endangered Species of Wild Fauna and Flora

The Government supports the Convention on International Trade in Endangered Species (CITES) as the main control on international trade of endangered species and wildlife.

The Government intends to:

- nominate the Great White Shark for listing on the CITES' schedules; and
- complete assessments of other species that have been proposed for CITES listing by non-government organisations.

Preserving Australia's Heritage

National Strategy for Heritage Protection

Local, State and Commonwealth Governments have made considerable advances in management and protection of Australia's heritage places. However, the roles and responsibilities of the various levels of government need sharper definition.

The Government, with the States and Territories, is developing Australia's first, national heritage places strategy.

The strategy will provide an historic opportunity to:

- improve the way all levels of government identify and protect heritage places;
- establish 'best practice' and consistent standards for heritage protection across all jurisdictions; and
- remove gaps in existing heritage regimes.

The Commonwealth has published a public consultation paper to promote development of the strategy. Discussions with the States and Territories will be concluded after the final public consultation period.

Financial Support for Heritage Conservation

The Government will create a new Cultural Heritage Projects Programme to support the restoration and conservation of built and indigenous heritage. The programme will absorb the National Estate Grants Programme and the tax incentives for heritage conservation scheme.

The Government will provide annual funding of \$4 million.

Understanding Antarctica

Australia has responsibility for 42 per cent of Antarctica, a continent of great beauty and significant biological resources, which is of scientific and practical interest to Australia.

The Government will protect this special region and seek to increase understanding of its influence on Australian and global environmental systems.

The Government will:

- maintain Australia's efforts to protect the Antarctic and ensure that Australian activities in the region continue to meet the highest environmental standards;
- examine options for a more efficient multi-ship operation to support the Antarctic research programme and to improve our marine research capabilities;
- complete the examination of options for air transport between Australia and its Antarctic territory to support the Antarctic science programme. The link must be cost-effective and meet the highest environmental standards;
- continue to work with other nations to stop illegal fishing in the Southern Ocean and promote strong measures at the 1998 meeting of parties to the Convention for the Conservation of Antarctic Marine Living Resources to achieve this goal;
- continue to support Hobart as Australia's gateway to the Antarctic; and
- retain all four permanent Australian Antarctic research stations.

World-Class Weather Forecasting

Excellent weather forecasting is essential to the safety and well-being of the Australian community and to many Australian industries. In view of this Professor Ralph Slatyer was asked to review the operation of the Bureau of Meteorology.

The Government has:

- provided an additional \$4.6 million a year for three years in response to the Slatyer review;
- established, with the CSIRO, a joint High Performance Computing and Communications Centre to provide Australia with world-class weather computing systems;

Budget 1999-2000

- entered a joint project to develop a new pilotless aircraft, Aerosonde, to improve Australia's capacity to monitor and collect data from tropical cyclones;
- approved the development of a wave buoy network to improve marine weather services and increase marine safety; and
- established an agricultural-meteorology specific web site, SILO, to assist rural communities.

The Government will continue to support Australia's weather forecasting services. It will fund:

- enhanced services to provincial centres and rural areas through field meteorological offices;
- further improvements to the Bureau of Meteorology's vital, public cyclone, flood, severe storm and fire weather warning services;
- improvements to climate monitoring and prediction techniques;
- increase public access to Bureau information, particularly through the World Wide Web; and
- improvements in the quality of data provided to the agricultural sector.

Chapter 2: Overview

INTRODUCTION

Achieving ecologically sustainable development requires the integration of environmental considerations across the range of Commonwealth policies and programmes. This Commonwealth Environment Expenditure Statement describes the full range of Commonwealth environmental programmes and activities. It builds on such Statements in the two previous Budgets.

This Statement highlights new measures in the 1999-2000 Budget, while giving a broad outline of environment programmes, and programmes and activities that contribute to better environmental outcomes, across all portfolios.

Financial information and descriptions of programmes represent the information currently available within Commonwealth reporting systems. Identification of what is environmental expenditure depends on the extent to which spending can be ascribed to environmental purposes or outcomes. This varies with programmes. Often environmental aspects are difficult to separate from other outcomes, being fully integrated into activities. While this is consistent with the principles of ecologically sustainable development it can restrict the ability to document all environment expenditure. Inevitably, some expenditure cannot be accurately recorded. For this reason it would not be meaningful to provide a total of all the programme expenditures identified in the tables in this Statement.

FUNDING FOR ENVIRONMENT

Estimates solely for that part of Commonwealth environmental expenditure covered by the environmental programmes undertaken by the Environment and Heritage and the Agriculture, Fisheries and Forestry portfolios are given in Table 2.1.

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

Description	1998-99 \$m	1999-00 \$m	2000-01 \$m	2001-02 \$m	2002-03 \$m
Environment and Heritage Portfolio					
Outcome 1: environment, especially aspects that are matters of national environmental significance, is protected and conserved	466.4	473.2	490.9	431.0	217.8
Outcome 2: Australia benefits from meteorological & related science and services(a)	8.3	6.5	6.4	6.4	6.3
Outcome 3: Australia's interests in Antarctica are advanced	93.9	95.3	95.3	94.7	95.2
Agriculture, Fisheries and Forestry Portfolio	281.7(b)	264.4	201.5	150.9	72.8

	850.3	839.4	794.1	683.0	392.1
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- a. These Bureau of Meteorology figures relate to environmental expenses only and have a proportion of corporate resources attributed to them.
- b. Relates to relevant programmes of the former portfolio of Primary Industries and Energy.

Figures in Table 2.1 for the Environment and Heritage portfolio provide for the estimated expenditures for environmental outcomes presented on an accrual basis with outyear estimates in outturn prices. The figures include corporate resources, which have been attributed across outputs and outcomes. (These resources were reported under a discrete programme in the 1998-99 and previous years' Budget documentation.)

NEW MEASURES

New measures announced since the 1998-99 Budget and included in the 1999-2000 Budget are summarised in Table 2.2

Table 2.2: New Measures

Title of Measure	1999-2000 \$m	2000-01 \$m	2001-02 \$m	2002-03 \$m
The Living Cities Programme	10.2	20.5	20.0	-
Oceans Policy Implementation	10.0	10.0	10.0	-
Shipping Support for Australian Antarctic Programme	na	na	na	na
Protecting Australia's forests	5.8	-	-	-
Environment Protection Programme	4.3	4.3	4.3	4.4
Biodiversity Convention and Strategy Programme	2.2	2.2	2.3	2.3
Australian Biological Resources Study	1.1	1.1	1.1	1.2
Greenhouse Science initiatives	2.0	4.0	4.1	4.1
Great Barrier Reef Marine Park Surveillance	1.0	1.2	1.2	-
Funding for the Great Barrier Reef Marine Park Authority to cover increased costs of the Independent Monitor for the Port Hinchinbrook project	0.2	-	-	-
Flood Damage Repairs Norfolk Island	3.5	-	-	-
Cultural Heritage Projects Programme	2.2	2.2	2.3	-

Incentives for Heritage Programme	1.1	1.1	1.1	1.1
Telstra Social Bonus--additional funding for the Natural Heritage Trust	-	-	250.0	-
Deterring illegal fishing in Australia's sub-Antarctic waters	4.0	4.0	4.0	4.0

- denotes nil.
na denotes not available.

The Living Cities Programme

The Government will provide funds from 1999-2000 to 2001-02 to address urban environment problems under the Living Cities Programme. The Programme was an election commitment in *Our Living Heritage*.

The Programme addresses urban environmental problems and has five main elements:

- waste management to promote recycling;
- improving the management of chemicals disposal under a programme called Chemwatch;
- improving air quality;
- establishing a viable network of compressed natural gas refuelling stations; and
- an urban waterways and coastal pollution programme to improve the health of degraded urban waterways.

Oceans Policy Implementation

In December 1998, the Government announced Australia's Oceans Policy, which will set in place the framework for integrated and ecosystem-based planning and management for all of Australia's marine jurisdictions. Building on existing arrangements, the Oceans Policy will promote ecologically sustainable development of the resources of our oceans and encourage internationally competitive marine industries, while ensuring the protection of marine biological diversity.

Consistent with the Government's election commitment in *Our Living Heritage*, an additional \$20 million is to be funded from the Natural Heritage Trust, contingent on the sale of the second tranche of Telstra.

Further details can be obtained from the Oceans Policy Statement, which was released by the Minister for the Environment and Heritage in December 1998.

Shipping Transport Support for Australian Antarctic Programme

The Government has sought offers, by tender, for a three-year ship charter for the period from 2000-01 to 2002-03. The current charter of the *RSV Aurora Australis* concludes at the end of the 1999-2000 Antarctic Summer season and new transport arrangements are required to be in place and working by September 2000 to ensure the continuation of Australia's Antarctic programme. The three-year contract will allow time for the evaluation of future air transportation systems as recommended in the Antarctic Science Advisory Committee (ASAC) report *Australia's Antarctic Programme Beyond 2000; A Framework for the Future* and supported by Government.

Protecting Australia's Forests

The Government will continue to support the Regional Forest Agreement (RFA) process by seeking to complete all RFAs in woodchip regions by the end of December 1999. This increased funding honours the Government's election commitment announced in *Environment: Our Living Heritage*.

Completion of the RFAs will provide environmental and industrial certainty to communities for the next 20 years.

The RFA's affected by this measure include those for the south-western region of Western Australia, Eden in New South Wales; the Southern, Lower Northeast and Upper North East regions of New South Wales, the Gippsland, Upper Northeast and Western regions of Victoria, and for the Southeast region of Queensland.

Environment Protection Programme

A portion of the Environment Protection Programme was due to lapse in 1999-2000. The Government will continue the current level of funding to address environmental priorities in a number of areas including:

- environment impact assessment of major development proposals and other projects arising from Commonwealth decisions;
- meeting Australia's commitments under international regimes for the sound management of chemicals;
- regulating trade in and illegal traffic management of hazardous waste;
- addressing the rehabilitation of contaminated sites;
- promoting Australia's environment industries particularly in the Asia Pacific region;
- supporting our international negotiations and efforts to protect the ozone layer;
- promoting national initiatives for the protection of the nation's water resources; and
- fulfilling Australia's environmental obligations under the London Convention on sea dumping and sea installations.

Biodiversity Convention and Strategy Programme

The Government will continue to provide funds for monitoring progress towards the implementation of a National Strategy for the effective identification, conservation and management of Australia's biological diversity.

Australian Biological Resources Study

The Government will continue to fund the Participatory Programme research grant scheme of the Australian Biological Resources Study (ABRS) at current levels to provide the underlying taxonomic knowledge necessary for the conservation and sustainable use of Australia's biological diversity.

Greenhouse Science Initiatives

The Government will continue to fund Greenhouse Science for the four years from 1999-2000 until 2002-2003 at the current level. Funding for the activity was due to reduce by \$2 million in 1999-2000 and cease thereafter.

This measure supports continued investigation of climate systems, improving climate change models, detecting regional climate change and supporting international climate change science.

This initiative is part of Australia's commitment to supporting global research on greenhouse science under the Framework Convention on Climate Change.

Improved Great Barrier Reef Marine Park Surveillance

The Government will provide an additional \$3.4 million from 1999-2000 to 2001-02 for improved surveillance and enforcement within the Great Barrier Reef Marine Park.

This measure will ensure the protection, sustainable use and enjoyment of the Great Barrier Reef.

The reported incidence of illegal fishing activities in the Park is increasing. A targeted enforcement and surveillance programme is required to contain and reduced this activity. An increase in the level of fines applicable under the *Great Barrier Reef Marine Park Act 1975* is proposed to be commensurate with relevant fisheries legislation.

Funding for the Great Barrier Reef Marine Park Authority to Cover Increased Costs of the Independent Monitor for the Port Hinchinbrook Project

Under the joint Deed of Agreement between the Commonwealth and the State of Queensland an independent Monitor has been appointed to oversee the construction of marina access from the resort being developed at Port Hinchinbrook, Queensland to the Hinchinbrook Channel. The channel is part of an area which is listed under the UNESCO Convention for the Protection of the World Cultural and Natural Heritage.

Lengthy delays in completing the dredging work on the project have resulted in increased activity by the independent monitor. This delay has increased the cost to the Commonwealth from \$165,000 to \$315,000. The measure will fund the extended monitoring programme through to the completion of commitments under the Deed of Agreement.

Flood Damage Repairs Norfolk Island

The Government will provide a \$3.5 million equity injection in 1999-2000 to repair the main access and other associated roads to Norfolk Island National Park so it can be reopened to the public. Major flood damage in August 1998 forced the permanent closure of the roads.

Cultural Heritage Projects Programme

The Government will implement the new Cultural Heritage Projects Programme (CHPP), to honour one of its election commitments in *Our Living Heritage*.

The CHPP will absorb the National Estate Grants Programme (NEGP) and support the conservation and restoration of places of cultural significance, with a priority for built works and indigenous heritage.

In addition to the new funds identified in this measure, the current funding to NEGP of \$0.8 million per year will be included in the CHPP.

Incentives for Heritage Programme

The Government will convert the former Taxation Incentive for Heritage Conservation Scheme (TIHC) into a grants programme. Under the new Cultural Heritage Projects Programme approximately \$1 million annually will be allocated for grants to private owners of heritage-listed buildings and structures to perform conservation work.

The TIHC is administered under the *Income Tax Assessment Act 1936* and provided a rebate of 20 per cent of heritage conservation works completed to taxpaying private owners of heritage places.

Translation to a grants programme will not involve any additional impact on the Budget as the taxation rebates previously available under the TIHC will cease.

Telstra Social Bonus--Additional Funding for the Natural Heritage Trust

The Government made a commitment to provide additional funding of \$250 million for the Natural Heritage Trust of Australia in 2001-02. This measure forms part of the Government's social bonus to be funded from the sale of the second tranche of Telstra.

Deterring illegal fishing in Australia's sub-Antarctic waters

This programme of the Agriculture, Fisheries and Forestry portfolio will involve the patrolling of Australia's remote sub-Antarctic waters. Expected outcomes are prevention of illegal fishing in the Australia Fishing Zone (AFZ) and the consequent protection of important fishery resources, especially of the Patagonian toothfish.

NATURAL HERITAGE TRUST PROGRESS

The Natural Heritage Trust is entering its fourth year. Contingent upon the sale of the second tranche of Telstra, the Government will provide an additional \$250 million to extend the Trust beyond the term of the original package, with an assured level of funding over the next three years to 2001-02. The extension reaffirms the Government's commitment to the Trust as the largest and most significant environment initiative in the country's history. Another three years of funding will ensure that the Trust programmes continue to stimulate activities in the national interest to achieve the conservation, sustainable use and repair of Australia's unique and diverse natural environment. The estimates for Trust programmes have been revised as shown in Table 2.3. The Natural Heritage Trust programmes are now fully underway and significant achievements have been made. The year 1999-2000 will be an opportunity to build on the successes that have been achieved, with many projects now well advanced. The Government continues to be committed to ensuring that the Natural Heritage Trust meets the most pressing environmental challenges facing the nation and to ensuring that our environment and natural resources are managed in an ecologically sustainable way.

The Trust provides additional funding to some already existing programmes which will continue to exist with the Trust programme structure. When the funds attached to these programmes are added to those from the Trust, the total funds for these programme areas are as shown in Table 2.4.

Natural Heritage Trust of Australia Act 1997 (Natural Heritage Trust Act) was proclaimed on

18 June 1997. The Act establishes the Natural Heritage Trust of Australia Reserve to conserve, repair and replenish Australia's natural capital infrastructure. It also establishes the Natural Heritage Ministerial Board, which comprises the Minister for the Environment and Heritage and the Minister for Agriculture, Fisheries and Forestry. The Natural Heritage Trust Advisory Committee is an expert committee established by the Natural Heritage Trust Act to advise the Ministerial Board on the integration of the Trust's objectives and the effectiveness of the Partnership Agreements.

Partnership Agreements, which implement the requirements of the Natural Heritage Trust Act, have been put in place with each State and Territory to establish the terms and conditions under which financial assistance is provided from the Trust and to establish a framework for cooperation in environmental protection, natural resource management and sustainable agriculture. Partnership Agreements are the central means of integration and delivery of the Natural Heritage Trust. The Commonwealth is working through the Partnership Agreements to ensure that policies and guidelines for environmental protection and sustainable development are consistent with national strategies and priorities. Partnership Agreements generally have been signed by the Prime Minister and each State Premier and the Territories' Chief Ministers, and are endorsed by the State and Territory Cabinets.

Many of the Trust programmes are delivered through a 'one-stop-shop' which involves local communities and regional organisations in the Natural Heritage Trust and incorporates relevant Commonwealth and State and Territory programmes. More than \$260 million has been approved so far in 1998-99 for well over 3,000 Natural Heritage Trust and related projects. This represents more than a 20 per cent increase in funding to projects seeking solutions to environmental and natural resource problems faced across Australia. Australia's coastal and marine environment has seen a boost in approved funding for environmental projects of more than a third, and Commonwealth efforts in the National Reserve System Programme have more than doubled. Approved funding on Natural Heritage Trust and related projects has increased in almost every programme of the Natural Heritage Trust.

Table 2.3: Natural Heritage Trust Funding

Description	1996-97 \$m	1997-98 \$m	1998-99 \$m	1999-00 \$m	2000-01 \$m	2001-02 \$m (b)	Total \$m
Vegetation							
Bushcare	3.7	22.2	67.9	81.8	87.1	83.8	346.5
Farm Forestry Programme	-	2.8	10.1	11.5	15.6	9.2	49.2
Inland Waters							
Murray-Darling Basin 2001	3.8	27.5	40.4	43.1	48.7	32.6	196.1
National Rivercare Prog.	-	6.4	19.2	21.7	24.6	15.6	87.6
Riverworks Tasmania	1.8	2.6	4.4	-	-	-	8.8
National River Health Programme	0.1	1.6	4.7	3.1	4.5	1.8	15.8

Waterwatch	0.2	2.2	2.8	2.6	2.6	2.6	13.0
National Wetlands Prog.	0.5	1.6	3.6	3.8	3.8	3.8	17.1
Biodiversity							
National Reserve System	0.4	2.9	25.7	16.0	20.0	20.0	85.0
Endangered Species Prog.	2.0	2.1	6.4	5.5	5.5	5.5	27.0
Land Resources							
National Land and Water Resources Audit	1.3	2.4	12.3	10.5	10.5	5.0	42.0
National Feral Animals Control Programme	3.7	3.1	4.1	2.4	2.7	3.0	18.9
National Weeds Prog.	2.1	1.3	9.0	5.4	5.9	4.8	28.5
National Landcare Programme (including Landcare tax measures)	10.2	30.1	69.4	64.0	74.2	78.7	326.6
FarmBis: Advanced Property Mgmt Planning	0.4	0.3	5.7	3.7	4.9	-	15.0
Coasts and Oceans							
Oceans Policy	-	-	-	4.1	7.4	8.5	20.0
Coasts and Clean Seas	-	8.6	31.0	25.5	27.2	24.4	116.8
Fisheries Action Prog.	-	1.2	1.7	2.3	1.5	1.3	8.0
Environment Protection							
Waste Management Awareness Programme	0.2	0.6	1.6	1.1	1.3	1.1	6.0
Atmosphere							
Air Pollution in Major Cities	1.3	1.5	3.7	3.9	4.1	4.1	18.5
Australian Heritage							
World Heritage Area management & upkeep	4.7	10.7	10.5	8.9	8.9	8.9	52.5
	36.3	131.4	334.3(a)	320.9	361.3	314.7	1499.0

- denotes nil.

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.

- a. Includes \$39.8 million carryover from 1997-98.
- b. 2001-2002 figures for Natural Heritage Trust programmes are contingent on the second tranche sale of Telstra.

To implement the Commonwealth's aim of a 'one-stop-shop', the Guidelines for 1999-2000 consolidate ten programmes (amounting to 80 per cent of Trust funds) into one readily accessible Guideline booklet. The closing date for applications for 1999-2000 was 26 February 1999 and processing of applications is underway.

The procedures established in the partnership agreements for selecting members of State and Regional Assessment Panels recognise the broadening of the Natural Heritage Trust processes to better reflect a partnership between the Commonwealth and the States in delivering biodiversity conservation and sustainable agriculture objectives. The Commonwealth and the States have worked together to put in place assessment panels which encompass a broad constituency with appropriate skills or experience to provide advice to State and Territory Ministers who then recommend proposals for funding to the Natural Heritage Ministerial Board.

Table 2.4: Total Expenditure Estimates for Natural Heritage Trust & Trust-related Programmes

Description	1996-97 \$m	1997-98 \$m	1998-99 \$m	1999-00 \$m	2000-01 \$m	2001-02 \$m	Total \$m
Vegetation	14.2	35.8	84.2	94.7	104.2	94.4	427.6
Rivers	24.1	51.6	79.4	78.7	88.6	60.7	383.1
Biodiversity	6.3	7.4	34.8	22.8	26.8	26.8	124.8
Land Resources	83.3	91.9	155.5	122.9	135.4	128.5	717.5
Coasts and Oceans	7.9	14.6	37.6	42.9	47.1	45.1	195.2
Environment Protection	0.2	0.6	1.6	1.1	1.3	1.1	6.0
Atmosphere	1.3	1.5	3.7	3.9	4.1	4.1	18.5
Australian Heritage	13.1	22.2	17.0	15.1	15.0	15.0	97.4
	150.4	225.5	413.8(a)	382.0	422.4	375.8	1970.0

- a. Includes \$39.8 million carryover from 1997-98.

Coasts and Clean Seas programmes funded from the Natural Heritage Trust are being delivered through trilateral Coasts and Clean Seas Memoranda of Understanding between the Commonwealth, States and Territories, and local government. The MOUs are consistent with the partnership agreements. The National Land and Water Resources Audit, the World Heritage Area Management and Upkeep, the Air Pollution in Major Cities and the Waste Management Awareness programmes are not covered under the partnership agreements. These programmes are delivered through discrete arrangements and are not part of the Natural Heritage Trust 'one-stop-shop'. More detail about the programmes of the Trust can be found in Chapters 3 to 9.

COMMONWEALTH ENVIRONMENT ACTIVITIES

The Commonwealth's environmental activities go well beyond programmes targeted directly at environmental issues. Commonwealth programmes concerned with resource and industry sectors, economic growth, microeconomic reform, social goals and international cooperation and development aim to integrate environmental considerations with economic and social considerations. Also, internal management practices in areas such as government administration and Defence are moving to environmental best practice (see Table 2.5).

Table 2.5: Environmental Activities by Portfolio

Portfolios	Major environmental activities
Agriculture, Fisheries and Forestry	Primarily responsible for natural resource management policy integrating environmental considerations, with a broad range of environment-related programmes.
Australian Quarantine and Inspection Service	Responsible for quarantine services to prevent entry of exotic pests and diseases and for inspecting and certifying export goods prescribed under the Export Control Act.
Attorney-General's	Funding of Community-based environmental legal services and provision of environment-related legal advice.
Australian Customs Service	Border operations to control potentially environmentally damaging imports and exports.
Communications, Information Technology and the Arts	Responsible for radiofrequency and electromagnetic energy research and information.
Defence	Management of the environmental and heritage attributes of the defence estate, particularly training areas.
Education, Training and Youth Affairs	Green corps and other programmes which provide youth training, skills and work experience in environmental conservation and heritage activities. Provision of environmental education materials and professional development to teachers.
Employment, Workplace Relations and Small Business	Administers the national industrial chemicals notification and assessment scheme;
Environment and Heritage	Primarily responsible for environmental policy, with a broad range of environmental programmes.
Antarctic Division	Research on matters of oceans and marine life, atmosphere, climate change and protection of the Antarctic environment.
Bureau of Meteorology	Atmospheric, oceanographic and hydrological monitoring, research and service provision.
Finance and	Monitors Commonwealth environmental spending and contributes to

Administration	environment policy.
Foreign Affairs and Trade	Seeks to promote solutions to international environmental issues consistent with Australia's economic and environmental interests.
AusAID	Overseas aid programme supporting Australia's national interests through environmental activities in developing countries.
Health and Aged Care	Undertakes a range of environmental health activities and contributes to chemical assessments.
Industry, Science and Resources	Primarily responsible for industry development policies and programmes covering research and development, innovation, technology diffusion and business networks. Major funder of environmental research particularly through CSIRO, CRCs, the Australian Institute of Marine Science, and the Australian Nuclear Science and Technology Organisation. Renewable energy industry assistance. Energy efficiency programmes. Monitoring, protecting and enhancing the environment in relation to tourism through policy advice on tourism in World Heritage Areas and funding support for projects.
Prime Minister and Cabinet	Provision of general environmental advice; coordination of the Government's programme of Regional Forest Agreements.
Aboriginal and Torres Strait Islander Commission	Land management and Aboriginal heritage programmes.
Transport and Regional Services	Primarily responsible for transport policy integrating environmental considerations; protection of the marine and coastal environment through the Australian Maritime Safety Authority.

Table 2.5: Environmental Activities by Portfolio

Portfolios	Major environmental activities
Treasury	Contributes to the development of environment policy.
Australian Bureau of Statistics	Development of environmental accounts and reporting of environment statistics.
Productivity Commission	Addresses environmental issues in its public inquiries and research.
Australian Taxation Office	Administers a range of environment-related taxes, levies, deductions and rebates.

GUIDE FOR READERS

This Statement attempts to cover all Commonwealth activities and programmes that have environmental benefit as either a primary or a secondary goal. Environmental benefit has been defined as:

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

In practice there is no clear definition of an environmental programme and judgement is needed on what to include. The aim is not strict definition, but to show the broad range of programmes which now have an identifiable environmental element.

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

The objective is to include all expenditure directly attributable to environmental objectives. However, environmental expenditure associated with everyday good practice operations, or expenses on some large projects, may not appear as separate line items in departmental budgets. For these reasons the figures provided underestimate total Commonwealth spending.

The figures provided for tax expenditures (tax concessions) are the cost to revenue estimated by the Australian Taxation Office and the Treasury.

Structure

Activities are classified according to their objective, not by the department or agency that undertakes them. Chapter 3 deals with activities that cut across sectors or are not dealt with under other chapters. Chapters 4 to 10 cover aspects of the environment following broadly the approach in the report *Australia: State of the Environment 1996*. Many activities cover more than one sector. In this case, activities are located in the chapter to which the majority of their activities are relevant. Cross-references are provided to other chapters where necessary.

After sections of text in Chapters 3 to 10, the name is provided of the agency or department (and in the case of Environment Australia, the name of the EA group) covering the activity, with a contact telephone number. These contact details are to enable readers to get more information on activities of interest to them. If there is any doubt as to which agency covers an activity, telephone the Budget Statement production team on 02 6274 1968.

Style Conventions

This Statement follows many of the style conventions of the Budget papers. However, there are some important differences.

Although new measures are expressed in outturn prices consistent with other budget statements, unless otherwise indicated, other expenditure and revenue figures are expressed in 1999-2000 prices rather than indexed or otherwise adjusted for expected cost increases.

There are some significant gaps in the figures for outyears. 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.

Figures also often are not available where they cannot be separately identified from larger programme funds into which they are closely integrated.

Not all dollar figures in the text are included in the tables of new measures and programme 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.

For the first time, the Commonwealth Budget for 1999-2000 has been based on accrual budgeting. This does not mean a fundamental change to the Statement. However, the change to costing outputs on a full accrual basis may increase the level of spending on some activities in chapter tables compared with the previous cash expenditure base.

This would mean that figures for last year might not be strictly comparable with those for this Budget and future years. However, this strict lack of comparability is unavoidable with such a change, and should not undermine the objective of giving a broad indication of the levels of environment expenditure by the Commonwealth.

Tables of new measures and programme and tax expenditure estimates are broken into two sections. The first section includes new measures announced in the current Budget. The second section has total programme and tax expenditure estimates including the effects of the new measures.

All dollar figures in tables 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 2000-01 onwards are only estimates and are subject to normal budgetary procedures.

Chapter 3: Cross Sectoral Activities

Key Points:

- The reform of Commonwealth environmental legislation is well advanced with the introduction into Parliament of the Environment Protection and Biodiversity Conservation Bill.
- The majority of States and Territories have signed the Council of Australian Governments Heads of Agreement on Commonwealth and State Roles and Responsibilities for the Environment.
- A number of Regional Forest Agreements are currently under negotiation for Queensland, New South Wales, and the North East Gippsland and West regions of Victoria.

The Commonwealth's environmental objectives are being pursued directly and indirectly through a large number of cross-sectoral and international activities, which together have the capacity to affect the environment significantly. The Government continues to take opportunities to integrate environmental objectives into economic and social policies and programmes, and to make existing systems and processes more efficient and effective in delivering environmental outcomes. Table 3.1 shows outlays on identifiable activities.

Table 3.1: Cross Sectoral Activities--Programmes and Tax Expenditure Estimates

Description	1998-99 \$m	1999-00 \$m	2000-01 \$m	2001-02 \$m	2002-03 \$m
PROGRAMME AND TAX EXPENDITURE ESTIMATES					
Commonwealth-State Relations					
Administration of EP (IP) Act (a)	na	na	na	na	na
Tax deduction for environmental assessment activities	< 10	< 10	< 10	< 10	na
AIC Environmental Crime Prevention Research Programme	na	..	na	na	na
International Development Cooperation					
Environmental activities under the Aid Programme (b)	193.0	191.0	na	na	na
Global Environment Facility	4.5	5.1	7.7	9.4	10.3
Montreal Protocol Multilateral Fund	5.9	5.1	2.9	4.8	1.0
International Environment Protection Prog.	0.3	0.3	0.3	na	na
International Conservation Programme	0.1	na	na	na	na
International Programme on Chemical Safety	0.1	0.1	0.1	0.1	na
International Forest Forum	na	na	na	na	na
Contributions to International Conventions and Organisations (c)	1.1	1.1	na	na	na
Technical Cooperation (c)	na	0.9	na	na	na

Table 3.1: Cross Sectoral Activities--Programmes and Tax Expenditure Estimates (continued)

Description	1998-99 \$m	1999-00 \$m	2000-01 \$m	2001-02 \$m	2002-03 \$m
Involving the Community					
Grants to Voluntary Environment and Heritage Organisations.	1.8	1.7	1.6	1.6	1.6

Various tax concessions for environmental NGOs	na	na	na	na	na
Environmental Legal Services	0.6	0.6	0.6	0.6	0.6
Environmental Education and Information Programme	na	na	na	na	na
Green Corps (Young Australians for the Environment)	21.6	21.8	22.1	22.5	22.9
ATSIC Community Housing and Infrastructure Programme	na	na	na	na	na
ATSIC Heritage Protection	4.3	4.2	na	na	na
ATSIC Community Development Employment Projects	3.8	3.8	na	na	na
Expanding the Environmental Knowledge Base					
State of the environment reporting	1.2	1.2	1.3	1.5	na
ABS environment reporting activities	0.8	1.2	0.9	1.1	0.9
Environmental Resources Information Nwk.	2.2	2.2	2.2	2.2	na
AUSLIG:topograph mapping & remote sens.	25.9	26.0	25.6	25.3	25.3
CSIRO	92.7	92.7	na	na	na
ANSTO	7.8	13.5	na	na	na
Technology Diffusion Programme	0.4	na	na	na	na
Bureau of Meteorology (d)	8.3	6.5	6.4	6.4	6.3
World Meteorological Organization Contrib.	1.1	1.0	1.0	1.0	1.0
ABARE	na	na	na	na	na
LWRRDC	10.9	10.9	10.9	na	na
Cooperative Research Centres (e)	34.0	25.9	35.5	33.5	21.9
ARC/DETYA Large Research Grants (f)	na	na	na	na	na
Tax deduction for environmental R&D	na	na	na	na	na
Greening of Government					
Department of Defence environmental work	3.1	na	na	na	na
Territories Programme	4.4	3.4	3.4	3.4	3.4
Environment Resource Officer scheme	0.4	0.4	na	na	na

na denotes not available;
 < denotes less than;
 .. denotes a figure which rounds to less than 0.1.

- a. These initiatives will be funded under the Environment Protection Programme.
- b. AusAID's 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. Overseas aid programmes will continue to give high priority to supporting environmental activities in developing countries. More detailed information and examples of how Australia's aid programme is contributing to international actions on the environment are outlined in some of the following chapters.
- c. Expenditure by Environment Australia only. See also Table 3.2.
- d. Estimates of appropriation-based Bureau of Meteorology expenditure attributable to atmospheric, oceanographic and hydrological monitoring, research and service provision in support of environmental objectives.
- e. Some individual Cooperative Research Centres are also covered in other chapters.
- f. Grants with a specific environment focus.

COMMONWEALTH-STATE RELATIONS

The Council of Australian Governments (COAG) Heads of Agreement on Commonwealth and State Roles and Responsibilities for the Environment gives substance to the Government's commitment to a revitalised partnership with State, Territory and local governments to protect the environment. The Agreement provides a more effective framework for intergovernmental relations on the environment, which will provide greater certainty for participants in environment issues, minimise duplication of effort and facilitate improved environmental outcomes.

The Agreement focuses Commonwealth responsibilities and interests on matters of national environmental significance. It streamlines environmental assessment and approvals processes, provides for improved Commonwealth compliance with State and Territory environment and planning laws and establishes a framework for more effective establishment and administration of national environmental programmes.

The Australian and New Zealand Environment and Conservation Council (ANZECC) is the ministerial forum for cooperation and consultation between jurisdictions on environmental matters. The Council has agreed on a set of priority matters for consideration and action over the medium term: water, marine, greenhouse, industry waste reduction and vegetation management. The Council is making progress towards the following objectives:

- implementation of a National Framework for the Management and Monitoring of Australia's Native Vegetation. The basic framework and an implementation timetable were agreed to by the Council in December 1998;
- a joint approach with the Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ) to implement, and report to COAG on, the environmental aspects of COAG's national water reform framework;
- implementation of Australia's Oceans Policy and development, in conjunction with New Zealand, of a trans-Tasman understanding on oceans policy;
- cooperative action between the Commonwealth and the States and Territories to meet Australia's obligations under the Framework Convention on Climate Change, through the National Greenhouse Strategy. To this end, the Australian Greenhouse Office now has a seat on ANZECC's two Standing Committees; and
- development of a National Packaging Covenant between government and industry to minimise packaging waste is being negotiated with the support of ANZECC, between all spheres of government and industry involved in the packaging supply chain. Finalisation of the Covenant by all parties is expected in July 1999.

Inter-Governmental Coordination and Cooperation

Intergovernmental coordination and cooperation on a range of specific issues has resulted in mechanisms for effective environmental management for forests, oceans and National Environment Protection Measures.

Forests

Regional Forest Agreements (RFAs) provide a blueprint for the future management of native forests in an ecologically sustainable manner. RFAs will secure a forest conservation reserve system and ensure long-term access to forests for an internationally competitive and ecologically sustainable forest products industry with the opportunity for greater value adding. To date, three RFAs have been signed for Tasmania, East Gippsland and the Victorian Central Highlands. Presently, Western

Australian, Queensland, New South Wales, and additional Victorian RFAs are under negotiation.

The Regional Forest Agreements Bill was introduced into Parliament on 30 June 1998. The Bill lapsed with the announcement of the election and was reintroduced to Parliament on 26 November 1998 and was passed by the House of Representatives on 9 February 1999. The Bill is yet to be debated in the Senate. Once passed and enacted, the Bill will exempt certain RFAs' forestry operations from existing environmental heritage legislation given that such legislation has been fully taken into account by the RFAs themselves. It is the Commonwealth Government's intention to finalise RFAs by the end of 1999 for all regions that produce export woodchips. Woodchip exports from areas not covered by RFAs will be prohibited from 1 January 2000.

Oceans

Most of the area of ocean under Australian jurisdiction is the direct responsibility of the Commonwealth Government. However, there are also significant coastal waters where the Commonwealth has handed primary management responsibility to the States and Territories.

Australia's Oceans Policy was released in December 1998. Implementing a National Oceans Policy will need increased coordination between the National, State and Territory Governments to integrate planning and management, ensuring that jurisdictional boundaries do not hinder effective management. The Government is seeking the early and full endorsement of Australia's Oceans Policy by the States and Territories (see Chapter 9).

The Coasts and Clean Seas Memoranda of Understanding (MOUs) are the primary mechanisms for the delivery of Coasts and Clean Seas programmes and for outlining processes by which intergovernmental cooperation in relevant aspects of coastal management can be achieved in each State and the Northern Territory. The MOUs are tripartite agreements between the Commonwealth, State and Territory and local government (see Chapter 9).

National Environment Protection Measures

The National Environment Protection Council has now made three National Environment Protection Measures (NEPMs) which adopt a national approach to environmental issues. The three NEPMs are the National Pollutant Inventory, the Ambient Air Quality and the Movement of Controlled Waste between States and Territories. Draft NEPMs are under consideration for the Assessment of Contaminated Sites and Used Packaging Materials. Preliminary scoping work has commenced on a NEPM for Diesel Emissions.

Commonwealth-initiated Strategies and Processes

The Commonwealth continues to expand its activities to protect and enhance Australia's environment in response to both domestic and international priorities and responsibilities. The Commonwealth's environmental initiatives are guided by the Intergovernmental Agreement on the Environment and the National Strategy for Ecologically Sustainable Development which seek, among other things, to integrate economic, environmental and social considerations in national strategies and processes.

The Productivity Commission inquiry into the implementation of Ecologically Sustainable Development (ESD) by Commonwealth departments and has provided an opportunity to promote ESD implementation. The Productivity Commission Draft Report promotes best practice policy making through integration of economic, social and environmental considerations into decision making. The draft recommendations also include a call for improved communication between Commonwealth departments and agencies and between Ministerial Councils on ESD issues and

development of ESD performance indicators and an intergovernmental framework to facilitate ESD performance monitoring. Environment Australia has made two submissions to the inquiry.

Commonwealth Environmental Legislation and Legal Activities

On behalf of the Commonwealth, the Attorney-General's Department and the Australian Government Solicitor perform a number of legal activities relating to the environment.

The Department can provide advice on a range of matters, such as: international environmental law and its implementation in Australia, policy and legal advice on the application of Commonwealth administrative law and merits review of decisions made under Commonwealth environmental legislation.

Environment Australia and other Commonwealth agencies and authorities can engage the Australian Government Solicitor for legal advice and advocacy services on environment-related matters. This is especially so in areas of constitutional law, commercial law, administrative law and litigation concerning contaminated land.

The Office of Parliamentary Counsel provides legislative drafting resources according to Government legislative priorities. A range of environmental legislation, including the Environment Protection and Biodiversity Conservation Bill, has been prepared for introduction into Parliament. The Office will continue to draft environmental legislation in accordance with instructions received from Environment Australia and other Commonwealth agencies.

The Australian Institute of Criminology (AIC), a Commonwealth Statutory Authority under the Attorney General's portfolio, is planning a national overview of policy and practice on the prevention of environmental crime. The emphasis of the project is on the prevention of harm to the environment, and the development of efficient and effective means of improving environmental quality through the promotion of behaviour which is environmentally responsible and economically beneficial. The project is scheduled to commence in July 1999.

The Australian Federal Police (AFP) investigates breaches of Commonwealth legislation to protect the environment. This includes deterring criminal activity such as:

- the export and dumping of hazardous waste at sea;
- discharging oil within the Great Barrier Reef and other National Parks;
- importing dangerous chemicals in breach of the Ozone Protection Act;
- the export of fossil material in breach of the Moveable Cultural Heritage Act; and
- serious offences in breach of Commonwealth fisheries legislation.

REFORM OF COMMONWEALTH ENVIRONMENTAL LEGISLATION

The Government has introduced into Parliament the Environment Protection and Biodiversity Conservation Bill (EPBC Bill) and the associated Environmental Reform (Consequential Provisions) Bill. The Government will seek to enact the Bills as soon as possible.

The EPBC Bill represents the only comprehensive attempt in the history of Australia's Federation to define the environmental responsibilities of the Commonwealth Government. It proposes the most fundamental reform of Commonwealth environmental legislation since the first environment

statutes were enacted in the early 1970s.

The EPBC Bill implements key elements of the COAG Heads of Agreement on Commonwealth and State Roles and Responsibilities for the Environment. The Bill focuses Commonwealth responsibilities and interests on matters of national environmental significance and will put in place a streamlined environmental assessment and approvals process.

The Government has introduced to Parliament the Environment and Heritage Legislation Amendment Bill 1999, to give effect to Australia's commitments under the Protocol to the 1972 London Convention. The Protocol provides for a rigorous approach to dumping wastes at sea, allowing only seven classes of material (including dredge material, vessels and platforms) to be dumped at sea after an issue of a permit.

Box 3.1: An Efficient Environmental Assessment and Approval Process

The EPBC Bill implements a modern environmental assessment and approval process.

Reliance on direct environmental triggers will substantially increase the certainty and efficiency of the assessment and approval process. Accordingly, the new process delivers significant benefits for proponents, without compromising environmental standards.

- The proponent may trigger the process, avoiding the current delays associated with designation under the *Environment Protection (Impact of Proposals) Act 1974*.
- By relying on specific environmental criteria as triggers (and not the existing indirect triggers), the proponent and the community know up-front whether the Commonwealth is involved; there is not the existing capacity for late intervention.
- Tight statutory timeframes are now included at all stages in the process to ensure timely decision-making.
- Commonwealth assessment is confined to impacts on the matters of national environmental significance (the Commonwealth will not assess matters which are more appropriately the responsibility of the States).

There are appropriate linkages to State processes at all stages, ensuring an integrated assessment process that minimises delay and duplication.

The decision whether to grant approval is made after considering social and economic factors as well as the matters of national environmental significance.

Other features of the new process include: express recognition of the precautionary principle and the other principles of ecologically sustainable development; and, the adoption of a strategic assessment process to promote cumulative and regional assessments.

A key element of the Bill is the increased capacity for the Commonwealth to accredit State and Territory processes, and where appropriate, State and Territory decisions. Through the use of bilateral agreements the Commonwealth will be able to 'delegate' to the States responsibility for conducting assessments for projects involving matters of national environmental significance where State processes meet appropriate criteria.

The Bill also provides a substantially improved and integrated framework for the conservation and sustainable use of Australia's biodiversity.

The Bill will establish a new legislative framework to enable the Commonwealth to deal with current and emerging environmental issues and allow Australia to meet the environmental challenges of the twenty-first century with renewed confidence.

Box 3.2: Integrated Approach to Biodiversity Conservation

The EPBC Bill will strengthen Australia's capacity to protect its biodiversity. Key Features of the EPBC Bill include:

- providing for voluntary conservation agreements with landholders for the conservation of biodiversity;
- enhancing protection for threatened species through improvements to the listing process; providing for the recognition of vulnerable ecological communities and conservation dependent species; and, the application of specialised criteria to assess the conservation status of marine biota;
- providing for regulations to be made for the control of access to biological resources in Commonwealth areas;
- providing for the improved management of Commonwealth reserves, including through application of the IUCN Protected Areas Management Guidelines;
- removing an existing impediment to the creation of marine reserves;
- improving protection for World Heritage properties;
- for the first time, providing legislative protection for Ramsar wetlands of international importance and migratory species;
- recognising and promoting improved management for Biosphere reserves;
- promoting bioregional planning; and
- providing for increased recognition of the importance of identification and monitoring of components of biodiversity.

The Bill also provides for the formal establishment of the Australian Whale Sanctuary. The establishment of the sanctuary complements Australia's efforts at the international level to secure, through the establishment of a truly global sanctuary, a permanent international ban on commercial whaling.

INTERNATIONAL ACTIVITIES

Australia continues to seek to influence environment outcomes at the multilateral and regional levels in line with Australia's international economic and environmental interests. Australia is placing a priority on establishing and reinvigorating existing regional and bilateral relationships, and ensuring consistency of approach by the Commonwealth.

Australia has much to offer and much to gain from international relationships. Australian capabilities in environmental management are well recognised overseas but need to be converted to productive commercial relationships that will benefit the environment.

Substantial national gains can be made from cooperative efforts for nature conservation and environment protection. For example, the Convention on International Trade in Endangered Species controls international trade in wildlife, protects endangered species from extinction and prevents other wildlife species from being threatened with extinction. Cooperation through the Organisation

for Economic Cooperation and Development (OECD) provides data on chemicals that Australia and many other smaller nations could not afford to develop by themselves. It also enables safe management of both domestic and international trade in existing and new chemicals that are potentially dangerous to humans and the environment.

International Organisations

In the United Nations system, the Commonwealth is actively seeking to reinvigorate the United Nations Environment Programme (UNEP), based in Nairobi, Kenya. Australia supports UNEP activity on environmental aspects of freshwater and the International Coral Reef Initiative, encouraging UNEP to draw on the expertise and experience of member governments to identify best-practice management and to seek government endorsement of its policy conclusions. Australia emphasises the importance of UNEP developing and debating environmental policy related to new and emerging issues.

Australia will continue to contribute to the work of the UN Commission on Sustainable Development (CSD). This body oversees integration of the economic, social and environmental elements of development in the UN system, following up the 1992 Rio Declaration and Agenda 21. Australia will be working through the CSD to ensure that an integrated system of ocean protection and management is developed and implemented.

International Treaties and Educational Programmes

In 1999-2000, the Commonwealth Government will consider signing of the newly finalised global treaty on 'prior informed consent,' which aims to protect human health and the environment against potentially harmful impacts from certain hazardous chemicals in international trade. The Commonwealth Government is consulting affected stakeholders with a view to considering ratification of the Convention to Combat Desertification Convention. Australia will continue to assist in development of an international treaty on the management of persistent organic pollutants and the development of a protocol on biosafety under the Convention on Biological Diversity.

Australia is a signatory to the International Convention of Legal Metrology, which has adopted international requirements for a range of environmental measuring instruments. The Convention's recommendations will support confidence in measurements carried out to show compliance with international treaty obligations. Furthermore, the recommendations will support the integrity of greenhouse gas emission trading schemes.

Table 3.2: Environment Australia's Proposed Contributions to International Conventions and Organisations with Environmental Objectives for 1999-2000

Convention or International Organisation	\$000s
Basel Convention on Transboundary Movements of Hazardous Wastes	81
Convention on Biological Diversity (CBD)--Assessed contribution	195
Convention on Biological Diversity (CBD)--Voluntary payments	100
Convention on International Trade on Endangered Species (CITES)	96
Convention on the Conservation of Migratory Species of Wild Animals	79

Convention on Wetlands of International Importance especially as Waterfowl Habitat (RAMSAR)	42
Coordinating Body on the Seas of East Asia (COBSEA)	30
Council of Managers- National Antarctic Programmes (COMNAP)	7
Intergovernmental Forum on Chemical Safety (IFCS)	25
International Panel on Climate Change (IPCC)	100
International Union for the Conservation of Nature (IUCN)	219
International Whaling Commission (IWC)	66
Montreal Protocol Trust Fund	82
OECD Chemicals Programme	25
OECD/International Energy Authority (IEA) Annex I Experts Group	50
SCAR Group of Specialists on Global Change and the Antarctica (GLOCHANT)	36
Scientific Council on Antarctic Research (SCAR)	10
UN Framework Convention on Climate Change (FCCC)	163
UNESCO World Heritage Fund	70
Vienna Convention	27
Wetlands International	24
World Meteorological Organization (b)	996
Total (a)	2 523

- a. Figures rounded to the nearest thousand.
- b. The objectives of WMO are primarily meteorological rather than environmental.

International Forest Conservation

In 1999-2000, the Government will continue to work cooperatively to encourage sustainable forest management particularly in the Asia-Pacific region. Australia will continue its commitment to the United Nation's Intergovernmental Forum on Forests (IFF), an international body established to continue the intergovernmental dialogue on sustainable use and management of forests commenced by its predecessor, the Intergovernmental Panel on Forests. The Forum is set to have its final meeting early in 2000. Australia's priorities under the IFF will continue to include: implementing agreed actions; future international arrangements for forests; forest conservation and protected areas; and plantations.

Australia's Oceans Policy: International Component

In December 1998, Australia's Oceans Policy was released as a major contribution to the United Nations International Year of the Ocean. The Oceans Policy provides integrated and multi-sectoral approaches to the management of ocean areas and includes actions at both the national and international level. Priority international activity areas in 1999-2000 include:

- follow-up to the deliberations of the Seventh Session of the Commission on Sustainable Development (April 1999) on oceans and seas;
- tackling marine pollution and promoting sustainable management of fisheries;
- implementation of the marine and coastal programme of work of the Convention on Biological Diversity; and
- encouraging effective marine conservation programmes within regional fora such as Asia Pacific Economic Cooperation (APEC), the Coordinating Body on the Seas of East Asia and the South Pacific Regional Environment Programme.

Australia will continue to participate in the APEC Marine Resources Conservation Working Group (MRCWG). This is an important forum for facilitating regional cooperation on sustainable management of the marine environment.

Whales

Australia will continue to push for a truly global whale sanctuary through the International Whaling Commission and other fora. Australia's objective is to ensure a permanent international ban on commercial whaling. As a step towards that goal, Australia and New Zealand are jointly developing, in consultation with other nations, a proposal for a South Pacific Whale Sanctuary.

Albatross

Albatross are currently the most threatened group of marine birds and the best available evidence indicates that long-line fishing is the most serious threat facing albatross today. Seventeen species of albatross are currently listed under the *Endangered Species Protection Act 1992*. The listing obliges Environment Australia to prepare a Recovery Plan for these species in cooperation with the States in which the species occurs. A Recovery Plan is currently being prepared in consultation with scientific specialists, conservation Non-Government Organisations, and the States and Territories, which manage albatross populations in Australia. This Plan will detail research and management actions necessary to stop the decline and support the recovery of the listed species. Actions are funded by both Environment Australia and the Tasmanian Government.

Also listed under the Act is the key threatening process of the 'incidental catch (or by-catch) of seabirds during oceanic long-line fishing operations'. This listing led to the preparation of a Threat Abatement Plan (TAP) for this threatening process. TAP aims to significantly reduce the by-catch of seabirds during oceanic long-line operations in the Australian Fishing Zone within five years. (For further details see Chapter 4.)

To initiate the preparation of the TAP, Environment Australia convened a series of focus-group workshops with the fishing industry, non-government groups, research organisations and State and Commonwealth Government agencies. The workshops were run to maximise the opportunity for all parties to identify the issues to be addressed in the TAP and possible mechanisms for addressing them. Development of such a complex document would not have been possible without the cooperation and good will of such a diverse range of stakeholders.

Australia also is continuing to push for a global approach to conservation of albatross through the development of a Regional Agreement with southern hemisphere range States to ensure cooperation to achieve effective conservation of albatross globally. The Convention on the Conservation of Migratory Species of Wild Animals (CMS or Bonn Convention) provides a possible framework for developing such an agreement and thus enhancing the conservation status of migratory albatross through the cooperative efforts of the countries along the migratory path of those species. As a step toward that goal, Australia is developing and consulting with other nations on the development of a Regional Agreement, which will ensure that conservation measures of the type that Australia is pursuing within the Australian exclusive economic zone (EEZ) are applied to other countries EEZ's and the high seas. If conservation measures are not applied to areas outside the Australian EEZ then the status of Australian albatross populations cannot be secured.

Asia and the Pacific

The Government will be looking to build on Australian relationships in Asia and the Pacific. The Government will be seeking to consolidate close cooperation with Indonesia and to maintain progress on the environment following the regional financial crises. The Australian and New Zealand Environment and Conservation Council (ANZECC) is providing funding to Papua New Guinea to encourage full participation.

The international programme structure, comprising the International Conservation Programme (ICP) and the International Environment Protection Programme (IEPP), supports initiatives and undertake activities relating to international nature conservation and international environmental protection issues, particularly in Asia and the Pacific.

In 1999, these programmes will support conservation of habitat in Papua New Guinea, the Solomon Islands and Indonesia. Furthermore, the programmes will provide for training courses on protecting migratory shore birds in China, the distribution of a CD ROM on environmental enforcement in the South Pacific region and the development of biodiversity assessment and land-use planning software manuals and training for the Asia-Pacific region.

Funding under the International Conservation Programme will be increased from \$140,000 to \$270,000 to allow an increased focus on regional environment and conservation protection.

Australia will continue to use the Australia-Indonesia Government Sector Linkages Programme (GSLP, a component of the Australian Aid Programme) to undertake bilateral activities with Indonesia. The Environment Portfolio received funding of nearly \$500,000 under the first two rounds of the GSLP to undertake activities consistent with Australia's MOUs and the Australia Indonesia Ministerial Forum objectives.

Funding has been granted for assistance under the APEC Support Programme for the adaptation and implementation of the Asia-Pacific Code of Forest Harvesting in selected Asia Pacific Countries, including Indonesia, the Philippines, China and Vietnam.

Australia is supportive of a new round of trade liberalisation in 2000. In particular, Australia will support early voluntary liberalisation of trade and investment in the environmental goods and services sector and seek to consolidate existing initiatives in the areas of the marine environment, cleaner production and urban management, both in APEC and more broadly.

International Development Corporation

The Australian Agency for International Development (AusAID) is responsible for administering Australia's overseas aid programme. The programme focuses on bilateral and regional activities in the Asia-Pacific. It also funds activities in Africa and South Asia as well as global and regional development institutions.

Promoting environmental sustainability is a key objective of Australia's overseas aid programme. Because the environment is a global resource, assisting with international environmental protection supports Australia's domestic environmental interests. Environmental management is also crucial for sustainable development. Air and water pollution, poor sanitation and mismanagement of natural resources are all common problems in developing countries. Developing countries are especially vulnerable to environmental disasters such as droughts, floods and tidal waves.

Australia is actively helping developing countries to improve their environments. The aid programme supports a portfolio of activities that directly target environmental issues. These projects focus on environmental policy and management, water supply and sanitation, natural resource management, sustainable agriculture, rural and urban development, climate change and renewable energy.

In addition, Australia ensures that environmental sustainability is maximised in all its aid activities by integrating environmental monitoring and assessment mechanisms into their design and implementation. Australian domestic environmental protection legislation applies to all overseas aid activities through the application of the Commonwealth *Environment Protection (Impact of Proposals) Act 1974* and AusAID's Environmental Assessment Guidelines. The Australian aid programme also draws upon the sector guidelines in the World Bank's Environmental Assessment Sourcebook, and conducts evaluations and reviews of its environmental projects.

In 1998-99, \$51 million was spent on bilateral and regional activities directly addressing environmental issues. A further \$88 million was spent on activities with a significant environmental component. Australia also supported international institutions, such as the Asian Development Bank, World Bank, United Nations Development Programme and the Global Environment Facility, which funded a significant number of environmental activities.

MICROECONOMIC REFORM

Microeconomic reform under the National Competition Policy (NCP) can help achieve environmental goals in several ways.

- removing subsidies, structural rigidities, monopoly rights, anti-competitive behaviour and barriers to entry. This encourages bodies with old, inefficient and environmentally outdated technologies to move to newer, more efficient and environmentally better technology, and create access for firms with better environmental technology or practices. Greater competition within an industry can also lead firms to seek out lower cost environmental solutions to maintain competitiveness.
- removing pricing arrangements or regulations that undervalue environmental resources and amount to subsidies to natural resource use. By artificially lowering resource prices, such subsidies promote higher, and thus possibly ecologically unsustainable, rates of resource extraction and harvesting and their removal can therefore promote more ecologically sustainable outcomes.
- providing the transparency that comes with corporatisation and competitive neutrality changes. Transparency should ensure that the prices are right for non-environmental aspects. This should then enable a clear view of environmental externalities and how these can be addressed directly.

- allowing governments to impose environmental charges or regulation more easily on bodies previously seen as part of government, as they become more at arm's length under the framework of the NCP.

In these ways microeconomic reform processes are contributing to improved environmental management in three key sectors: in the water sector, through the Council of Australian Governments Water Reform Framework; in the forests sector through the National Forests Policy Statement; and in the energy sector through the Energy Market Reform process. Current developments on the environmental benefits of these reform processes are covered in the relevant sector chapters.

COMMUNITY INVOLVEMENT

The Commonwealth actively supports community involvement in its environmental programmes through a range of provisions.

Environmental Legal Services

The Commonwealth allocates recurrent funding of around \$600,000 each year for the purchase of community-based environmental legal services. This enables the provision of legal advice, community legal education, law reform, administration management, and networking on environmental issues.

Tax and Grant Support

The Commonwealth supports a number of eligible, non-profit environmental organisations through:

- Deductions for donations to non-profit environmental organisations listed on the Commonwealth's register of environmental organisations. In 1997-98 these tax deductible donations amounted to approximately \$13.2 million; and
- Grants to voluntary environment and heritage organisations are available to assist community-supported organisations to cover administrative costs associated with their environmental work; funds of \$1.8 million were awarded in 1998-99.

A number of other Commonwealth tax concessions are available to encourage best-practice management of Australia's natural and cultural heritage (see Chapter 5), including built heritage tax concessions (see Chapter 10).

Community Environmental Education

Environment Australia undertakes a range of environmental education activities. These activities are designed to raise awareness and understanding of environmental issues and influence community attitudes and behaviour towards achieving ecologically sustainable development.

The environment portfolio also provides resource materials to the formal education sector and funds national best practice environmental education and information initiatives relevant to Commonwealth environmental interests. The portfolio is developing a Ministerial Statement on environmental education, in recognition of the importance of environmental education in the national endeavour towards sustainability.

Communications initiatives play an important role in promoting and delivering the Natural Heritage Trust and its programmes including Bushcare, Coasts and Clean Seas and Endangered Species. Other

communications activities include the Biodiversity Awareness Campaign, Oceans Policy, World Environment Day, National Pollutant Inventory and Cleaner Production.

Community involvement in the Natural Heritage Trust

The highest priority for the Natural Heritage Trust is to provide resources to community groups undertaking worthwhile projects that will achieve results on the ground. There is an increase in the community participation in the Trust, demonstrated by a greater number and proportion of successful community based projects funded through the Trust last year.

The Natural Heritage Trust facilitates community participation through a 'one-stop-shop' application process. Regional and State assessment panels chaired by a community representative with a majority of community membership examine most project applications. The panels facilitate involvement of individual landholders, community groups, and State and local governments to undertake integrated action to achieve sustainable land, water and vegetation management.

Involvement of Aboriginal and Torres Strait Islander People

The Commonwealth operates a range of programmes that can involve and assist Aboriginal and Torres Strait Islander traditional owners in environmental management. The *Native Title Act 1993* as amended contains substantial new provisions in relation to land management and native title, namely Indigenous Land Use Agreements. These agreements are voluntary and can relate to proposed grants of land (especially mining and exploration tenements) where native title might be affected, and/or other regional or local land management issues.

Matters relating to environmental management and the integration of Indigenous issues can be captured in terms of any agreement reached. These include access rights for traditional purposes, taking and consumption of plants and animals, environmental protection and rehabilitation, participation in land management advisory boards, and participation in the management of conservation reserves, including the potential for joint management regimes over national parks. Indigenous Land Use Agreements must be registered with the National Native Title Tribunal (or responsible State or Territory body) and thus have statutory protection under the *Native Title Act 1993*.

Agreements reached in this way can be expected to provide more efficient ways of dealing with the management of land and waters where native title exists, and lead to increased certainty in relation to land management while protecting native title rights and interests.

Funds are available to the Aboriginal community for the protection, preservation, acquisition and management of cultural property under the Heritage, Environment and Culture Sub-Programme of the Social and Cultural Programme (see Chapter 10). The Community Housing and Infrastructure Programme (CHIP) has broad relevance to the environment. The projects funded through this Programme contribute to environmental health outcomes for indigenous people with assistance to address landcare, dust control, sewerage and other community infrastructure needs.

The Community Development Employment Projects (CDEP) scheme aims to provide employment and training opportunities in remote regions whilst contributing to the economic and social development needs of indigenous communities. A number of projects in the scheme involve activities that are directly environmentally related.

Youth Involvement

Green Corps (Young Australians for the Environment) is a training programme with an environmental focus. Participation is voluntary and subject to a competitive selection process.

Participants come from a variety of backgrounds including secondary and tertiary education and the unemployed. Twenty-six-week placements are available to young Australians aged 17 to 20 years who demonstrate a commitment to preserving and restoring Australia's natural environment. Participants receive a Training Allowance (based on Level C of the National Training Wage) during the period of their participation and may be eligible for an additional \$500 allowance if they enrol in further accredited education or training after their placement.

Green Corps projects typically involve 14 weeks of a major project and at least 134 hours of accredited training. There are also typically one or more minor projects (up to four weeks) and community projects (up to two weeks). Major projects have a strong environmental focus while minor projects are related to environmental issues. Community projects are designed in consultation with the local community and typically benefit that community; they may touch on environmental issues.

Participants are typically engaged in a range of activities including land care, surveys and data collection, cultural heritage and conservation work, establishment and protection of native vegetation, and building and repairing walking tracks and footbridges in environmentally sensitive areas.

Examples of innovative activities are:

- habitat protection for endangered species (helmeted honeyeater, little tern and pig nosed turtle);
- expansion of North Coast rainforests;
- restoration of an underground hospital at Mount Isa in Queensland; and
- feral species control at Shark Bay off the coast of Western Australia.

INDUSTRY DEVELOPMENT

Commonwealth environment and industry policy is also supporting the competitive development of sustainable industries that are dependent on natural resources. These include forest products, environmental management, agriculture, tourism and mining. The Natural Heritage Trust programmes described in the following chapters will contribute to the sustainability of these industries.

Box 3.3: Sustainable Industries and Industry Development

Eco-efficiency is about improving the efficiency of the use of natural resources. The Commonwealth Government is committed to the promotion and encouragement of the uptake of eco-efficiency in Australia, as a means to reduce depletion, pollution and waste, and increase productivity and profitability.

Cleaner Production--information will continue to be developed, updated and provided on the Internet, on cleaner production case studies in industry.

Technology Promotion:

EnviroNet--this web site aims to promote environmental awareness and better environmental behaviour in the community and provide Australian companies with a suitable vehicle for promotion of their goods and services to domestic and export markets.

Best Practice Environmental Management in Mining--working with industry and the community to promote the voluntary adoption of best-practice environmental management in the mining industry, both domestically and internationally.

Mining Technology Promotion--raising awareness of best practice principles for sound environmental management in mining.

Best Practice Promotion in Tourism--to promote best environmental practice in order to minimise the impact of human activity on the environment.

International Environment Protection Programme--assists in the growth of Australia's environmental goods and services industries and to support environment protection in our region.

The Clean Hunter Centre--will promote new and innovative uses for recycled and recovered materials, and develop markets for recycled products.

Environment Industries Development Network--with the National Secretariat for Australian Environmental Industries and the CRC for Waste Management and Pollution Control, EIDN facilitates international industry and research and development collaboration, technology diffusion and networking, and information support systems for the environmental management industry. EIDN also operates an environmental technology website at www.environmenttechnology.com.

Environment Australia has developed a framework of cooperation with the Australian Petroleum Production and Exploration Association (APPEA), setting a high standard for both industry and government in cooperation on achieving sustainable environment. Among other institutions, APPEA, Environment Australia and the Western Australian Department of Conservation and Land Management have been working towards the development of a multiple-use conservation strategy to protect environmental and heritage values of Commonwealth waters surrounding Montebello and Barrow Islands off the North West Shelf. It is anticipated that this initiative may provide a model for cross-jurisdictional management of multiple objectives in the marine environment.

The sustainable management of Australia's unique environment is important if Australia is to make the most of its international reputation as a tourist destination. The Government's efforts toward achieving an ecologically sustainable tourism industry are discussed in Chapter 4.

The Department of Industry, Science and Resources is responsible for policies and programs that foster the growth and competitiveness of Australian business, including suppliers of environmental goods and services, through encouragement of investment, research and innovation, market access and technology diffusion. The Department supported the establishment of the Environment Industries Development Network (EIDN) which aims to create industry networks to prove the technology capability of our environment management industry in the Australian and export markets

EXPANDING THE ENVIRONMENTAL KNOWLEDGE BASE

The dissemination of environmental information is the fundamental basis for more effective formulation and management of environmental policies and programmes.

Box 3.4: Environmental Resources Information Network

Environment Australia requires up-to-date environmental information for decision making. This is supplied by the Environmental Resources Information Network (ERIN). ERIN aims to provide:

- a detailed database to support Environment Australia's policies and programmes;
- an associated framework to ensure that information is managed appropriately;
- analyses and outputs to meet specific policy and programme outcomes; and
- a comprehensive World Wide Web site providing access to details of the Government's environmental policies and programmes and to key environmental databases administered by

Reporting and Information Initiatives

The Australian Bureau of Statistics (ABS) has continued the development work on environmental accounts. Physical accounts, showing the stocks and flows of natural resources, are nearing completion for energy and water. A resource account for minerals was released in March 1998 and fish stocks in March 1999. The ABS conducts an annual presentation of the national balance sheet, providing estimates for non-produced (natural) assets including land, subsoil and forest assets. Environment protection expenditure by the public and private sectors was released recently for the 1994-95 and 1995-96 financial years. Development work is under way to extend these accounts to a new framework, which is aligned more to the system of national accounts (SNA). Accounts on the SNA basis for 1995-96 and 1996-97 are expected to be released in May 1999. A household survey on the community's views and actions on environmental problems, and sources and conservation of water was undertaken in March 1998 and released November 1998. A survey about energy sources and conservation practices was conducted in March 1999. The results are expected to be released in November 1999.

Box 3.5: State of the Environment Reporting: Environment Indicators

A landmark has been reached in the development of environmental indicators for state of the environment reporting that will help track the condition of Australia's environment and the human activities that affect it. The development of the indicators has occurred at three levels, national, State and local.

- A comprehensive set of indicators has been developed which cover each of the seven major themes used in national state of the environment reporting: human settlements; biodiversity; the atmosphere; the land; inland waters; estuaries and the sea; and natural and cultural heritage.
- Following a public discussion period, a set of 'core' environmental indicators that are applicable across all National and State and Territory jurisdictions has been produced. The set of 'core' environmental indicators was developed in partnership with State agencies through a taskforce of ANZECC.
- A pilot study was undertaken on environment indicators for community and local government use, based on trial projects in six regions throughout Australia. The Australian Local Government Association (ALGA) and Environment Australia undertook the study.

The Environmental indicators will be used to support the next major national assessment of Australia's environment, due to be completed in 2001. The indicator development programme is also providing important input to other initiatives, such as, the National Land and Water Resources Audit and the ALGA's Regional Environmental Strategies.

In 1998-99, the Australian Surveying and Land Information Group (AUSLIG) continued a programme of maintaining and upgrading its national mapping series. NATMAP topographic maps and associated GEODATA products together represent a significant national asset for use in resources management, identification of natural resources and management of natural disasters.

AUSLIG, through its Australian Centre for Remote Sensing (ACRES), continually acquires imagery over Australia with an archive dating back to 1979. Satellite imagery is a cost-effective tool for environmental monitoring and facilitates analysis of the impact of phenomena such as deforestation, salinity, erosion and urban sprawl on the Australian landscape. In 1998-99, AUSLIG

introduced SPOT-LITE, an on-line, Internet-based catalogue and distribution system for satellite imagery.

Figure 3.1: File Requests for Environment Australia On-line Web site

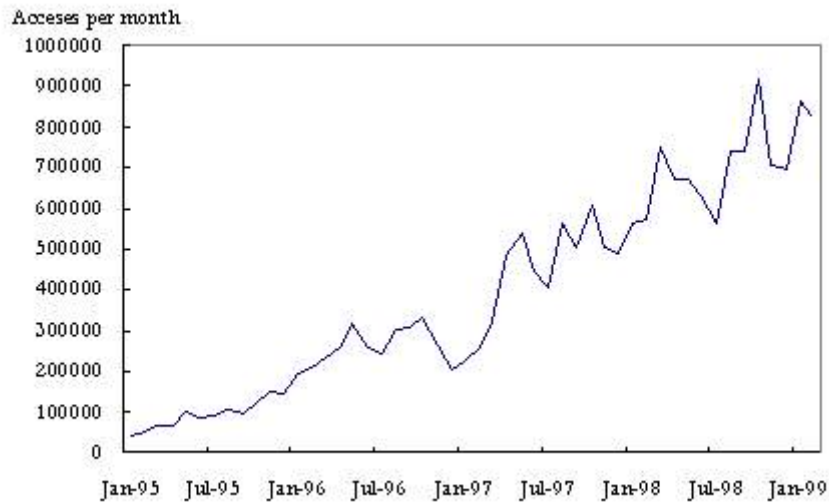
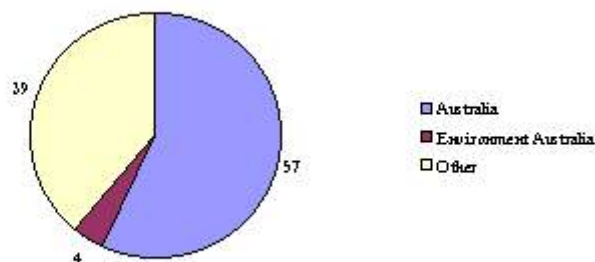


Figure 3.2: Profile of Users of Environment Australia On-line Web site



Environment Australia On-line Web site

Environment Australia's on-line web site receives nearly one million 'hits' a month. Figure 3.1 illustrates the increasing use of the electronic information services provided by the Department with peak requests occurring in October 1998. The majority of on-line web site users are from within Australia (see Figure 3.2). However, a significant proportion of interest in the Department's web site can be attributed to commercial users from the United States of America. CSIRO in collaboration with Environment Australia and others, produced an informative booklet and complementary web site as a simple guide to use of environmental indicators. It can be found at <http://www.csiro.au/csiro/envind/index.htm>

National Land and Water Resources Audit

The Audit will provide a nationwide assessment of Australia's land, vegetation and water resources to support sustainable development. The Audit is a five-year programme under the Natural Heritage Trust totalling \$42 million.

RESEARCH AND DEVELOPMENT

Commonwealth Research

The Commonwealth Scientific and Industrial Research Organisation (CSIRO) undertakes research that covers most environmental fields. CSIRO research, which is directly relevant to the environment, is funded by around \$90 million each year of direct appropriations from the Commonwealth and approximately another \$40 million each year for contracted research from other sources. This includes Commonwealth research and development corporations, Commonwealth departments, State Governments and the private sector. Other CSIRO research in industry sectors also has environmental benefits. Details of CSIRO activities in different environmental areas are in the following chapters.

CSIRO's gross funding for the triennium June 2000 to June 2003 is announced in this Budget. The distribution of that appropriation funding is based on an extensive planning and priority-setting process with substantial advice from clients and stakeholder representatives. The results will be announced later in 1999 and relevant sections will be in next year's Budget Statement.

Some CSIRO divisions undertake economic research on environmental issues. For example:

- the CSIRO's Division of Wildlife and Ecology undertakes research into the field of ecological economics; and
- the CSIRO's Division of Building, Construction and Engineering researches models of sustainable urban form.

The Bureau of Meteorology supports environmental objectives through its atmospheric, oceanographic and hydrological monitoring, research and service provision. (Details are given in the appropriate chapters.)

The Australian Bureau of Agricultural and Resource Economics (ABARE) provides economic information to both the public and private sectors about Australia's agriculture, minerals, energy, forestry and fishing industries.

ABARE's environment-related research priorities over the next 12 months are:

- economic assessments for the Regional Forest Agreements, a part of the National Forest Policy Statement;
- water resource management, including salinity and water pricing issues;
- land management and Landcare;
- economic analyses of management of fisheries; and
- economic analyses of energy markets in relation to climate change policy.

The majority of ABARE's research outputs are published in reports, which can be obtained from the ABARE publications section (Freecall: 1800 244 129) or on ABARE's website at <http://www.abare.gov.au>.

The Land and Water Resources Research and Development Corporation (LWRRDC) provides strategic leadership in utilising research and development to improve the long-term productive capacity, sustainable use, management and conservation of Australia's land, water and vegetation resources. The Corporation focuses its activities in areas of high priority where there is a clear justification for additional public spending to expand or enhance the contribution of research and development to sustainable management of natural resources. LWRRDC research and development programmes

cover three broad categories: Productive and Sustainable Land Use systems; Sustainable Management of Rivers and Water Resources; and Sustaining Vegetation in the Landscape. Further information is available on the Corporation's website at <http://www.lwrrdc.gov.au>

The Australian Nuclear Science and Technology Organisation (ANSTO) has a diverse and multifaceted programme of research directly relevant to the environment. This research includes:

- development of cleaner technology for uranium mining and milling;
- development of advanced oxidation technology for the treatment of water and waste water;
- use of nuclear techniques in assessment of human impact and climate variability;
- managing mine wastes radionuclide environmental pathways;
- research on radionuclides in mineral products;
- reduction of potential impact of radioactive waste stored at Lucas Heights;
- development of advanced landfill design and operation;
- use of naturally occurring radioactive tracers to quantify environmental process and date environmental samples; and
- use of accelerator mass spectrometry, ion beam analysis and nuclear related techniques to investigate environmental processes.

National Standards Commission

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

Prime Minister's Science, Engineering and Innovation Council

The Prime Minister's Science Engineering and Innovation Council, a group of eminent people representing the science and innovation communities, is examining the potential for Australian industry to promote the development and commercialisation of new technologies arising from greenhouse science research.

In 1998-99, members of the Council have considered salinity issues and identified the type of long-term programmes, policy environment and directions that Australia must adopt if it is to deal effectively with, and as necessary live with, dryland salinity in regional and rural Australia. Their paper proposes options that will enable Australia, at manageable cost (and low cost compared with the damaging effects of salinity), help address one of its most pervasive, insidious and potentially damaging natural resource problems.

Priorities for future direction of greenhouse science, acknowledging that climate change will continue even after atmospheric greenhouse gas emissions have stabilised, was a focus for discussion among members in December 1998. Members are examining the commercial opportunities now developing to seek out markets for Australia's greenhouse-reacted innovations.

Cooperative Research Centres Programme

The Cooperative Research Centres (CRCs) Programme was launched in May 1990. CRCs are selected in competitive selection rounds and are funded usually for seven years. A selection round was conducted in 1998 and on 16 April 1999 the Government announced funding for 26 proposals. In July 1999, there will be 67 operational CRCs in fields as diverse as mining, engineering, information

technology, agriculture, the environment and medical technology.

The programme emphasises the importance of developing internationally competitive industry sectors. It also addresses the health and wellbeing of Australian society, the understanding and management of the environment, and the interaction of all these objectives to achieve ecologically sustainable development.

The objectives of the CRC programme can be summarised as:

to enhance the capture of the benefits of research by strengthening the links between research and its commercial and other applications through the active involvement of the users of research in the work and management of the CRCs.

A total of 17 CRCs undertake projects that will have significant environmental and community benefits in their research outcomes, above and beyond any commercial potential. Details of these can be found in later chapters of this Statement.

More information on the CRC Programme can be found at <http://www.dist.gov.au/crc/index.html>

Technology Diffusion Programme

The Technology Diffusion Programme (TDP), administered by the Department of Industry, Science and Resources (ISR), commenced on 1 July 1998. The TDP will provide about \$90 million over four years for activities aimed at building international science and technology links, domestic science and industry alliances, and initiatives in technology diffusion. Innovative projects in the environment field are eligible under the programme.

The TDP comprises two integrated components, namely Technology Alliances and Technology Transfer. Technology Alliances is designed to support international scientific and technological collaboration in pure science, and in applied science at the pre-commercial research and development stage. Technology Transfer aims to support the diffusion of technologies throughout Australian industry.

In 1998, ISR engaged the Environment Industries Development Network under the Targeting Research Alliances element of the TDP to conduct workshops and related activities in the field of environmental technologies. More information on the TDP can be found at: <http://www.ausindustry.gov.au/tdp>.

GREENING OF GOVERNMENT

Internal Environmental Management

Most Commonwealth portfolios have policies and programmes aimed at reducing environmental impacts of their operations and activities (Table 3.3). Additionally, the development of environmental efficiency is one of the productivity initiatives in the Australian Public Service Enterprise Agreement.

A number of Commonwealth departments have formulated environment and heritage policies to provide recommendations, administrative support and on-going evaluation concerning the impact of high-profile agency activities on the environment.

Table 3.3: Summary of Environment Management in Commonwealth Portfolios

Portfolio	Recycling of Paper and Other Wastes	Energy/ Water Saving	Environmental Management Plan and/or Audits	Environmental Building Design
Agriculture, Fisheries and Forestry	4	4	4	4
Attorney-General's	4	4	4	4
Communications, Information Technology and the Arts	4		4	
Defence	4	4	4	4
Education, Training and Youth Affairs	4	4		
Employment, Workplace Relations and Small Business	4	4		4
Environment and Heritage	4	4	4	4
Family and Community Services	4	4	4	4
Finance and Administration	4	4	4	4
Foreign Affairs and Trade (* relates to properties in Australia)	4	4	4*	4
Health and Aged Care	4	4	4	4
Immigration and Multicultural Affairs	4	4	4	
Industry, Science and Resources	4	4	4	
Prime Minister and Cabinet	4	4		
Transport and Regional Services	4	4	4	
Treasury	4	4		
Veterans' Affairs	4	4	4	4

Department of Defence Environmental Work

The Department of Defence formulates, implements and advises on Defence corporate environment and heritage policy relating to the environmental aspects of Defence activities and proposals. There is emphasis on environmental impact assessment of high profile Defence proposals. Defence also monitors performance through the Defence Environment Panel, oversees compliance with

Commonwealth environmental (including heritage) legislation, issues Environmental Certificates of Compliance as required, develops and maintains the Defence corporate Environmental Management System, provides Portfolio environmental policy to wider government fora and participates in Commonwealth, State and Territory environmental committees. Finally, it manages Defence environmental research projects and initiatives, and coordinates Australian International environmental cooperation. Defence environment activities highlights are:

- preparation of corporate environmental management system;
- military exercise environmental impact assessment and management plan (Crocodile 99 and Wallaby 99);
- departmental instructions on environmental management (including an Environmental Compliance Manual);
- environmental management plans for the Defence Estate.;
- environmental management information system; and
- an energy efficiency improvement programme.

COMMONWEALTH SUPPORT FOR LOCAL LEVEL ENVIRONMENT INITIATIVE

Environmental Management of Australia's Territories

The Commonwealth provides for environment management and monitoring on Christmas and Cocos (Keeling) Islands and Jervis Bay Territory.

Indian Ocean Territories--Christmas Island and Cocos (Keeling) Islands

Environmental management and monitoring activities on the Cocos (Keeling) Islands and on Christmas Island are concerned primarily with the provision of:

- water and sewerage services;
- sanitation and refuse management;
- community amenities;
- recreation facilities;
- best practice in mining activities; and
- road safety and maintenance.

The Commonwealth is providing \$1 million in 1999-2000 for environmental management in the Indian Ocean Territories, with about \$1 million to be spent in 2000-01.

On Christmas Island it is necessary to balance the needs and effects of a phosphate mine, resort developments and a national park. Similarly, the Cocos (Keeling) Islands constitute a fragile environment with a limited economic base of marine-based tourism and infrastructure servicing.

Some of the activities currently taking place on the islands include implementing a Rockfall Risk Reduction Strategy to reduce the risk to life and property arising out of the potential for rockfalls to occur in an identified residential and business area of Christmas Island.

The Science Group provides a full-time onsite Environmental Officer under an arrangement with the

Department of Transport and Regional Services, and conducts Environmental Performance Reviews of enterprises twice a year on Christmas Island and the Cocos (Keeling) Islands. This position is also supported by a Service Delivery Arrangement with the Western Australian Department of Environment. The problem on the islands of dealing with waste accumulated as a result of infrastructure development is also being addressed by the Commonwealth Government. This includes the removal of scrap metal, obsolete fuel tanks and the use of sea dumping off Cocos (Keeling) Islands.

Environment Resource Officers

The Environment Resource Officer (ERO) Scheme is funded and administered by Environment Australia as a mechanism for promoting and disseminating information on Commonwealth environment policies and programmes to local government. The EROs also provide assistance to local government on general environmental management. The Scheme funds part of the cost of a dedicated environment officer in a peak Local Government Association in each State and the Northern Territory to work with local councils to maximise positive environmental outcomes.

There is also a national ERO based in the Local Government Environmental Network, known as Environs Australia, to deal with specific local government issues, which are expected to benefit from a national approach.

Local Agenda 21

Local Agenda 21 (LA21) is a programme of sustainable development established by and for local government. The term derives from Chapter 28 of Agenda 21, the global blueprint for sustainable development generated at the Earth Summit in 1992. Chapter 28 recognises the value of local government in achieving sustainable development.

The Commonwealth Government also recognises the significance of local government in achieving sustainable development. In *Our Living Heritage*, the Commonwealth supported APEC's goal to double the number of cities and local governments that have LA21 plans by 2003.

As part of its assistance to local government, Environment Australia has commissioned Environs Australia to produce a new how-to-do-it LA21 Manual for local councils. The Manual gives practical guidance and presents case studies to local councils wishing to undertake a LA21 or local ESD programme.

In addition, Environment Australia will be establishing a new web site containing the LA21 Manual, best practice examples, links to other sustainable development sites and local council contacts.

Given the projected urban growth in Asia-Pacific early next century, local government will have a significant role in achieving sustainable cities through the development of LA21 programmes.

Recognising the regional and global dimensions of LA21, the Commonwealth Government will be working with the UN's Commission on Sustainable Development and the International Council for Local Environmental Initiatives to produce a regionally tailored manual suitable for various APEC economies.

Chapter 4: Biodiversity

Key Points:

- The Commonwealth continues to implement the National Strategy for the Conservation of Australia's Biological Diversity and, through it, to fulfil Australia's obligations under the Convention on Biological Diversity. Australia attended the Fourth Conference of the Parties to the Convention in 1998, and the Extraordinary Meeting of the Conference of Parties on a protocol on biosafety. The Commonwealth is working with the State and Territory Governments to review progress towards meeting the Year 2000 commitments in the National Strategy, and to prepare for the five yearly review of the strategy due in 2001.
- Natural Heritage Trust Programmes are contributing significantly to achieving the Strategy's goal to protect biological diversity and maintain ecological processes and systems, both on and off reserve. The Bushcare Programme funded 684 new community and State and Territory agency projects through the 'one-stop-shop' process at a cost of \$26.9 million in 1998-99, as well as 319 continuing projects at a cost of \$15.4 million. Natural Heritage Trust programmes with a natural resource management focus, such as Landcare, Rivercare and Murray-Darling 2001 also make a significant contribution to the Natural Heritage Trust's biodiversity outcomes.
- The Commonwealth will provide \$83.3 million in 1999-2000, in cooperation with State, Territory and local governments, for Bushcare including grants to landholders, land managers and the community for remnant vegetation protection and revegetation, as well as for developing institutional and community frameworks and to support the long-term sustainable management of natural resources.
- The Commonwealth will provide \$16 million in 1999-2000 to enhance Australia's National Reserve System and \$30.4 million for the management of Commonwealth protected areas.
- The Endangered Species Programme will receive \$6.8 million in 1999-2000.
- In 1999-2000 the Commonwealth will spend \$5.4 million on the National Weeds Programme, and \$2.4 million on the National Feral Animal Control Programme.
- A New Measure will ensure the continuation of the Australian Biological Resources Study at current levels.
- An additional \$3.5 million will be provided by 1999-2000 to repair flood-damaged roads to Norfolk Island National Park.

Table 4.1: Biodiversity--New Measures and Programme and Tax Expenditure Estimates

Description	1998-99 \$m	1999-00 \$m	2000-01 \$m	2001-02 \$m (a)	2002-03 \$m
NEW MEASURES					
Biodiversity Convnt. & Strategy Prog.(a)(b)	-	2.2	2.2	2.3	2.3
Australian Biological Resources Study	-	1.1	1.1	1.1	1.2
Flood Damage Repairs Norfolk Island	-	3.5	-	-	-
PROGRAMME AND TAX EXPENDITURE ESTIMATES					
Biodiversity Programme (a)	2.1	2.2	2.2	2.3	2.3
Off-Reserve Conservation					
Bushcare (b)(c)	74.0	83.3	88.6	85.2	1.4
Reserves					
National Reserve System (b)	25.7	16.0	20.0	20.0	-
Commonwealth Protected Areas (d)	29.5	30.4	25.8	25.7	25.7
Feral Animals and Weeds					
National Weeds Programme (b) (e)	9.0	5.4	5.9	4.8	-
Animal and Plant Quarantine Policy	6.1	5.5	5.8	5.8	5.8

National Feral Animal Control Prog. (b)(f)	4.1	2.4	2.7	3.0	-
Plant pest eradication Programmes (g)	5.6	5.3	-	-	-
Wildlife Conservation					
Wildlife resource conservation	2.6	2.6	2.5	2.5	2.5
Threatened Species					
Endangered Species Programme(b)	9.0	6.8	6.8	6.8	1.3
Information Base					
Australian Biological Resources Study	2.2	3.7	3.8	3.7	3.8
CSIRO (total) (h)	22.1	21.6	na	na	na
Biodiversity knowledge	4.5	4.6	na	na	na
Role of biodiversity in ecosystems	1.0	1.0	na	na	na
Innovative uses	0.7	0.6	na	na	na
Sustainable tourism	0.4	0.4	na	na	na
Conserving and monitoring biodiversity	6.0	5.7	na	na	na
Integrating with resource management	2.2	2.2	na	na	na
Managing pests, weeds and diseases	4.6	4.6	na	na	na
Bioinformatics	1.7	1.6	-	-	-
Feral animal control	1.0	0.9	-	-	-
Cooperative Research Centres (total)(h)	10.9	10.9	11.5	11.3	6.9
CRC for Biological Control of Pest Animals	2.0	2.2	2.4	2.2	2.0
CRC for Weed Management Systems	2.3	2.3	2.3	2.3	na
CRC for Conservation & Management of Marsupials	1.9	1.9	1.9	1.9	na
CRC for Tropical Rainforest Ecology and Management	2.4	2.2	2.6	2.6	2.6
CRC for Sustainable Tourism	2.3	2.3	2.3	2.3	2.3

New measures are expressed in outturn prices and other expenditure and revenue figures are expressed in 1999-2000 prices.

Programme and tax expenditure estimates include the effect of new measures

- denotes nil;

na denotes not available.

- a. For implementation of the National Strategy and fulfilling obligations under the Convention on Biological Diversity. The Biodiversity Strategy and Convention Programme continues the activities of the Biodiversity Programme which concluded in 1998-99.
- b. 2001-02 figures for Natural Heritage Trust programmes are contingent on the sale of the 2nd Tranche of Telstra.
- c. Includes funds for the Cape York Natural Heritage Trust Plan, (but excludes funds for farm forestry administered through the Farm Forestry Programme, and for Property Management Planning administered through the National Landcare Programme; these funds amount to \$7.5 million in 1999-2000 and \$8 million in 2000-01). In 1999-2000, of the total Bushcare funding, \$81.8 million is funded through the Natural Heritage Trust, with an additional \$1.5 million through Natural Heritage Trust-related Programmes.
- d. A significant portion of this is funding for Uluru-Kata Tjuta and Kakadu National Parks, which are World Heritage areas (see Chapter 10).
- e. Jointly administered by the Agriculture, Fisheries and Forestry, Australia, and Environment Australia. 1998-99 figure includes all carry forwards from 1997-98.
- f. Jointly administered by the Agriculture, Fisheries and Forestry, Australia, and Environment Australia.
- g. Funding for eradication programmes is subject to approval by ARMCANZ/SCARM on a case by case basis. Therefore, out-years funding can only be estimates as the number and nature of incursions are unknown.
- h. This is the total of the figures against the indented descriptions below.

Australia is home to about 10 per cent of the planet's biological diversity, of which 80 per cent is endemic, reflecting Australia's long period of geographical isolation. Biodiversity conservation has been identified in the report *Australia: State of the Environment 1996* as perhaps Australia's key environmental challenge, a challenge linked through unsustainable land clearing and habitat destruction to land and water resource degradation. Sustainable agriculture and management of Australia's natural resources are intimately linked to conservation of our unique biodiversity. Together they constitute the core objectives of the Government's Natural Heritage Trust.

Australia works to conserve its biodiversity--at the levels of ecosystems, species and genetic variability within species--through the National Strategy for the Conservation of Australia's Biological Diversity, and through it fulfils its obligations under the Convention on Biological Diversity. Priorities are conserving biodiversity both on and off reserves; addressing threats to biodiversity, particularly land clearance, feral animals and weeds; and building on knowledge of Australia's native species and ecosystems and how they function.

The National Reserve System and the Bushcare programmes, both funded through the Natural Heritage Trust, address loss of biodiversity through both on- and off-reserve conservation. The Commonwealth is committed to a comprehensive, adequate and representative (CAR) reserve system, and implementation through Regional Forest Agreements, of strategies to protect old-growth forests and wilderness as part of the reserve system. The CAR reserve system allows for ecologically sustainable development. Other biodiversity-focused programmes address a variety of issues including endangered species, invasive species, world heritage management and nature-based tourism. In addition, the programmes with a focus on natural resources management, such as the National Landcare Programme, the National Rivercare Programme, Murray-Darling 2001, the Farm Forestry Programme and the Fisheries Action Programme also make a significant contribution to the Trust's biodiversity outcomes, for example through controlling salinity, or improvements in water quality.

Funding for biodiversity and related programmes is shown in Table 4.1. The Coasts and Clean Seas Initiative described in Chapter 9 addresses biodiversity conservation in the marine environment.

Australia recognises that biodiversity conservation is critical for sustainable food production and the alleviation of poverty in many developing countries. Australia's overseas aid programme will spend \$22.3 million in the financial year 1998-99 on bilateral and regional activities in developing countries aimed at the management of biodiversity. This includes institutional strengthening, human resource, land resource management, forestry and coastal zone activities. These activities support a number of international conventions or initiatives, including the Convention on Biological Diversity, Ramsar Convention and the International Coral Reef Initiative. The Australian aid programme has also committed \$38.6 million to the Global Environment Facility (GEF), the interim funding mechanism for the Convention on Biological Diversity. Approximately 35 per cent of these funds are directed towards biodiversity activities.

IMPLEMENTING THE BIODIVERSITY CONVENTION AND THE NATIONAL STRATEGY

The Government has decided to fund the Biodiversity convention and Strategy Programme to \$9 million over the next four years in order to continue work to implement the Convention on Biological Diversity and in recognition that the implementation of the National Strategy for the Conservation of Australia's Biological Diversity is central to ensuring the conservation of Australia's biodiversity.

Over the past year, Australia has continued to implement the Convention on Biological Diversity through participation in the Fourth Conference of the Parties to the Convention, the third meeting of the Subsidiary Body on Scientific, Technical and Technological Advice, negotiating sessions for a protocol on biosafety, and the Extraordinary Meeting of the Conference of the Parties on the protocol. Australia provided information to other countries on taxonomic issues; inland water ecosystems; access to genetic resources and benefit sharing; indigenous knowledge and practices relevant to biodiversity; environmental impact assessment; and sustainable tourism. Australia shared its experience in regulating genetically modified organisms during the negotiations for a protocol on biosafety. As gene technology enables the transfer of genes between species to an extent and range not previously possible using conventional breeding techniques, potential risks need to be identified, assessed and managed in order to protect the environment and conserve biodiversity. The protocol will apply to the international transboundary movement of these organisms. Australia also provided financial assistance to the Convention's Secretariat to support attendance at meetings by Pacific Island countries and to advance the Global Taxonomy Initiative.

The Commonwealth has developed a reporting mechanism to monitor progress towards implementing the National Strategy for the Conservation of Australia's Biological Diversity, to identify gaps or problems, and to make recommendations on how these may be addressed. Reports on progress will be made to the Australian and New Zealand Environment and Conservation Council (ANZECC).

The Biological Diversity Advisory Council, the Commonwealth's premier advisory body on biodiversity, meets regularly to provide advice on biodiversity issues. Over the past year it has advised on a communications campaign for biodiversity and on enhancing the role of indigenous people in biodiversity conservation. In 1999, it will develop a strategy to assist industry to implement biodiversity conservation measures.

Box 4.1: Local Government Biodiversity Strategy

The Biological Diversity Advisory Council (BDAC), in its role to promote the objectives of the National Strategy, has been working with local governments from each State and the Northern Territory, to develop a strategy for local governments to include biodiversity as a mainstream part of local governments' activities.

The National Local Government Biodiversity Strategy was endorsed by unanimous vote at the National Local Government General Assembly in November 1998. The document represents an agreed local government position at the national level on the management of our biodiversity.

The structure of the strategy is built on the following five key issues:

- resourcing;
- legislative framework;
- regional partnerships and planning;
- awareness, training and education; and
- information and monitoring.

The strategy also outlines a number of key actions that need to be undertaken in order to achieve the objectives of the strategy.

BDAC, in supporting the strategy but handing ownership over to local government, has provided a positive model for cooperation between local government and the Commonwealth.

OFF-RESERVE CONSERVATION

Some 500 million hectares, or more than two-thirds of Australia's land area, are currently managed by private landholders, while about 40 million hectares are within the terrestrial reserves system. Conservation of biodiversity through reserves alone is clearly inadequate. Biodiversity outside reserves has, for many years, been affected by vegetation clearance and modification. For large parts of Australia only scattered remnants of the original natural vegetation exist.

Box 4.2: Bushcare

The objectives of Bushcare are to reverse the long-term decline in the quality and extent of Australia's native vegetation cover by working cooperatively with communities, industries and governments to:

- conserve remnant native vegetation;
- conserve Australia's biological diversity; and
- restore, by means of revegetation, the environmental values and productive capacity of Australia's degraded land and water.

The historic and ambitious goal of Bushcare can only be achieved through the actions of land managers, supported through enabling institutional frameworks, technical advice and public investment consistent with achieving public benefits.

To date Bushcare has achieved a range of outcomes including:

funding or approved funding through the Natural Heritage Trust 'one-stop-shop' of 1,292 Bushcare projects with community involvement or support;

- strategic national projects were initiated, including Florabank and the new Atlas of Australian Birds;
- establishment of a Bushcare extension network to support the community in sustainable native vegetation management;
- establishment of the Council for Sustainable Vegetation Management, which has met nine times to discuss and prepare advice for the Minister for Environment on a range of issues;
- extensive community consultations have been undertaken through the Bushcare Link Consultancy, and increased Local Government involvement in Bushcare has been pursued through the National Local Government Bushcare Facilitator; and
- publication of a series of landmark reports on issues such as incentives to promote sound vegetation management, opportunities for local government to conserve native vegetation, and the introduction of tax incentives for the protection of high conservation native vegetation.

This has led to problems with both biodiversity conservation and the long-term viability of Australia's agriculture sector. Bushcare aims to address this situation by promoting activities that integrate sustainable native vegetation management principles with mainstream agriculture.

Bushcare

The Commonwealth provided funding of \$74 million for Bushcare in 1998-99 which allowed community groups, local and State Governments to work on improving the protection, management and re-establishment of native vegetation. Of this \$26.9 million was provided for 684 new projects through the 'one-stop-shop' process, with \$15.4 million provided for continuation of 319 existing projects; these figures include \$2.4 million for 14 new projects in Cape York. The remainder was used nationally to develop institutional and community frameworks and to support an increase in the extent and quality of native vegetation. Around 15 per cent of Bushcare funding in 1998-99 was invested in urban Bushcare.

The Commonwealth, through the Natural Heritage Trust has provided funding of \$4 million over the life of the Natural Heritage Trust for the employment of twelve Indigenous Land Management Facilitators. The Indigenous Land Management Facilitators are employed to assist indigenous communities to access the suite of Natural Heritage Trust programmes and to support sustainable land management practices on Aboriginal land and on those public lands where indigenous people have a local interest.

Funding for this project has been sourced through the Landcare and Bushcare Programmes and is administered by the Indigenous Policy and Coordination Section, within the Biodiversity Group of Environment Australia.

Recruitment of the twelve Indigenous Land Management Facilitators was completed in October 1998. The facilitators have to date focussed on assisting indigenous communities to develop Natural Heritage Trust proposals for the 1999-2000 funding round.

The Commonwealth has established contracts with regionally based agencies including indigenous land councils, representative bodies and State land management agencies to host these positions and to oversee their activities in their regions.

Cape York Peninsula

The Cape York Natural Heritage Trust Plan will provide up to \$40 million to protect the outstanding environmental and heritage values of Cape York. The Plan was developed by the Commonwealth, in consultation with the Queensland Government, and is being delivered by both Governments in partnership with key stakeholders from industry, indigenous communities and conservation organisations.

Key elements of the Cape York Natural Heritage Trust Plan include up to \$23 million for a comprehensive voluntary property planning process and an enhanced and expanded network of protected areas. Funding is being provided to develop and implement strategies to protect and conserve natural and related cultural values on land managed by indigenous people. The Cape York Property Plan Technical Group advises both Governments on the implementation of these key elements. Pilot properties for the property planning process have been identified and activities through this component will intensify during the 1999 dry season.

The Plan also provides community grants to complement the work of both Governments and their agencies in sustainable production and the conservation of natural and related cultural values on the Cape.

The Cape York Regional Advisory Panel has facilitated community implementation of the Plan, providing advice and recommendations to both Governments on the implementation of the Plan, and assessing Natural Heritage Trust funding applications.

RESERVES

National Reserve System

The Commonwealth will provide \$16 million in 1999-2000 to further develop a comprehensive, adequate and representative National Reserve System. The Commonwealth is working with all levels of governments, industry and the community to establish and manage new ecologically significant

protected areas, provide incentives for indigenous people and other landholders to participate in strategically enhancing the National Reserve System and to develop and implement best practice standards for management.

Table 4.2: National Reserve System Programme Land Acquisitions 1997-98 and 1998-99

State	1997-98	1998-99
New South Wales	Yahringerie	Dananbilla-Illunie-Dembary Arakoola Beula Bolivia Hill Peery Mulgoa Gosford Coastal Open Space System Hexham Swamp
Victoria	<i>Ningaringalook</i>	
Queensland	Cudmore	Albinia Downs
South Australia		Mt Cone Mt Remarkable
Western Australia	<i>York Gum Wandoo Woodland</i> Southern Ironstone at Busselton	Gingin Meentheena North Tarin Additions to Cane River National Park Ippolo Road Bushland Tumulus Springs Community Herb Rich Saline Shrublands Barnong Pastoral Lease Muggon Pastoral Lease Pimbee Pastoral Lease Earaheedy Pastoral Lease

To meet these objectives, the Commonwealth, with the support of the State and Territory nature conservation agencies, has developed the *Interim Biogeographic Regionalisation of Australia* and the *Interim Scientific Guidelines for Establishing the National Reserve System* as planning tools to ensure the reservation of areas of highest priority. The Interim Scientific Guidelines are currently being refined on the basis of experience in their use and in consultation with the community and State and Territory agencies.

The acquisition of land for inclusion in the National Reserve System is funded jointly by the Commonwealth, States and Territories, and community groups. Since 1998, community groups have assisted with the identification and purchase of areas suitable for inclusion in the National Reserve System. In addition, owners of land of significance to the National Reserve System may seek assistance to have such land recognised as a protected area.

Box 4.3: Hexham Swamp Rehabilitation Project

In 1998-99, the Commonwealth Government approved funding of \$900,000 a year over the next three

years for this project, which will implement the Ironbark Creek Total Catchment Management Strategy. The project aims to restore and rehabilitate the estuarine, aquatic and terrestrial ecosystems of the 3,200 hectares of Hexham Swamp. The major activities will centre around voluntary acquisition of some private land, the modification of flood gate operation, the rehabilitation of native vegetation and the reintroduction of estuarine fish and crustaceans.

The Commonwealth will provide \$2.1 million in 1999-2000 to the Indigenous Protected Areas component of the National Reserve System Programme to establish and manage protected areas on indigenous-owned estates, and to establish cooperative management arrangements for government-owned protected areas between indigenous groups and the relevant government nature conservation agency.

Projects funded under the National Reserve System Programme cover the establishment of protected areas on private land, best practice protected area management and regional planning for the identification of priority additions to the National Reserve System.

Box 4.4: Gosford Coastal Open Space System Biodiversity Component

The National Reserve System programme has approved funding of \$1 million over three years for the acquisition of land for the purpose of establishing private protected areas to protect the significant biodiversity values of the sites and to assist with the completion of the Gosford City Coastal Open Space System.

Box 4.5: Nantawarrina

Nantawarrina, an Aboriginal owned property in the Northern Flinders Ranges, was declared the country's first Indigenous Protected Area in August 1998. An Indigenous Protected Area is an area of Aboriginal owned land voluntarily dedicated to the conservation of biodiversity and managed in accordance with International Union for Conservation (IUCN) protected areas guidelines and standards. Nantawarrina is a property of 58,000 hectares, which was previously used for pastoral and mining activities. The declaration of an Indigenous Protected Area over Nantawarrina demonstrates a commitment from the Aboriginal landowners to manage the area for Biodiversity conservation and cultural values. This represents a significant step forward in the development of the National Reserve System.

Box 4.6: Peery Station--A Protected Area in the Mulga Land of New South Wales

In 1998-99 the Commonwealth approved funding for the purchase of Peery Station, a property in the north-west of New South Wales, north of Broken Hill and adjacent to the Paroo River Overflow. The large overflow lakes are highly significant for waterbirds, especially migratory waterbirds. The property has unique geomorphology features of stony ranges, lake beds and mound springs, which contain rare and threatened species. Few of the ecosystems on Peery Station are currently protected in a reserve system.

COMMONWEALTH PROTECTED AREAS

The Commonwealth manages protected areas established in those parts of Australia which come under its direct responsibility, such as the external territories and Australian waters beyond three nautical miles. Sixteen areas have been declared under the *National Parks and Wildlife Conservation*

Act 1975 comprising six national parks, five national nature reserves, three marine parks and two botanic gardens. The Commonwealth will provide \$30.4 million in 1999-2000 to manage these areas.

Three of the six Commonwealth national parks (Kakadu and Uluru-Kata Tjuta National Parks in the Northern Territory and more recently Booderee National Park in the Jervis Bay Territory) are jointly managed with Aboriginal traditional owners through Boards of Management. Kakadu and Uluru are included on the World Heritage List (see Chapter 10) and are probably Australia's best known parks. The other three parks are located in the external territories of Cocos-Keeling and Christmas Islands in the Indian Ocean and Norfolk Island in the South Pacific. The Australian National Botanic Gardens in Canberra is the premier organisation devoted to growing, studying and promoting Australian native plants.

Uluru-Kata Tjuta National Park is managed jointly between the Park's Aboriginal traditional owners and Parks Australia. The selection of the park as the starting point for the Olympic torch relay reflects appropriately the national and international significance of Uluru.

Kakadu National Park is also managed jointly between the Park's Aboriginal traditional owners and Parks Australia. The park's fourth plan of management which came into effect in March 1999 outlines the framework for protecting Kakadu's outstanding values over the next five years through a unique blend of Aboriginal land management skills and modern park management practices.

Booderee National Park has been managed jointly between the Wreck Bay Aboriginal Community and Parks Australia since 1995. The past year has concentrated on developing the park's first plan of management under the new joint management arrangements. Finalisation of plans of management for Booderee National Park, Norfolk Island National Park and a number of marine protected areas will be a major focus of attention in 1999-2000.

Protected areas including those managed by the Commonwealth are major attractions for the Australian tourism industry. Around 1.5 million people visit Commonwealth protected areas in any year, including approximately 220,000 at Kakadu and 340,000 at Uluru-Kata Tjuta in 1998-99. The heavy rains that devastated parts of eastern Australia in August 1998 caused damage to roads in Booderee National Park and also forced the prolonged closure of the main access road to Norfolk Island National Park. Repair of the Norfolk Island roads will be a major capital works item in 1999-2000.

Other Commonwealth Land

Biodiversity protection is also provided on other Commonwealth land such as Department of Defence land. The Commonwealth has also made a substantial commitment to marine biodiversity conservation in Australia's Exclusive Economic Zone (see Chapter 9).

FERAL ANIMALS AND WEEDS

Weeds

Weeds are distributed widely throughout Australia. They comprise a diverse group of invasive species, which affect both the natural environment and primary production. The Commonwealth will provide \$5.4 million in 1999-2000 to implement, together with the States and Territories, key elements of the National Weeds Strategy.

National Weeds Programme

Through working with all levels of government, industry and the community, the National Weeds Programme seeks to:

- develop integrated strategic approaches 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 of existing pest plants to become weeds of national significance.

Specific outcomes of the Programme include:

- the implementation of a quarantine assessment procedure to prevent new pest plant introductions. Two tiers of the procedure have been developed and implemented in the Australian Quarantine and Inspection Service. The third tier, relating to post-entry growth trials, is currently being developed;
- the production and implementation of cost-effective, strategic-management plans for weeds of national significance. Guiding principles on the process for determining weeds of national significance have been finalised and 74 weed species nominated by the States and Territories have been assessed using the criteria. Endorsement of the inaugural list of weeds of national significance is being sought from the Ministerial Councils responsible for Agriculture, Environment and Forests. Once announced, strategic management plans for these weeds will be developed. The goal of these plans will be to reduce the impact of weeds of national significance to an extent where management by the appropriate State or Territory Governments is possible; and
- improved public awareness of issues relating to weeds of national significance.

Plant Pest Eradication

The plant pest eradication programmes help maintain international market access through the eradication of exotic plant pests, weeds and diseases. These programmes are a shared responsibility of the Commonwealth, State and Territory Governments.

On the endorsement of the Standing Committee on Agriculture and Resource Management (SCARM), the Commonwealth will contribute 50 per cent of required funds for plant pest eradication programmes, with benefits for agriculture and biodiversity conservation. As the timing, nature and extent of exotic plant pests, weeds and diseases cannot be predicted forecasts for outyear funding are not available.

The Australian Nuclear Science and Technology Organisation (ANSTO) provides a gamma ray service to NSW Agriculture as part of the production of sterile insects (Queensland Fruit Fly) for the Tri-State Fruit Fly Strategy, funded by three State Governments, the Commonwealth Government and the fruit growing industry. Demand for the service is seasonal and dependent on a number of factors such as the number of outbreaks. Between six and 15 million pupae are irradiated each week.

Feral Animal Control

The National Feral Animal Control Programme, a Natural Heritage Trust Programme, aims to manage the impact of feral animals on the natural environment and agriculture. The Commonwealth is working with all levels of Government, industry and the community to develop integrated, strategic approaches to manage the impacts of nationally significant feral animals and to develop best practice guidelines for the control of the impact of feral animals.

The Commonwealth will provide \$2.4 million in 1999-2000 to be used in cooperation with the States and Territories to focus on:

- Developing and implementing Threat Abatement Plans (TAPs) for key feral animals. (Schedule 3 of the Endangered Species Protection Act 1992 lists four key threatening processes caused by introduced vertebrate animals (fox, cat, goat and rabbit). The Act requires a TAP to be prepared for each key threatening process. The fox and cat TAPs have been approved by the Minister, and the rabbit and goat TAPs are being revised based on responses received during the public comment period. The TAPs will determine the Commonwealth's priorities for funding decisions on those species under the Programme.)
- Developing best practice guidelines for managing the impact of key feral animals (this year, national guidelines are being developed to manage, inter alia, the impacts of wild dogs and carp).
- Identifying invasive species with the potential to become threats to the environment.
- Filling knowledge gaps in pest management.

Animal and Plant Quarantine Policy

The Commonwealth will provide \$5.5 million in 1999-2000 to develop animal and plant quarantine policy. Development of animal and plant quarantine policy results in the application of risk assessment-based commodity protocols, which allow the safe importation, or exclusion, of animal and plant material.

Cooperative Research Centres

There are two Cooperative Research Centres (CRCs) undertaking research on the control of invasive species.

The CRC for Weed Management Systems is focused on improving the sustainability and productivity of Australian agriculture and the biodiversity of our natural ecosystems by developing integrated weed management systems, notably through the release of specific insects and pathogens. The CRC has developed and is releasing insects which are specific to controlling Paterson's Curse, Onopordum Thistles, Nodding Thistle, Spear Thistle, Variegated Thistle, Horehound, Emex, St John's Wort, Scotch Broom, Bitou Bush and Boneseed, and is developing insect and rust biocontrol agents for bridal creeper and blackberry.

The CRC for Biological Control of Pest Animals aims to contribute to the better management of Australian biodiversity by limiting the growth of vertebrate pests through fertility control. The key concept is to manage vertebrate pest populations using immunocontraceptives delivered by bait or through the agency of a virus or other contagious agent that spreads naturally through the target pest population. The CRC has laboratory 'proof-of-concept' that infection of a host with a host-specific recombinant virus expressing a specific reproductive antigen induces long-lasting infertility. For the mouse, this infertility extends over its reproductive lifespan. For the rabbit, the infertility is of shorter duration. For the fox, where no fox-specific virus has been identified to date, development of a bait-delivered product is continuing.

WILDLIFE CONSERVATION

The Commonwealth has committed \$2.6 million to wildlife conservation programmes in 1999-2000. In general the management of wildlife in Australia is the responsibility of States and Territories; the Commonwealth has responsibility for the management of wildlife on Commonwealth lands and waters and control over the export of wildlife products.

Trade in native species and products derived from them is regulated under the Commonwealth *Wildlife Protection (Regulation of Exports and Imports) Act 1982*. This Act gives effect to Australia's obligations under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). The Act requires that an appropriate management regime be approved to ensure that harvesting of a particular species is not detrimental to its survival.

The *Whale Protection Act 1980* provides for the conservation of all cetaceans (whales, dolphins and porpoises) in Commonwealth waters. Currently, the Commonwealth, States and Territories are working together to develop a national framework for managing whale and dolphin watching. National guidelines for recreational whale and dolphin watching are to be published in mid 1999.

THREATENED SPECIES AND ECOLOGICAL COMMUNITIES

The Commonwealth will provide \$6.8 million in 1999-2000 for the Endangered Species Programme for action on threatened species and ecological communities, threatening processes and community education and involvement.

A major initiative announced in 1998-99 was the decision to provide \$1 million of Endangered Species Programme funds for community grants over 1998-99 and 1999-2000. The grants Programme was established to support and inspire community work to recover threatened species and ecological communities. Ninety-one applications were received in the first round of funding.

Action on Species and Communities

The Endangered Species Programme provides a core resource for the conservation of nationally threatened species and ecological communities, primarily through recovery and threat abatement plans. Plans are undertaken in cooperation with the States and Territories and strongly foster the involvement of all stakeholders, including industry and community groups. Table 4.3 summarises the number of recovery plans that have been adopted or approved by the Commonwealth and the number of species for which recovery plans are currently in preparation.

During 1998-99, 13 amendments were made to the listings of species that are endangered, vulnerable or presumed extinct, as follows.

- Three mammals, two birds and one amphibian were added to, and one mammal was removed from Schedule 1: Part 1 of the Act-species that are endangered.
- One invertebrate and one non-vascular plant were added to and one mammal and one bird were removed from Schedule 1: Part 2 of the Act-species that are vulnerable.
- Two birds were added to Schedule 1: Part 3 of the Act-species that are presumed extinct.

In addition, the Cumberland Plain Woodland and the Eastern Suburbs Banksia Scrub of the Sydney Region became the first two endangered ecological communities to be listed under Schedule 2 of the Act. A further nine endangered ecological communities are currently being considered for listing.

Action plans and conservation overviews review major plant and animal groups, identify species at risk and develop nationally agreed priorities for conservation action, including amending the Act's lists of nationally threatened species.

During 1998-99, a Seal Action Plan and a Bat Action Plan were published. During 1999-2000, conservation overviews for marine invertebrates and marine algae will be finalised, and work on the preparation of a butterfly action plan, a marine fish action plan and a revised bird action plan will

near completion.

Table 4.3: Status of the preparation and adoption of Recovery Plans (as at April 1999)

Taxa	Number listed as Endangered or Vulnerable	Number of Plans adopted or approved	Number of species for which Recovery Plans are currently in preparation
Mammals	57	3	26
Birds	96	8	34
Amphibians	16	1 (covers 2 species)	13
Reptiles	52	1	10
Invertebrates	4	-	2
Fish	21	-	7
Plants	1072	8	250
Non Vascular Plants	1	-	-
Ecological Communities	2	-	1
Total	1321	21	343

Threatening Processes

Box 4.7: Albatross Threat Abatement Plan

Listed under the *Endangered Species Protection Act 1992* is the key threatening process of the 'incidental catch (or by-catch) of seabirds during oceanic long-line fishing operations'. This listing led to the preparation of a Threat Abatement Plan (TAP) for this threatening process. The TAP was finalised in 1998. The objective of the TAP is to reduce seabird by-catch in all fishing areas, seasons or fisheries to below 0.05 seabirds per thousand hooks, based on current fishing levels. This represents a reduction of up to 90 per cent of seabird by-catch within the Australian Fishing Zone, and should be achievable within the five-year life of this Plan. The ultimate aim of the threat abatement process is to achieve a zero by-catch of seabirds, especially threatened albatross and petrel species, in long-line fisheries.

The Plan aims to significantly reduce the by-catch of seabirds during oceanic long-line operations in the Australian Fishing Zone within five years by:

- prescribing the appropriate modifications to fishing practices or equipment (mitigation measures);
- providing for development of new mitigation measures;
- educating fishers and the public; and
- collecting information necessary to improve knowledge of seabird long-line fishery

interactions.

The *Endangered Species Protection Act 1992* provides for action on key threatening processes, and the preparation of nationally coordinated threat abatement plans. This benefits both common and threatened species. The first Threat Abatement Plan-for the Incidental Capture (or Bycatch) of Seabirds during Longline Fishing Operations-was approved in August 1998. Threat abatement plans for the fox and feral cats were also approved. Work continued on the threat abatement plans for rabbits, feral goats, and dieback caused by the root-rot fungus *Phytophthora cinnamomi*, and it is anticipated that these plans will become operational in 1999-2000.

Other Natural Heritage Trust Programmes also provide resources for the preparation and implementation of threat abatement plans. The National Weed and National Feral Animal Control Programmes in particular carry out threat abatement activities for introduced and feral animals and weeds, including hosting national workshops to develop research and management priorities, and funding the preparation of national threat abatement plans.

Box 4.8: Endangered Species Enclosure Project

In 1998-99, the Endangered Species Programme provided \$535,000 for four projects involving development of secure enclosures for the captive breeding and management of a number of threatened species. Protection from predators has the potential to significantly enhance the recovery of some species, particularly small to medium sized mammals. The enclosures funded by the Programme will not only increase the numbers of these species in captivity but will also provide a source of animals that can be released into the wild, once adequate habitat has been made secure from predation.

Contact: Environment Australia, Biodiversity Group -- 02 6274 2240

Community Education and Involvement

A communications strategy has been developed for the Endangered Species Programme. In 1999-00, this strategy will be used to guide the expenditure of funds designed to enhance community education and involvement in threatened species issues. A total of \$670,000 will be allocated to implementation of this strategy.

One example of the programme's innovative approach to community education and involvement is the Threatened Species Network. The Network provides a networker in each State and Territory and is administered under contract by the World Wide Fund for Nature. The Networkers are particularly important for identifying opportunities for public participation in on-ground activities to protect threatened species and in forging links between the community and government agencies. Birds Australia is contracted to provide a similar Threatened Bird Network, and the Australian Network for Plant Conservation undertakes similar work in relation to threatened flora.

Funding for the Threatened Species Network was increased in 1998-99 to allow networkers to be employed on a full-time basis. The Network is also responsible for administering the new community grants component of the Programme-the Threatened Species Network Community Grants. The Threatened Species Network Community Grants aim to provide seed funding to assist community groups to take on long-term responsibility for conservation and recovery of populations of threatened species and ecological communities.

In May 1999, the Minister announced the successful grant recipients for the first round of funding.

Thirty-nine community groups received a total of \$410,881 to assist them in undertaking on-ground work to protect threatened species.

Cooperative Research Centre for Conservation and Management of Marsupials

The CRC for Conservation and Management of Marsupials is concentrating on the special problems unique to marsupials. Research is aimed at gaining an understanding of the fundamental aspects of marsupial reproduction and genetics to develop practical management tools and policies. The CRC has, to date, isolated and cloned essential reproductive genes and developed new protocols for artificial breeding. This research also has a direct application to understanding the processes threatening rare or endangered marsupials. An interesting aspect of this research is the partnership with Landcare Research International Ltd of New Zealand, where marsupials are a major feral pest. The CRC also aims to assist New Zealand in developing humane methods of marsupial population control.

BIODIVERSITY INFORMATION BASE

Australian Biological Resources Study

The Commonwealth has committed \$3.7 million for the Australian Biological Resources Study in 1999-2000. The Study aims to underpin conservation and ecologically sustainable management initiatives funded under the Natural Heritage Trust, in particular, by implementing the *National Strategy for the Conservation of Australia's Biological Diversity* requirements for increased knowledge about Australia's biota. The Government will provide an additional \$4.5 million over four years, commencing in 1999-2000, to the ABRS to ensure that its Participatory Programme Grant Scheme component for taxonomic research is maintained at an appropriate level.

The four key objects of the Study are:

- through its Participatory Programme, develop new knowledge about Australia's biodiversity, and help maintain and further develop taxonomic capacity in Commonwealth, State and Territory agencies and universities. Sixty-seven research projects were approved for 1999 totalling \$1.5 million;
- support professional training in taxonomy to counter a nation-wide decline in recruitment to the field. For 1999, three postgraduate scholarships were awarded at \$18,600 each, while 12 postdoctoral fellows and an additional 14 postgraduate students were supported under the Participatory Programme research projects;
- disseminate consolidated information on Australia's biota, including the publication of catalogues and books, as well as, through the Internet and on CD-ROM. In 1998-99, nine books were published and the ABRS Web site was upgraded. The Census of Australian Vertebrate Species was updated. A number of Web and CD-based products were prepared for release during 1999-2000; and
- promote taxonomic research, fieldwork, and the dissemination of biodiversity information held in Australia's distributed biological collections, and in the wider global community, through coordination, facilitation and development of partnerships with government agencies, research organisations and professional societies and councils. ABRS continued to be involved in developing the Global Taxonomy Initiative under the Convention on Biological Diversity, and published the report from the second international meeting. Two volumes of the international project *Species Plantarum: Flora of the World* were published.

CSIRO

Research is essential to deal with the often unique nature of Australia's resources and to support the Commonwealth's biodiversity conservation programmes. The CSIRO's allocations on biodiversity research in 1999-2000 include:

- \$4.6 million to improve and disseminate knowledge of biodiversity;
- \$1 million to understand the functional role of biodiversity in ecosystems;
- \$600,000 to develop new ways of using Australia's biodiversity;
- \$400,000 to develop sustainable tourism;
- \$5.7 million to conserve and monitor biodiversity;
- \$2.2 million to integrate biodiversity conservation with natural resource management; and
- \$4.6 million to manage environmental pests, weeds and diseases.

In addition, the CSIRO is spending \$3.3 million over 1998-99 and 1999-2000 on new work to improve its use of bioinformatics, allowing better access to, and analysis and visualisation of, genomic and biodiversity information. In the same period, it will spend \$1.9 million on novel technologies for feral animal control, focusing in particular on control of European carp in the first instance.

NATURE-BASED TOURISM

Nature-based tourism presents Australia with the opportunity to make the most of the competitive advantage bestowed by its unique natural features, cultural heritage, and flora and fauna. Australia's Commonwealth Government, through the Department of Industry, Science and Resources (ISR), has developed a National Action Plan for Tourism that identifies conservation and careful management of the environment as essential to the long term viability of the tourism industry. The National Action Plan, launched in 1998, was developed following extensive consultation with stakeholders from the tourism industry, State Governments and non-government organisations.

The National Action Plan makes a commitment to ecologically sustainable tourism development, recognising that environmental, community and cultural issues should be an integral part of economic decisions.

Cooperative Research Centre for Sustainable Tourism

The CRC for Sustainable Tourism is focused on delivering strategic, economic and ecological knowledge to assist in the development of a sustainable tourism industry. In the environmental area the CRC will develop improved ecosystem, environmental and heritage management tools and planning systems to enhance economic, social, cultural and business solutions and reduce deleterious impacts on natural resources and the environment.

Australian Tourist Commission Environment Strategy

The objectives of the Australian Tourist Commission's Environment Strategy include the monitoring, reporting on and reducing the impact of, international tourism on Australia's natural environment. Activities promoted by the strategy include market research and communicating environmental messages through tourism information materials. The Commonwealth will provide \$30,000 to the Strategy in 1999-2000.

Chapter 5: Land Resources and Forests

Key Points:

- The Commonwealth will provide \$382 million in 1999-2000 for the Natural Heritage Trust and related funds. The bulk of these funds will be dispersed through the five major programmes, Landcare, Bushcare, Murray-Darling 2001, Rivercare and Farm Forestry, with a focus on support for community-based on-ground activities.
- The Commonwealth Government will provide \$5.8 million in 1999-2000 for finalising the Regional Forest Agreements (RFAs). Woodchip exports from areas not covered by RFAs will be prohibited from the year 2000.
- The Australian Nuclear Science and Technology Organisation's (ANSTO) Managing Mine Waste Project is predicting expenditure of \$3.4 million in 1999-2000 and a further \$1.7 million in 2000-01 for research and development. ANSTO is also involved in developing technologies that will lead to cleaner and more environmentally sustainable operations in uranium mines.
- Australia will spend \$156 million on international agricultural development in 1998-99. This expenditure includes \$67.8 million worth of bilateral and regional programmes in the Asia-Pacific, \$41.4 million in support for the Australian Centre for International Agricultural Research (ACIAR) and \$41.8 million for the World Food Programme.

Sustainable Agriculture

Sustainable Management of Natural Resources

As an integrated approach to sustainable land and water management and the conservation of biodiversity, the Commonwealth will provide \$382 million in 1999-2000 from the Natural Heritage Trust and related funds. Five major programmes are as follows.

- The National Landcare Programme (NLP) which will provide over \$88 million in 1999-2000 to promote sustainable land and water management practices.
- Bushcare with total funding of \$83.3 million in 1999-2000 for protection and re-establishment of native vegetation.
- Murray-Darling 2001 with total funding of \$43.1 million from the Natural Heritage Trust in 1999-2000 for integrated catchment management including on-ground activities.
- The National Rivercare Programme with total funding of \$21.7 million in 1999-2000 for the rehabilitation, conservation and management of Australia's rivers on a sustainable basis.
- The Farm Forestry Programme with total funding of \$15.1 million in 1999-2000.

Table 5.1: Land Resources and Forests—New Measures and Programme and Tax Expenditure Estimates

Description	1998–99 \$m	1999–00 \$m	2000–01 \$m	2001–02 \$m	2002–03 \$m
NEW MEASURES					
Protecting Australia's forests	–	5.8	–	–	–
PROGRAMME AND TAX EXPENDITURE ESTIMATES					

Sustainable Agriculture					
National Landcare Programme					
Natural Heritage Trust	59.4	50.9	46.0	49.9	na
Natural Resource Management Act (a)	55.0	37.0	36.8	36.8	36.8
Advanced Property Management Planning (FarmBis) (b)	5.7	3.7	4.9	–	–
Taxation					
Tax deduction for water conveying and Landcare activities	30.0	30.0	30.0	30.0	na
Taxation allowance for drought preparedness	9.0	10.0	10.0	na	na
International sustainable agriculture (c)	101.0	na	na	na	na
Forests (d)					
Bureau of Rural Sciences					
National Forest Inventory	1.0	0.5	0.3	0.1	–
CRAs / RFAs (e)	59.5	35.2	–	–	–
International sustainable forestry	18.5	na	na	na	na
Plantations 2020 Vision	1.0	0.5	0.3	0.1	-
Farm Forestry (f)	13.8	15.1	15.6	9.2	na
Assessing the Resource Base					
National Land and Water Audit	12.2	10.5	10.5	5.0	–
CSIRO (total) (g)	14.5	14.6	na	na	na
Catchment management and monitoring	2.4	2.5	na	na	na
Land resources inventory	1.9	2.1	na	na	na
Land degradation processes and management	3.0	3.1	na	na	na
Remediation	1.2	1.2	na	na	na
Integrated resource use and society	1.7	1.7	na	na	na
Farm forestry	4.0	4.0	na	na	na

Murray-Darling Basin land management work plan	0.3	–	–	–	–
Tree planting strategies	na	na	na	na	na
Geoscience research and mapping	5.6	5.6	5.6	–	–
Bureau of Rural Sciences—various sustainable land and water resource progs.	3.4	2.8	2.8	2.8	na
National Dryland Salinity Research, Development and Extension Programme	na	na	na	na	na
CRC for Sustainable Development of Tropical Savannas	2.6	2.6	2.6	2.6	na
Mining and Land Rehabilitation					
Best practice in mining activities—Supervising Scientist Group	na	na	na	na	na

Table 5.1: Land Resources and Forests—New Measures and Programme and Tax Expenditure Estimates (continued)

Description	1998–99 \$m	1999–00 \$m	2000–01 \$m	2001–02 \$m	2002–03 \$m
National codes of practice for radioactive ore mining	0.3	0.5	0.5	0.5	0.5
Enhancing the Sustainability of the Mineral Sector	0.2	–	–	–	–
Alligator Rivers Region	na	na	na	na	na
ANSTO	3.9	6.5	na	na	na
Maralinga	16.5	19.8	–	–	–
CSIRO Minesite Rehabilitation Programme	1.5	1.6	na	na	na
Railway contaminated site remediation	9.5	15.7	–	–	–

– denotes nil; na denotes not available.

- Includes all appropriations under the *Natural Resources Management (Financial Assistance) Act 1992*. Funding for the NLP under this Act is subject to review.
- This activity is part of the FarmBis Programme, but is part funded from the Natural Heritage Trust. Also see Box 5.1.
- Expenditure on international development cooperation for sustainable agriculture includes land resources management, as well as other agricultural, forestry and fishing activities, through AusAID and the Australian Centre for International Agricultural Research (ACIAR).

- d. The new programme Plantations for Australia: The 2020 Vision is described in this chapter but funding details are provided in Table 8.1 of Chapter 8, under the heading 'Enhanced Package of Climate Change Measures-PM's Statement'.
- e. Funds for Comprehensive Regional Assessments of forests and for Regional Forest Agreements including \$90 million of funding for the Tasmanian RFA, but excluding the remaining \$20 million for the Tasmanian RFA from the Natural Heritage Trust and excluding funds provided under the Forest Industry Structural Adjustment Package and the Wood and Paper Industry Strategy (because these are in large part directly for industry purposes).
- f. The Farm Forestry programme of Agriculture, Fisheries and Forestry, Australia includes funding from the Wood and Paper Industry Strategy and the Natural Heritage Trust.
- g. This is the total of the figures against indented descriptions.

In 1998-99, Trust-funded programmes supported 2857 community and State and Territory agency projects related to sustainable agriculture across Australia, through the 'one-stop-shop' process at a cost of \$186.1 million, as follows:

- The National Landcare Programme provided \$87.2 million for 1063 projects;
- Bushcare provided \$42.3 million for 1003 projects;
- Murray-Darling 2001 provided \$36.6 million for 439 projects;
- the National Rivercare Programme provided \$14.1 million for 261 projects; and
- the Farm Forestry Programme provided \$5.9 million for 91 projects.

Other funds were used nationally in 1998-99 to develop institutional and community frameworks and to support the long-term sustainable management of natural resources.

Landcare

The NLP encourages integrated natural resource management at the farm, catchment and regional level. This programme therefore underpins a suite of Natural Heritage Trust programmes and the 4500 groups which comprise the Landcare movement in Australia. The NLP embodies the Landcare principle of collective action by the community to manage the environment and natural resources sustainably, in partnership with government, while recognising that individual resource managers and owners should take responsibility for the resources they own or control.

The NLP's critical contributions to achieving Natural Heritage Trust objectives are to:

- integrate catchment management, particularly land, water and related vegetation management; and
- sustainable agricultural productivity.

The NLP encourages strategic activities which result in improved on-ground outcomes and enhanced community capacity for change. The NLP strategies and priority actions focus on capacity building and on-ground action that contributes directly to the following outcomes:

Integration and Institutional Outcomes

- Institutional arrangements that support and promote integrated natural resource management and a culture of sustainable resource use, particularly at the catchment and regional level.
- Enhanced adoption of sustainable natural resource management practices through better application of research and development results.
- Regional strategies in place which deliver integrated nature conservation, natural resource management, and sustainable agriculture outcomes.

Environmental Outcomes

- Integration of environmental objectives in sustainable farming systems.
- Improved condition of natural ecosystems that are influenced by primary production.

Sustainable Production Outcomes

- Widespread adoption of sustainable natural resource management practices to protect the wealth-generating potential of Australia's agricultural resource base.
- Use of land and water resources within their capabilities, while maintaining options for future resource uses, particularly on a regional scale.
- Measurable improvements in the condition of on- and off-farm natural resource areas targeted by the NLP and complementary State and community investment, including ground and surface water quality.

People Outcomes

Communities and individual resource managers with the understanding, skills, self-reliance and commitment necessary for sustainable management of land, water and related vegetation.

Farm Business Improvement Programme

FarmBis has been established by the Government to drive cultural change towards the benefits of continuous learning. It aims to increase participation by farm families and operators in learning activities targeted to improve the profitability, competitiveness and sustainability of their business. FarmBis is not a 'quick fix', but an investment in the longer-term financial self-reliance and preparedness of the rural sector, the benefits of which will emerge over the medium term.

Additionally, FarmBis will enhance the capacity of farmers to identify, acquire and apply the business-management skills, information and practices they need. Over time, FarmBis will also stimulate providers to provide better targeted, flexible and responsive learning activities matched to the priorities of farmers.

To achieve the aims of FarmBis, which are shared by key stakeholders, will require a joint effort (including funding) between farmers, farm organisations, rural communities, governments and industry around Australia, increasingly working in partnership. Other programmes, such as Property Management Programme, have complementary aims to FarmBis and will contribute towards them. FarmBis will complement and build upon, not duplicate, existing programmes.

In this context, the objectives of FarmBis are to:

- increase farmer participation in learning activities which will enhance the profitability, sustainability and competitiveness of their farm business enterprise;
- develop greater acceptance of the benefits of continuous learning and skills development, and its relevance to the changing management needs of a competitive farm sector; and
- enhance farmers' capacity to identify and access appropriate learning activities, and over time, influence more flexible delivery of such activities.

Taxation

The Commonwealth provides deductions from taxable income for primary producers and rural businesses undertaking capital expenditures for storing and conveying water and for preventing and treating land degradation. These deductions are provided under Sections 387-130 and 387-55,

respectively, of the Income Tax Assessment Act 1997 (formerly under Sections 75B and 75D of the 1936 Act). The Treasury estimates their cost to revenue to be about \$30 million each year.

As part of the Natural Heritage Trust, \$80 million has been allocated to fund a Landcare rebate of 34 cents in the dollar, effective from 1 July 1997. The rebate is available for the same type of expenditures as the current Section 387–55 and 387–130 deductions. There is an annual limit of \$5,000 on expenditures that are eligible for the rebate under each of the subdivisions and the rebate is limited to taxpayers with incomes of up to \$20,700 a year.

A five-year, 10 per cent taxation allowance is available for capital expenditure on drought preparedness assets of up to \$50,000 per taxpayer each year. Eligible expenditure must be incurred before 1 July 2000. Deductions are also provided for rehabilitation-related activities on former sites of general mining, quarrying or petroleum operations or sites on which exploration or prospecting was conducted.

Innovative and Sustainable Agricultural Systems

Systems are being developed that will provide the agricultural industry and Government with the information needed to make sound decisions about sustainable land use. Topics include the extension of environmental auditing to agricultural industries through benchmarks for best practice for sustainable agriculture; risk management of pesticides and genetically modified organisms; and sustainable agricultural systems. Outcomes are the increasingly better management of systemic environmental impacts and adoption of sustainable agricultural practices and systems that set world standards.

Activities include:

- input into the action plan for the National Strategy for Agricultural and Veterinary Chemicals;
- identification of key scientific issues affecting gene technology, genetic resources and agricultural biodiversity in Australia;
- organising, conducting and reporting on a Fenner Conference on Visions of Future Australian Landscapes; and
- facilitating development of good practice for local government and catchment management for sustainable agriculture.

International Development Cooperation

Land Resources

Agriculture and rural development sector activities are of fundamental importance in alleviating poverty. Nearly one billion people lack minimum nutritional requirements and the great majority of these people reside in the rural areas of developing countries. Modernisation of the agriculture sector can have a direct impact on poverty, while contributing to the generation of savings and other surpluses necessary for economic growth and social transformation.

Box 5.1: Assistance to Agriculture in Cambodia

The Cambodia-Australia Agricultural Extension Project (\$11.1 million) is assisting agriculture in Cambodia by implementing a human resource and institutional development programme so that a sustainable framework for a national agricultural extension system can be established. Project activities include training of management, field and support staff, particularly in the prioritising of extension work. The project is testing a range of methods including demonstrations, farmer field schools and mass media. The ultimate beneficiaries of the project will be Cambodian farmers and

their families.

Following the trend of recent years, Australian support for international agricultural development in 1999-2000 is estimated at around \$101 million. This expenditure is concentrated in East Asia and the Pacific.

Australia's aid programme contributes to the improvement of food security in developing countries. As well as food aid, Australia provides technical assistance, support for sustainable agriculture and agricultural research, and assistance with food distribution through marketing infrastructure and policy advice. Australia also provides assistance to United Nations development organisations that tackle trans-boundary problems such as desertification and other forms of land degradation.

Land degradation and desertification affect nearly 33 per cent of the earth's land surface and the livelihoods of nearly 20 per cent of the world's population, mainly in developing countries.

Australia supports projects that specifically address desertification including the \$1 million Africa Programme to Combat Desertification. These funds are managed by the United Nations Development Programme and are used to engage Australian consultants to assist African countries prepare national environmental strategies to combat desertification. Another example is the proposed Alxa Environment Rehabilitation project. This project aims to control, or even halt, desertification, and eventually restore ecological balance to degraded land areas in western Mongolia through environmental management measures.

National Principles and Guidelines for Rangelands Management

Since 1993, the Commonwealth has contributed \$1.1 million towards the development of a National Strategy for Rangeland Management, involving considerable public input. Drawing from this work, the States, the Northern Territory, and the Commonwealth have agreed to a set of National Principles and Guidelines for Rangeland Management. The National Principles and Guidelines will act as a basis from which stakeholders will develop and implement strategies for rangeland management at a State and regional level.

Forests

Implementation of the National Forest Policy Statement

The National Forest Policy Statement (NFPS) sets out the broad conservation and industry goals for the management of Australia's forests agreed between the Commonwealth and State and Territory Governments. Through the NFPS and in partnership with the States, the Commonwealth will:

- establish a comprehensive, adequate and representative forest reserves system that will be recognised as one of the world's best;
- assist in developing an innovative, internationally competitive and ecologically sustainable timber products industry and build certainty for those communities dependent on forests—not just for timber products but also for all the other benefits forests bring; and
- encourage cooperation in plantation establishment, management, harvesting and marketing between industrial processing companies and farmers, while achieving ecologically sustainable management of plantations from establishment to harvesting and reestablishment.

Regional Forest Agreements

Regional Forest Agreements (RFAs) between the Commonwealth and the States are the primary means to achieve the goals of the National Forest Policy Statement. The Government will provide \$5.8 million in 1999–2000 for finalising the RFA process.

The objective of Regional Forest Agreements (RFAs) is to provide a blueprint for the future management of our forests, which will help resolve the forest debate. The RFAs will provide both a world-class forest reserve system and the basis of an internationally competitive, value adding and sustainable forest and forest products industry.

RFAs are based upon comprehensive assessments of environmental, heritage, economic and social forest values. These assessments, known as Comprehensive Regional Assessments (CRAs) are scientifically rigorous, based upon the most up-to-date data, and involve extensive community and stakeholder input.

Agriculture, Fisheries and Forestry—Australia is responsible for undertaking the social and economic assessments in cooperation with State Governments. These joint resource assessments include measurement of sustainable yields of production forests, measurement of the economic contribution of forest-based industries, the reporting on the application of principles of ecologically sustainable forest management for production forests, and consideration of options for forest-based industry development and community dependency on use of forests.

Environment Australia is responsible for undertaking jointly with State Governments, the environmental, heritage and national estate assessments. These assessments include wilderness, old growth, biodiversity, indigenous and world heritage values. RFAs identify how these values will be protected, either as part of the comprehensive, adequate and representative (CAR) reserve system or through off-reserve management. This is to ensure that the commercial management and use of forests outside the formal reserves system occurs in an ecologically sustainable way. Economic and social impacts are taken into account to ensure that the needs of regional communities are met and industry development opportunities are identified.

Regional Forest Agreements have been completed for Tasmania, Western Australia, and the East Gippsland and Central Highlands regions of Victoria. Commonwealth export controls no longer apply to wood sourced from native forests in these regions. Woodchip exports from areas not covered by RFAs will be prohibited from the year 2000. A Strategic Plan for the Private Land Component of the CAR Reserve System has been agreed between governments, as a component of the Tasmanian RFA.

The Tasmanian RFA included a Commonwealth Government commitment to provide financial assistance for employment and industry development (including plantation establishment and maintenance), voluntary conservation agreements to protect values on private land, and new reserve management. Funds also have been allocated to the Tasmanian Government for two interpretive centres to promote, among other things, an appreciation of Tasmania's forests. Funding for the Tasmanian RFA will total \$110 million of which \$20 million is provided from the Natural Heritage Trust. Industry development in other States has been funded through the Forest Industry Structural Adjustment Programme (not included in this Budget Statement).

Regional Forest Agreements currently under negotiation will cover the major forest areas of South-east Queensland, the Eden, Upper and Lower Northeast and Southern regions of New South Wales, and the North East Gippsland and West regions of Victoria.

National Forest Inventory

The National Forest Inventory (NFI), a cooperative programme between Commonwealth and State and Territory Governments and based in the Bureau of Rural Sciences, collects and communicates information on Australia's total 156 million hectares of public and private, native and plantation

forests. It provides a single authoritative source of data at the national level about the type, location, distribution, height, crown density, growth stage and/or planting date, ownership and protection status. Activities and outcomes include production of national forest statistics reported in *Australia's State of the Forests Report—1998*, the *National Plantation Inventory (NPI) 1997* and annual NPI reports *Australian Forest Products Statistics*, Australian Bureau of Statistics yearbooks and through a detailed website (www.brs.gov.au/nfi). Data describing criteria and indicators of sustainable forest management to meet nationally and internationally agreed frameworks are collated by the NFI and reported as part of Australia's national and international reporting obligations. This includes *Australia's First Approximation Report to the Montreal Process* in 1997, a current process to collate Category A regional indicators; and an FAO *Temperate and Boreal Forests Resource Assessments 2000*. Improved public knowledge on Australia's forests is facilitated through the website *State of the Forests Report*, maps and a publication series *Australian Forest Profiles*. The NFI is also involved in the development of protocols to promote nationally consistent data collection and data management standards.

The NFI was established in November 1988. In 1992, its role was endorsed in the National Forest Policy Statement, signed by all State and Territory Governments and the Commonwealth. In 1997, the NFI was renewed by a Commonwealth commitment to funding over four years through the National Land and Water Resources Audit, part of the Natural Heritage Trust.

Plantations and Farm Forestry

Farm Forestry Programme

The Commonwealth is providing \$15.1 million in 1999-2000 for plantation, farm forestry and forest industry development. Under the National Forest Policy Statement and the Wood and Paper Industry Strategy, \$3.7 million has been committed to projects to promote continued development of a diverse, internationally competitive forest industry based on ecologically sustainable management practices. The balance of \$11.4 million will be provided through the Natural Heritage Trust to expand and enhance the Farm Forestry Programme. A further \$15.6 million will be provided to the year 2000-01 from the Trust.

The aim of the Farm Forestry Programme is to encourage the incorporation of commercial tree growing and management into farming systems for the purpose of wood and non-wood production, increasing agricultural productivity and sustainable natural resource management.

The Farm Forestry Programme has four objectives.

- To promote farm forestry on cleared agricultural land for a range of benefits, including wood and non-wood products, increased agricultural production and environmental benefits.
- To promote commercial wood production on cleared agricultural land as an integral part of profitable wood-based industries.
- To promote development of new tree-crop products and industries with an emphasis on native species.
- To promote sustainable management and use of private native forest and woodland.

The Farm Forestry Programme continues to raise the national awareness of farm forestry, promoting a shift in the culture of landowners towards growing trees for commercial purposes to meet economic and environmental objectives. In addition, under the programme 14 Regional Plantation Committees have been established to address planning and coordination issues at the regional level, and to act as a catalyst for plantation and farm forestry development. A national inventory of farm forestry is being compiled by the Bureau of Rural Sciences on behalf of the Programme.

Plantations for Australia: the 2020 Vision

The Plantations 2020 Vision initiative builds on a target to treble the nation's plantation estate over the period 1996-2020. This target was adopted by industry following the release of a joint Commonwealth-State-industry report. Funding is designed to facilitate and stimulate a substantial increase in private sector investment in plantation forestry. The strategy is outlined in the report, *Plantations for Australia: The 2020 Vision*, which was endorsed by Commonwealth, State and Territory Forestry Ministers in July 1997, following a presentation on the report from industry.

The primary objective of the Plantations 2020 Vision is to build internationally competitive and commercially oriented plantation growing and processing industries. It aims to ensure that plantation forestry in Australia presents as a model of environmental, social and economic sustainability.

Environmental benefits include a substantial contribution to reducing Australia's net greenhouse gas emissions and improved land management outcomes. Other expected benefits include a turnaround in the trade deficit for wood and wood products, rural development (including creation of up to 40,000 jobs) and diversification of rural incomes.

Plantations 2020: Innovative Activities and Projects

The partners in the Plantations 2020 Vision, that is, the Commonwealth, the States and industry, are working to create an environment conducive for investment in plantations. Each of the partners has responsibilities for implementing the broad range of actions outlined in the Plantations 2020 Vision report. Activities currently being funded by the Commonwealth Government under the Plantations 2020 Vision include as follows.

- Employment of a national plantations coordinator.
- National workshops.
- A communications strategy for local governments and community groups on the benefits of plantations.
- Promotion of the natural resource management benefits of commercial trees.
- A study to assess the availability of suitable land for plantations.
- A study on plantation profitability compared with other land uses.
- Removal of impediments to plantation establishment and leverage for changed policy settings at all levels of Government.

International Forestry Assistance

Australia provides support to a wide range of forest-sector activities as part of its international development assistance programme. These extend from large institutional strengthening activities to relatively small community forestry projects such as those implemented by non-government organisations. The diversity of assistance reflects the extensive needs that exist within the forestry sector of developing countries. Forestry activities supported by Australia are located mostly in Papua New Guinea, the Pacific, and South Asia.

Australia also supports forestry research activities through the Australian Centre for International Agricultural Research (ACIAR). ACIAR commissions collaborative research projects in developing countries, and promotes close interaction between Australian and developing country scientists in areas of common interest. Included in these research expenditures is core and project-specific funding to the Centre for International Forestry Research in Indonesia, and to the International Centre for Research in Agroforestry, in Kenya.

Australia continues to support initiatives associated with the work programmes of the Intergovernmental Forum on Forests and the Asia-Pacific Forestry Commission. This work includes, for example, implementation of a Code of Practice for Forest Harvesting in the Asia-Pacific region.

Other international forestry assistance provided by Australia includes financial contributions to the International Tropical Timber Organisation, the Global Environment Facility, the World Bank, and the Asian Development Bank.

Box 5.2: Support for Sustainable Forest Management in the Pacific

The Solomon Islands Forest Management Project (\$1.9 million) is designed to help the Solomon Islands Government manage its extensive forest resources more effectively. The project will strengthen the infrastructure and institutional arrangements required for sustainable forest management, and strengthen the sector's policy, legal and regulatory framework. Project beneficiaries include the government's forestry division, landowners, local communities and timber companies. In Vanuatu, the Sustainable Forest Utilisation Project (\$5.4 million) is providing assistance in forests management and related operations. The project will strengthen national capacity in sustainable forest management by improving planning, minimising the environmental impact of logging, and maximising returns to resource owners and government. The project will also assist forest-based industry to develop timber products of acceptable standard for domestic and international markets.

Assessing the Resource Base

National Land and Water Resources Audit

The Audit provides data, analysis and appraisal to facilitate improved decision making on land, water, vegetation and natural resource management by building an Australia-wide information base. The Audit will complete its work by 30 June 2001. There are seven themes or areas of activity on which the Audit is concentrating:

- surface and groundwater management;
- dryland salinity;
- vegetation cover and condition;
- rangeland monitoring;
- landuse change;
- capacity for natural resource managers and farmers to implement change; and
- waterway, estuarine, catchment and landscape health.

Activities and Projects

A needs analysis has been undertaken by the Audit to identify key questions and information needs of resource managers. The themes of the Audit that arose from this analysis are:

- the Audit is developing systems and processes to provide input into the decision-making activities of senior natural resource managers;
- methods and data management requirements have been examined. A framework for a database is being defined and collated;
- protocols for data sharing, use, maintenance, and processing are being developed. Work plans for the seven themes are complete; and

- funds have been allocated to initiate a set of implementation projects that will demonstrate and trial Audit methods in projects proposed by State and Territory agencies.

CSIRO

The CSIRO's research on land resources supports the Government's investment in sustainable natural resource management and is closely linked with the work on water (see Chapter 6).

Allocations in 1999-2000 include:

- \$2.5 million for projects to increase understanding and monitor total catchment processes to develop effective planning and management tools;
- \$2.1 million for projects to aid the systematic understanding, measuring and monitoring of Australia's land resources;
- \$3.1 million for projects to understand land degradation processes and develop tools for management and restoration;
- \$1.2 million for projects to develop remediation techniques;
- \$1.7 million for projects to develop frameworks and processes to aid better land use decision making and resolve conflicts; and
- \$4 million for projects to assist in the development of environmentally and economically successful farm forestry projects in selected regions.

The CSIRO is continuing to develop, with other agencies, and groups a plan for new work on an integrated approach to sustainable land management in the Murray-Darling Basin. Also the CSIRO is undertaking a number of projects to support the development of tree planting strategies for areas affected by salinity and where disposal of wastewater and saline water disposal is a concern.

Land Cover Report

The Bureau of Rural Sciences and State Government agencies undertook a joint project to monitor rates of land clearing and tree planting across the 40 per cent of Australia used for agriculture. Landsat Thematic Mapper satellite data and other information was used to show that annual average rates of clearing of woody vegetation for cropping and grazing were around 293,170 hectares, about 100,000 hectares less than preliminary estimates made for the National Greenhouse Gas Inventory. The results of this study are being used to improve estimates of greenhouse gas emissions from land use change for the Inventory and will be used by research organisations and management agencies at State and local government levels for catchment modelling and planning and to address biodiversity conservation issues.

Mining and Land Rehabilitation

National Codes of Practice for Radioactive Ore Mining

The Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) coordinates the development of the national codes of practice to provide national uniformity in the development of State legislation and work practices controlling radiation practices, including the mining and milling of radioactive ores and the safe disposal of radioactive wastes. These codes are being revised currently.

Managing and Monitoring Mine Wastes

The Australian Nuclear Science and Technology Organisation (ANSTO) is involved in a number of activities related to the management of mine wastes. The ANSTO Managing mine wastes project (predicted expenditure of \$3.4 million in 1999-2000) is to provide a sound scientific basis for making decisions on management of mine wastes. This project will identify key parameters, develop and apply measurement techniques and develop and apply computational tools for quantitatively assessing the effectiveness of mine waste management options.

ANSTO is also developing cleaner technology for uranium mining and milling and advanced oxidation technology for the treatment of water and waste water (\$1.3 million in 1999-2000).

Rum Jungle

The five-year monitoring and maintenance programme, which totalled more than \$900,000, at the former Rum Jungle Uranium Mine in the Northern Territory was completed in 1997-98 and reviewed in 1998-99. The programme provided site monitoring to test the longer-term environmental response to rehabilitation, weed control and drainage structure repair.

Land rehabilitation

CSIRO

The Commonwealth Government will provide \$1.6 million in 1999-2000 to the CSIRO's Minesite Rehabilitation Programme.

Christmas Island

Under its existing lease, Phosphate Resources Ltd (PRL) is required to pay a levy to Parks Australia for rehabilitation of old mining sites. The lease imposes further environmental obligations requiring monitoring by the Commonwealth. These include a Dust Removal Project, to be completed by September 1999 at an estimated cost of \$6.7 million, and a comprehensive environmental management plan. PRL is obliged to reduce levels of air pollution to acceptable levels, to rehabilitate mining areas for future development purposes (or for incorporation into the Christmas Island National Park) and to comply with a range of mainland environmental standards.

Maralinga

The former British nuclear test sites at Maralinga are undergoing rehabilitation through a \$108 million project, to be completed in 1999-2000. The principal hazard at the test sites is plutonium contamination of soil and buried debris. Contaminated soil has been removed and buried, and the treatment of 21 plutonium contaminated debris pits has commenced. This project is expected to be completed by mid-2000.

The Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) monitors the clean-up of residual radiation contamination from atomic weapons tests in Maralinga. ARPANSA has a contract with the Department of Industry, Science and Resources to delineate the soil removal area and to verify that the rehabilitation criteria have been met. In addition, ARPANSA provides a health physics auditing role, as well as, a lung monitoring service for the workers involved in the project.

Railway Contaminated Site Remediation

The remediation of former Australian National Railways Commission (AN) land under the remediation project is almost complete, with most sites only requiring sign-off procedures to be conducted for finalisation. The management of the remediation has been outsourced to INDEC Consulting. It is expected that \$9.5 million will be expended in 1998-99 and \$15.7 million is to be provided in 1999-2000.

Chapter 6: Inland Waters

Key Points:

- The Natural Heritage Trust Programmes are contributing significantly to achieving improved management and quality of inland waters. The National Rivercare Programme funded 171 new community and State and Territory agency projects through the 'one-stop-shop' process at a cost of \$7.5 million in 1998-99, as well as 93 continuing projects at a cost of \$6.7 million.
- The National Rivercare Programme will provide \$21.7 million in 1999-2000 to support activities contributing to improved natural resource management and environmental outcomes outside the Murray-Darling Basin.
- The Commonwealth will provide \$43.1 million under the Murray-Darling 2001 programme in 1999-2000 to accelerate on-ground action addressing high priority water quality and river health issues in the Murray-Darling Basin.
- The National Wetlands Programme will provide for the listing of new wetlands under the Ramsar Convention and the completion of management plans for all of Australia's existing 49 listed wetlands. The Programme will also implement the Commonwealth Wetlands Policy, including an inventory of wetlands on Commonwealth land and waters.
- The National River Health Programme is central to the Commonwealth's efforts to progress implementation of the environmental aspects of the Council of Australian Governments Water Reform framework. Totalling \$3.1 million in the year 2000-01, the programme will allocate a significant portion of these funds towards environmental flow management.
- Waterwatch Australia continues to promote community-based monitoring and on-ground action for the health of Australia's waterways. The programme will be expanded into new catchments and regions, particularly urban waterways as part of the Living Cities Programme.
- The Living Cities Programme is a new measure, which recognises that Australia's environmental problems are not restricted to regional and rural areas. It includes an Urban Waterways component to improve the health of degraded urban waterways.

Allocation of Water Use

Council of Australian Governments Water Reform Framework

In February 1994, the Council of Australian Governments (COAG) consisting of the Prime Minister, Premiers, Chief Ministers and the President of the Australian Local Government Association agreed to implement a 'strategic framework to achieve an efficient and sustainable water industry'.

Table 6.1: Inland Waters—Programme and Tax Expenditure Estimates

Description	1998-99 \$m	1999-00 \$m	2000-01 \$m	2001-02 \$m (h)	2002-03 \$m
PROGRAMME AND TAX EXPENDITURE ESTIMATES					
Rivers					
National Rivercare	19.2	21.7	24.6	15.6	–

Programme(a)					
National River Health Programme(b)	4.7	3.1	4.5	1.8	–
Fisheries Action Programme, inland waters(c)	0.8	1.1	1.1	0.8	–
Waterwatch Australia(d)	2.8	2.6	2.6	2.6	–
Tasmanian Regional Environment Remediation Programme	4.4	–	–	–	–
Murray-Darling Basin					
Murray-Darling 2001	40.4	43.1	48.7	32.6	–
Wetlands					
National Wetlands Programme	4.1	3.8	3.8	3.8	–
Assessment, research and monitoring					
Living Cities Programme					
Urban Waterwatch	–	4.0	4.0	4.0	–
Urban River Health Programme	–	0.5	1.0	0.5	–
National Land and Water Audit(e)					
CSIRO (total)(f)	11.6	11.8	na	na	na
Nutrient and pollution transport	3.3	3.4	na	na	na
Surface water management	2.1	2.1	na	na	na
Groundwater management	1.0	1.0	na	na	na
Land and water contamination	2.8	2.9	na	na	na
Waste utilisation	1.3	1.3	na	na	na
Urban water systems	1.1	1.1	–	–	–
CRC for Catchment Hydrology	2.0	2.2	2.6	2.6	2.6
CRC for Freshwater Ecology	2.2	2.0	2.4	2.4	2.1

CRC for Water Quality and Treatment	2.3	2.7	2.7	2.6	–
Bureau of Meteorology(g)	0.8	0.6	0.6	0.6	0.6
International development cooperation					
International water supply and sanitation	38.0	30.2	27.7	17.4	na

– denotes nil;
na denotes not available

- a. Formerly referred to as the National Rivercare Initiative and comprising four programmes presented separately in this table: the National Rivercare Programme, the National River Health Programme, Waterwatch Australia and a contribution to the Fisheries Action Programme. This item refers to the elements administered by Agriculture, Fisheries and Forestry, Australia.
- b. Administered by Environment Australia.
- c. Administered by AFFA See Chapter 9 for the description of the programme.
- d. Administered by Environment Australia and comprising Natural Heritage Trust funds and Living Cities Programme funds
- e. See Chapter 5.
- f. This is the total of the figures against indented descriptions below.
- g. Estimate of appropriation-based Bureau of Meteorology expenditure attributable to hydrological monitoring, services and research in support of environmental objectives.
- h. 2001-02 figures for Natural Heritage Trust programmes contingent on the second tranche sale of Telstra.

The resultant COAG Water Reform Framework highlights the need for concerted action at both the economic and environmental level to reform the water industry and to minimise unsustainable use.

The COAG Water Reform Framework was subsequently linked in April 1995 to the National Competition Policy drawing the water industry more closely into the microeconomic reform process. The time frames for implementation of the Framework were set at five to seven years with full implementation by the year 2001.

Critical environmental water issues are addressed in the Water Reform Framework and include: allocation of water for the environment; ecological sustainability of new developments; institutional reform; the incorporation of environmental costs in water pricing; ecologically sustainable water trading; protection of groundwater; and implementation of the National Water Quality Management Strategy.

The Government's National River Health Programme is assisting the achievement of these goals and objectives.

Rivers

National Rivercare Programme

Water is an integral part of the environment and the basis of many human activities, yet it is increasingly threatened by nutrient enrichment and algal blooms, salinisation, disruptions to

hydrological processes, increased sediment loads, pesticides and heavy metal contamination, loss of aquatic biodiversity and invasion by foreign plant and animal species.

The National Rivercare Programme (NRP) aims to address this situation by promoting activities that contribute toward the sustainable management, rehabilitation and conservation of inland rivers outside the Murray-Darling Basin. The Murray-Darling 2001 Programme addresses high priority water quality and river health issues inside the Murray-Darling Basin.

The NRP involves a coordinated and integrated package of actions involving the community and other stakeholders who can make a contribution to river management. This approach recognises the importance of a number of strands of activity: community awareness and on-ground actions, as well as, targeted research and demonstration activities.

The central part of the NRP is the implementation of on-ground activities. Through this component the NRP seeks to encourage the development of strategic, targeted responses to address identified regional priorities for the management, rehabilitation and health of Australia's inland rivers.

Box 6.1: National Rivercare Programme

The aim of the National Rivercare Programme is to ensure progress towards sustainable management, rehabilitation and conservation of rivers outside the Murray-Darling Basin and to improve the health of these rivers.

The objectives will be achieved by working with all levels of government, industry and the community to:

- increase community awareness and understanding of river issues and promote linkages to facilitate community involvement in developing responses;
- promote integration of riverine action plans with land and vegetation management issues;
- assist in developing responses that address critical barriers or impediments to improved river health, particularly within catchment or regional contexts, through targeted management responses;
- assist and further stimulate investment in activities that address national, State and regional strategies and priorities for improved river outcomes; and
- assist in providing high quality data and decision support systems that support investment and decisions relating to environmental water provisions.

The Commonwealth provided funding of \$14.2 million for on-ground activities as part of the NRP in 1998-99 which allowed community groups, local and State Governments to start work in improving the protection, management and rehabilitation of inland rivers. Of the \$14.2 million, \$3 million was provided for 107 new community group projects, \$2.5 million for 30 new State agency projects and \$2 million for 34 new projects by other types of organisations such as local government and regional organisations. There was also \$1.5 million provided for 47 continuing community group projects, \$3.8 million for 34 continuing State agency projects and \$1.4 million for continuing projects of other types of organisations such as local government and regional organisations.

National River Health Programme

It is clear that in many of Australia's rivers and groundwater systems the unsustainable use of water is threatening environmental and productive values. Given the consequences of the adoption of inappropriate policies and practices, it is imperative that such decisions are made on the basis of the best available information and expertise. Through the \$15.8 million, six-year, National River Health Programme, including \$3.1 million in 1999-2000, a significant investment is being made to identify priorities to protect and repair the health of Australian rivers.

This is being achieved through the programme's two sub-components:

- The **Environmental Flows Initiative** has been targeted to assist in the implementation of the COAG Water Reform Framework. An Expert Advisory Panel has been established to assist in selecting the most suitable projects for Commonwealth and State partnerships to identify, allocate and implement appropriate environmental flow regimes. Following the initial round of projects submitted by States, a gap analysis will be undertaken and supplementary projects tendered. \$2 million will be invested under this component in 1999-2000.
- The **Australia-wide Assessment of River Health** will provide invaluable data for the State of the Environment Report, National Land and Water Audit and for monitoring the outcomes of the Natural Heritage Trust. Under this programme, \$1.8 million will be invested in 1999-2000 to undertake ongoing activities associated with the nationwide assessment of river health. The assessment, established as a joint venture between river management agencies across Australia, Environment Australia, researchers and communities, will be the first such assessment in the world undertaken on a continental scale.

Waterwatch Australia

Waterwatch Australia is a national programme, which operates in every State and Territory. It coordinates and supports the monitoring of our waterways by schools and community groups, aiming to promote community action to address water quality and aquatic biodiversity issues and to achieve healthy waterways.

The programme assists the community to establish water quality and aquatic biodiversity monitoring networks, which collect meaningful information. This information is shared with catchment managers and other sectors of the community. The network is assisted by the appointment of regional coordinators who feed the information collected into local and catchment management planning processes, so that all data is interpreted in the context of the whole catchment.

Most recently, Waterwatch Australia has developed national monitoring guidelines and protocols and data management tools to ensure consistency in the collection and interpretation of data across the 4,000 Australian sites where Waterwatch groups are operating.

The Commonwealth provided approximately \$2.2 million in 1998-99 for 66 Waterwatch Australia projects through the Natural Heritage Trust 'one-stop-shop'. Most of these projects are community-based, regional coordination projects that provide support and training to community Waterwatch networks.

In 1999-2000, approximately \$2.2 million will also be provided to community projects through the 'one-stop-shop'. Many of these projects will be a continuation of those funded in 1998-99. In addition, \$4 million will be provided through Urban Waterwatch.

Murray-Darling Basin

Murray-Darling 2001

The Murray-Darling Basin is Australia's most important agricultural region and also contains much of the nation's 'natural capital', including 24 major river systems and over 30,000 wetlands. Development in the Basin has come however at a high cost to its environmental resources, with substantial changes to the natural flow regimes of the rivers, deterioration in aquatic ecosystems, and major land degradation including irrigation induced salinity and dryland salinity due to overclearing.

The Murray-Darling 2001 Programme is primarily concerned with developing a coordinated and integrated set of actions to address the health of the Basin's river systems. The Programme is

delivered through an institutional framework established under the Murray-Darling Basin Initiative which has brought together six governments and the community in a unique partnership. A distinguishing feature of the Initiative, has been a focus on promoting integrated catchment management by encouraging investment to be delivered through community and government regional strategies and action plans based primarily on catchments.

The primary focus of the Murray-Darling 2001 programme is the implementation of strategic integrated on-ground activities that address high priority issues impacting on environmental flows, water quality, and the ecological health and diversity of the Basin's river systems and aquatic environments. Land use and management practices by landholders within catchments, particularly those associated with irrigation and dryland farming systems, are a major contributing factor to aquatic health and are an integral part of this integrated catchment management approach.

The Commonwealth provided funding of \$36.6 million for new and continuing projects under Murray-Darling 2001 in 1998-99. Under the special cost-sharing arrangements for projects funded through the Murray-Darling 2001 Programme, State Governments within the Basin have agreed to match (in cash) the Commonwealth's contribution. Of the Commonwealth's funding \$16 million was provided to 197 new projects through the 'one-stop-shop' process, with \$20.6 million provided for the continuation of 255 existing projects.

An amount of \$13 million has been specifically allocated from the Murray-Darling 2001 Programme over the life of the Trust to provide for improved environmental flows and implementation of management strategies to regenerate native fish populations and combat European carp in the Murray-Darling Basin. Commonwealth funding to address these objectives is delivered through the MD 2001 FishRehab Programme, which is not part of the Natural Heritage Trust 'one-stop-shop' and does not require matching funding from the States. The Commonwealth approved funding of \$2.8 million for new and continuing projects under this programme in 1998-99.

Box 6.2: Murray-Darling Basin 2001

The aim of the Murray-Darling 2001 Programme is to improve the health of the Basin's river systems and other aquatic environments through an integrated approach to the management of the land, water and other environmental resources.

Working with all levels of government, industry and the community through an agreed institutional approach, Murray-Darling 2001 aims to:

- improve water quality by reducing the current salt and nutrient levels;
- helping to ensure all Basin catchments have integrated catchment plans for managing their natural resources;
- support on-ground works that address land and water degradation problems identified in catchment strategies;
- restore the health of riparian land systems, wetlands and floodplains by establishing environmental flows that are capable of sustaining natural processes, protecting water quality and the aquatic environment;
- improve the condition of key river systems in the Basin through integrated catchment management and flow management strategies; and
- encouraging long-term productive land use in the Basin in balance with environmental protection by reducing salinity and waterlogging in irrigated lands and dryland areas and encouraging the highest value use of scarce water resources.

Wetlands

National Wetlands Programme

The Commonwealth has been progressing a range of initiatives under the National Wetlands Programme (NWP) which implement the Commonwealth Wetlands Policy and support Australia's obligations under the Ramsar Convention on Wetlands and bilateral migratory bird agreements with Japan and China. The Programme promotes the conservation, repair and wise use of wetlands across Australia.

The Natural Heritage Trust partnership agreements signed between the Commonwealth and respective States and Territories set the framework for the delivery of the National Wetlands Programme and provides for:

- a national framework of wetland policies, with State and Territory wetland policies and strategies complementary to the Commonwealth Wetlands Policy, so as to develop a national approach to the 'wise use' of wetlands;
- management plans for all Australian Ramsar sites, and increasingly, for East Asian Australasian Shorebird Site Network sites and other nationally important wetlands;
- a nationally consistent approach to monitoring of these wetlands;
- a national wetland inventory;
- nomination of additional sites under the Ramsar Convention and to the East Asian Australasian Shorebird Site Network;
- support for community wetlands projects; and
- development of a sound technical and scientific basis for wetland conservation and management.

The Commonwealth will provide \$3.8 million to the National Wetlands Programme in 1999-2000. A priority of the Programme is the development of a comprehensive national wetland inventory by the year 2000. A total of \$340,000 was allocated in 1998-99 to conduct surveys to identify important wetlands or to update State and Territory chapters of the second edition of *A Directory of Important Wetlands in Australia*. This information will be included in a third edition scheduled for release in late 1999.

Through the 1998-99 round of funding from the Natural Heritage Trust's 'one-stop-shop', the Commonwealth allocated over \$1.6 million to 90 wetlands projects. Nearly half of these were community-based projects to carry out on-ground works to rehabilitate and manage wetlands and to support awareness raising of wetland conservation issues.

Box 6.3: Gwydir Wetlands

On 2 February 1999, World Wetlands Day, a group of landholders of the Gwydir Wetlands near Moree, NSW, signed a Memorandum of Understanding that balances conservation with sustainable grazing. The Memorandum outlines the ecological and grazing values of the wetlands, establishes an agreed management framework, and recommends the Gwydir Wetlands be listed as a Wetland of International Importance under the Ramsar Convention. The Gwydir Wetlands, when listed under the Ramsar Convention at the Seventh Conference of Parties to the Convention in May 1999 at Costa Rica, will be the first voluntary private Ramsar site in Australia. The Memorandum was also signed by

the World Wide Fund for Nature, the New South Wales National Parks Association, and State and Commonwealth Governments.

Assessment, Research and Monitoring

Living Cities Programme

The Living Cities Programme is a new measure which addresses urban environmental problems, recognising that Australia's environmental problems are not restricted to regional and rural areas (see Chapter 7). The Urban Waterways component of the programme will provide a total of \$4.5 million in 1999-2000 to expand the Natural Heritage Trust's Waterwatch programme within urban areas and to establish a national monitoring regime for Urban River Health.

- The Commonwealth will provide \$4 million in 1999-2000 for the **Urban Waterwatch** programme to improve the health of urban waterways through community monitoring in cities and rural urban centres. The programme will raise awareness, identify sources of water quality problems and facilitate community involvement in on-ground projects to address the problems.
- The Commonwealth will provide \$500,000 in 1999-2000 for the Urban River Health Programme to establish a national monitoring regime for urban rivers. The programme will encompass river health bioassessment monitoring activities as well as the ongoing development of nationally consistent protocols for assessing urban river health. Actions undertaken under this programme will augment existing National River Health Programme activities, extending the Australia-wide Assessment of River Health to cover urban river systems and support the restoration of river health in urban areas. Urban River Health activities will build on work already completed under the National River Health Programme.

CSIRO

The CSIRO's water research supports the Government's investment in sustainable natural resource management and is closely linked with its research on land degradation (see Chapter 5). Allocations in 1999-00 include:

- \$3.4 million to improve understanding and management of pollution of waterways by nutrients, pollutants and sediments;
- \$3.1 million for building tools for understanding surface and groundwater resources and their management;
- \$2.9 million for understanding and modelling land and water contamination processes; and
- \$1.1 million for identifying new approaches to urban water system technologies, design and management.

In addition, the CSIRO has commenced a new project aiming to stimulate a radical re-consideration of the way that urban water systems are designed, equipped and managed. The technologies and approaches envisaged in future sustainable water systems will have environmental benefits. The CSIRO will commit \$2.2 million to this work for the years 1999-00 and 2000-2001.

Cooperative Research Centres

In 1998-99, the Commonwealth provided \$2 million to the Cooperative Research Centre (CRC) for Catchment Hydrology towards research aimed at improving our understanding of catchment

hydrology and its application to water management issues, concentrating particularly on salinity problems, water yield, waterway management, control of sediments and nutrients, and flood estimation and forecasting. The Commonwealth also provided \$2.2 million to the CRC for Freshwater Ecology for research on ecological sustainability and management of Australian temperate region surface waters and a further \$2.3 million to the CRC for Water Quality and Treatment towards research aimed at assisting the Australian water industry to deliver quality drinking water to consumers.

Hydrometeorology

The Bureau of Meteorology provides advice to government and others on a wide range of hydrometeorological issues related to the assessment, planning, development and operational aspects of water resources assessment. It operates, in conjunction with State and Territory water agencies, a network of benchmark stream flow gauging stations and associated climate stations suitable for detecting changes and trends associated with climate variability and change. It also provides an international focus, through UNESCO and the World Meteorological Organization, for information on Australia's water resources.

International Development Cooperation

Wetlands

Australia's overseas aid programme spent \$2.2 million in the 1998-99 financial year on bilateral and regional wetland projects worth a total of \$9.6 million. Australia also contributed to the Global Environment Facility and South Pacific Regional Environment Programme, under which important wetlands activities are being implemented.

Water supply and sanitation

It is estimated that 2.9 billion people worldwide lack adequate sanitation facilities and around 25 million people die each year of water-related diseases. Poor hygiene and contaminated water account for 80 per cent of diseases in developing countries. Globally, the quality of water continues to decline due to industrial pollution, poor land use planning, and the inappropriate disposal of waste.

The Australian aid programme, which operates within a framework of economic and environmental sustainability, is reducing the effects of poor water quality and supply by helping to improve water resource management and increasing access to clean water in developing countries.

During the 1998-99 financial year, Australia spent \$38 million assisting developing countries to improve water supplies, sanitation, waste disposal facilities, and water resource management. The majority of this assistance was focused on the Asia-Pacific region and ranged in scope from support for the construction of community-managed wells and latrines to the development of sustainable water resource management policies and institutions at the national level.

Box 6.4: Australian Support for Cleaner Production

Australia's aid programme is funding a \$4.8 million project under the ASEAN-Australia Economic Cooperation Programme to reduce the level of waste generated, and to improve the quality of water discharged from textile, food processing and distilling industries in ASEAN countries. By demonstrating cleaner production technologies, waste minimisation, and waste treatment techniques, the project is expected to result in industry adopting cleaner production methods including total catchment management, efficient water use, and recycling.

Examples of projects funded through the Australian aid programme include:

- a \$6.7 million water sanitation and supply project in Kiribati with the aim of improving the overall health of the population through the supply of potable water and improved sanitation;
- a \$2 million action programme for China's water sector, focusing on reducing fundamental water resource problems such as floods, pollution, environmental degradation and water shortages through effective resource management; and
- a \$13.8 million urban water supply in the Solomon Islands. The project's objective is to ensure that the Solomon Islands has an efficient and effective water authority to provide safe, available, reticulated water supplies and waste water services to urban centres.

Chapter 7: Environment Protection

Key Points:

- The National Environment Protection Council (NEPC) has now made three National Environment Protection Measures (NEPM). The first of these, the National Pollutant Inventory (NPI) was made in February 1998 and the first reporting year began on 1 July 1998. Council made two additional Measures in June 1998. These were the Ambient Air Quality NEPM and the Movement of Controlled Waste between States and Territories NEPM.
- Draft NEPMs on Waste Packaging and Assessment of Contaminated Sites have been issued for stakeholder consultation.
- A New Measure, the Living Cities Programme, will provide \$50.6 million from 1999-2000 to 2001-02. The Living Cities Programme recognises that Australia's environmental problems are not restricted to regional and rural areas and it addresses urban environmental problems.
- As a New Measure, the Environment Protection Programme provides funding of \$17.3 million from 1999-2000 to 2002-03 in a range of areas.

The Government continues its commitment to environmental protection through a range of cooperative programmes between all levels of government, industry and the community. Details of Commonwealth funding of environment protection initiatives are in Table 7.1.

Table 7.1: Environment Protection--New Measures and Programme and Tax Expenditure

Description	1998-99 \$m	1999-00 \$m	2000-01 \$m	2001-02 \$m	2002-03 \$m
NEW MEASURES					
Living Cities Programme	-	10.2	20.5	20.0	-
Environment Protection Programme	-	4.3	4.3	4.3	4.4
PROGRAMME AND TAX EXPENDITURE ESTIMATES					
National Environment Protection					
Living Cities Programme	-	10.2	20.5	20.0	-
National Environmental Protection Council(a)	1.0	1.0	1.0	1.0	-
National Pollutant Inventory	5.0	4.0	-	-	-
National Water Quality Management Strategy	na	-	-	-	-
Noise Pollution					

Noise Amelioration Programme for Sydney Airport	69.9	69.9	54.0	-	-
Airport building controllers and airport environmental officers at leased airports	4.0	4.0	4.0	2.7	-
EIS process for second Sydney airport	0.1	0.3	-	-	-

Table 7.1: Environment Protection--New Measures and Programme and Tax Expenditure (continued)

Description	1998-99 \$m	1999-00 \$m	2000-01 \$m	2001-02 \$m	2002-03 \$m
Environment/Industry Initiatives					
Technology promotion	na	na	na	na	na
Environment Industry promotion (b)	na	na	na	na	na
EnviroNET Australia	0.2	0.2	0.2	0.2	na
Eco-efficiency and programmes related to the Olympics (b)	na	na	na	na	na
Best Practice Environment Management	na	na	na	na	na
International Environment Protection Programme	0.3	0.3	0.3	0.3	na
Waste Minimisation					
Industry waste reduction agreements(b)	na	-	-	-	-
Other waste reduction initiatives(b)	na	-	-	-	-
Waste management awareness programme	2.3	1.1	1.3	1.1	-
CRC for Waste Management and Pollution Control	3.0	2.5	2.0	1.0	na
Tax deduction for pollution prevention or remediation	na	na	na	na	na
Hazardous Materials and the Environment					
International Programme on Chemical Safety	0.1	0.1	0.1	0.1	0.1

Chemicals risk management (b)	na	na	na	na	na
Environmental health assessment	0.7	0.7	0.7	0.7	na
Australian Dangerous Goods Code	0.1	0.1	0.1	0.1	0.1
Hazardous waste initiatives (Basel)	na	-	-	-	-
Leaded petrol excise levy (c)	-95.0	-85.0	na	na	na
Persistent organic pollutant management plans	na	-	-	-	-
Environment and Health					
National Environmental Health Strategy	0.7	1.0	1.5	1.6	1.6
Electromagnetic energy programme	1.0	1.0	1.0	na	na
Australian Radiation Laboratory, electromagnetic radiation monitoring	0.2	0.2	0.2	0.2	0.2
International Development Cooperation					
World Health Organization	2.4	2.4	2.4	2.4	2.4
International environment protection	12.0	14.3	8.2	na	na

- denotes nil; na denotes not available.

- a. This includes the Commonwealth's contribution to the National Environment Protection Council Service Corporation for its operational budget. The amount was \$400 000 in 1998-99.
- b. This activity is funded through the Environment Protection Programme.
- c. These funds flow from the excise differential between leaded and unleaded petrol. Funds go to consolidated revenue.

LIVING CITIES PROGRAMME

The Living Cities Programme recognises that Australia's environmental problems are not restricted to regional and rural areas and it addresses urban environmental problems. The Programme has five elements.

- Waste Management.
- Chemwatch.
- Air Toxics.
- Compressed Natural Gas Refuelling Infrastructure. (See Chapter 8.)
- Urban Waterways and Reducing Coastal pollution.

The programme will provide \$10 million in 1999-2000.

Waste Management

The waste management element of the Living Cities Programme will support a resource recovery centre programme. The key challenge for recycling in the current inadequacy of markets. The resource recovery centres are urgently needed to develop more diverse and sustainable markets for a wider range of recycled materials. \$2.1 million has been allocated to this project over a three year period (1999-2000).

Chemwatch

Chemwatch is a new programme to which \$14.4 million has been allocated over three years from 1999-2000. The objective of Chemwatch is to improve chemical management in Australia, primarily in relation to agricultural and veterinary chemicals. There are two main elements:

- A programme for the national collection, storage and destruction of unwanted rural chemicals, including organochlorine pesticides. The collections of unwanted rural chemicals are expected to begin early in 2000 and will be managed by State and Northern Territory environment agencies. Commonwealth funding is being provided on the basis that the States and the Northern Territory will match funding for the collection programme on a dollar-for-dollar basis. Commonwealth and State Government representatives have also been working with industry representatives to ensure safe management of unwanted rural chemicals after the government collections take place. Avcare, the Veterinary Manufacturers and Distributors Association and the National Farmers' Federation have finalised an agreement, the Chemclear Agreement, to ensure that unwanted chemicals do not again accumulate in rural areas.
- A national database of agriculture and veterinary chemicals usage. A detailed proposal is being developed by a joint Standing Committee on Environment Protection and the Standing Committee on Agriculture and Resource Management (SCEP/SCARM) working group by December 1999 for approval for ANZECC and ARM CANZ. The database will give effect to elements of the National Strategy for Agricultural and Veterinary Chemicals.

The outcomes of the Chemwatch programme in the year 1999-2000 will be:

- the establishment of the national collection, storage and destruction of unwanted rural chemicals scheme; and the development of a national database of agricultural and veterinary chemicals use.

The Air Toxics element of the new Living Cities Programme is the Government's second stage response to the independent inquiry into Urban Air Pollution in Australia. The Air Toxics Programme has been allocated \$5 million over three years from 1999-2000 to support the development of a national strategy to monitor and manage air toxics. The State of Environment Report (1996) defined air toxics as 'pollutants present at very low concentrations, known to cause or suspected of causing long-term health effects in humans'. The air toxics strategy will monitor, establish the levels of community exposure to, and manage emissions of selected air toxics. Consideration will be given to the inclusion of air toxics in a future National Environment Protection Measure. Outcomes of the Air Toxics Programme in 1999-2000 will include:

- the development of a 'state of knowledge report' relating to air toxics in Australia;
- commissioning of a number of studies to fill the information gaps identified by the 'state of knowledge report'; and
- the identification of a priority list of air toxics.

Urban Waterways and Reducing Coastal Pollution (National Stormwater Initiative)

Under the Living Cities Programme, The Government has committed \$25 million over three years to further improve the health of urban waterways, in part by building on existing programmes such as Waterwatch. All major urban centres, except for Canberra are on the coast so that urban waterways are a significant source of coastal pollution. \$11 million has been allocated to the development of a National Stormwater Initiative. This programme will address the major sources of pollution of urban waterways and the coast, and lead to improvement in the management of stormwater (including sewage overflows).

Attention to stormwater management and control will have a major effect in alleviating coastal pollution and will build on initiatives under the Coasts and Clean Seas Programme by initially focussing on a selected highly degraded waterway in major coastal cities. The existing Waterwatch and River Health programmes would be integral to the assessment and evaluation of the programme.

NATIONAL ENVIRONMENT PROTECTION

The National Environment Protection Council (NEPC) was established under the *National Environment Protection Council Act 1994*. Its main purpose is to make national environment protection measures (NEPMs) that relate to air quality, ambient marine, estuarine and fresh water quality; the protection of amenity in relation to noise; assessment of site contamination; hazardous wastes; the re-use and recycling of used materials; and motor vehicle noise and emissions. The Commonwealth contributes to the operating costs of the NEPC and to the development costs for each NEPM. In 1999-2000 the Commonwealth will provide \$1 million as its contribution to the NEPC.

Box 7.1: National Environment Protection Measures

- The **National Pollutant Inventory (NPI) NEPM** provides the framework for the development and establishment of the NPI which is an Internet database designed to provide publicly available information on the types and amounts of certain substances being emitted to the air, land and water. State, Territory and Commonwealth Governments are working cooperatively to ensure the effective collection, collation and dissemination of NPI data. Data from the first year (1 July 1998 - 30 June 1999) will be available on the database in February 2000.
- The **Ambient Air Quality NEPM** establishes national ambient air quality standards for six pollutants: sulphur dioxide, nitrogen dioxide, lead, particles, photochemical oxidant (as ozone) and carbon monoxide; and a monitoring and reporting protocol. All jurisdictions (including the Commonwealth) are required to adopt the standards, to monitor against them, and to report annually to the Council and table the report before each House of Parliament within seven sitting days of that House, after the Council has formally adopted the report. The Measure provides a consistent national approach so that standards for air quality are common throughout Australia.
- The **Movement of Controlled Waste NEPM** will achieve a nationally consistent approach to the tracking of controlled wastes when they are moved interstate for recovery or disposal. A similar system, the National Manifest system, previously developed by the Australian and New Zealand Environment and Conservation Council (ANZECC), was being fully implemented in only two States. This NEPM established a uniform national approach to the tracking of controlled wastes when they are moved between jurisdictions for recovery or final disposal.

National Water Quality Management Strategy

The Commonwealth has maintained its involvement in the development and implementation of the National Water Quality Management Strategy, which aims to achieve sustainable use of the nation's water resources by protecting and enhancing their quality, and at the same time, facilitating economic and social development.

Work on the strategy includes progressing the finalisation of effluent management guidelines for specific industries: dairy sheds and dairy processing plants, intensive piggeries, aqueous wool scouring and tanning, and related industries. Effluent management guidelines for Australian wineries and distilleries were published in 1998. The Commonwealth continues to coordinate the revision of the Australian Water Quality Guidelines for Fresh and Marine Waters on behalf of two Commonwealth-State Ministerial Councils, ANZECC and the Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ). A draft document (for public comment) will be released during 1999. The Commonwealth is also coordinating completion of a number of other important guidelines under the NWQMS. These include guidelines for Water Quality Monitoring and Reporting, biosolids management, reclaimed water, sewerage system overflow, and rural land uses and water quality. The Commonwealth Government is also coordinating a rolling revision of the Australian Drinking Water Guidelines.

Noise Pollution

The Government will maintain its focus on noise amelioration in areas around the Sydney (Kingsford Smith) Airport and the preferred site for the proposed second Sydney airport at Badgerys Creek.

The Commonwealth will spend \$69.9 million in 1999-2000 on the Sydney Airport Noise Amelioration package that provides for insulation of noise-affected houses and other public buildings.

Environmental Management at Leased Airports

Commonwealth responsibilities for environmental management at leased Federal airports are set out in the Airports Act 1996 and related Airports (Environment Protection) Regulations. The Government has contracted out to the private sector the statutory roles of the Airport Environment Officer at most of these airports. These officers are responsible for overseeing environmental regulation, clean up and pollution prosecution actions. The Commonwealth is providing \$4 million for employment of Airport Environment Officers and Airport Building Controllers in 1999-2000. This will be recovered through charges on airport owners and, where appropriate, users.

The Commonwealth has developed its regulations in accordance with best practice that provides for implementation of environment management systems and the emerging National Environment Protection Measures.

EIS for the Second Sydney Airport

The Government is committed to conducting a thorough and transparent Environmental Impact Statement (EIS) process on the proposed second airport site at Badgerys Creek. The EIS is putting before the community and the Government a detailed analysis of the benefits and environmental costs of the three options for the construction of the airport at Badgerys Creek. No decision on the development of the airport will be taken until the EIS process is complete.

The Commonwealth has allocated \$283,000 in 1999-2000 for the completion of an independent audit of the EIS process.

ENVIRONMENT INDUSTRY INITIATIVES

Technology Promotion

The Commonwealth is committed to a partnership approach with industry and the community, including taking action together to protect the environment in the long-term national interest. The benefits of this partnership continue to grow and have positive economic and environmental effects in stimulating business opportunities, innovation and jobs.

The Commonwealth is helping the Australian environment industry sector develop into one of the growth industries of the next century. It assists the industry to develop solutions to environmental problems and facilitates the expansion of commercial opportunities in other countries. Industry promotion is about providing support in identifying, developing and expanding commercial opportunities and by providing information about available funding mechanisms.

Funding is provided through the Environment Protection Programme to deliver industry promotion activities and to showcase Australian environment industry expertise.

The Joint Working Group on Environment with Indonesia is one initiative which facilitates cooperation between Indonesian and Australian industry representatives. They identified six priority environment areas for cooperation and, despite regional economic volatility, have developed relationships which serve to underscore the long term nature of Australia's commitment to Indonesia. In 1998, Environment Australia supported a number of capacity building, market access and environment education activities under the JWGE.

The Australia-Germany Collaboration on Water and Environment Research and Development, is a major bilateral research and development effort, funded by the Department of Industry, Science and Resources and managed by the Environment Industry Development Network (EIDN) and the Water Research Foundation of Australia. The Programme has been successful to date in strongly linking the Australian and German water industries in a combined effort to develop new and innovative products for the water industry.

Another initiative designed to help the industry improve its competitive advantage is the preparation of the publication, *Doing Environment Business with China: A Guide*. This publication seeks to raise awareness of appropriate ways in which Australia may contribute to environment protection and sustainable development in China. It also assists in identifying commercial opportunities for Australian companies.

Environment Australia will continue to facilitate opportunities in China with the development of a joint workshop, a joint study and leading a proposed industry delegation to China in late 1999.

The Business Leaders' Forum on Sustainable Development, to be held on 28 May in Canberra is another opportunity to showcase the achievements of Australia's environment management sector. It is designed to bring the Chief Executive Officers of Australia's leading companies together to establish a business network of excellence and innovation on sustainable development.

The Commonwealth continues to focus on the development of new approaches to environment protection through assisting the development of innovative environmental technologies.

EnviroNet

Information on new environmental technologies, services and integrated management systems is disseminated to the Australian and international communities through *EnviroNet Australia*, available on the Internet. The network has been allocated \$200,000 each year over four years from 1998-99 for maintenance and promotion. The site aims to promote environmental awareness, to improve environmental behaviour in the community, and to provide Australian companies with a suitable vehicle for promotion of their goods and services to domestic and export markets. Environment Australia is working with the Environment Management Industry Association of Australia to improve the EnviroNET website and to make it more responsive to industry needs.

As well as EnviroNET Australia, there are a range of mechanisms which promote industry related activities, including websites, publications and seminars.

Australian Environmental Technology website and APEC Virtual Centre

This EIDN internet database features technologies, companies, research agencies involved in environmental management in Australia, detailing technology systems, site assessments, capital and operating costs for environmental technologies operating in Australia. EIDN also supports Australia's website on the APEC Virtual Centre for Environment Technology Exchange, which promotes Australian capabilities to potential technology partners in the region.

International Environment Protection Programme

The Commonwealth is providing \$300,000 each year over four years from 1998-99 for the International Environment Protection Programme to assist in the growth of Australia's environmental goods and services industries and to support environment protection in our region. The programme provides for joint public-private sector initiatives aimed at accessing new, and improving existing, export markets for Australian environmental goods and services. Typical activities include capacity building programmes, commercially based technology transfer, staff exchanges, business development strategies and business missions.

Eco-efficiency

Eco-efficiency is about improving the efficiency of the use of natural resources. As such, it involves industry and the community. The Commonwealth is committed to the promotion and encouragement of the uptake of eco-efficiency in Australia, as a means to reduce depletion, pollution and waste, and increase productivity and profitability.

Funding has been provided through the Environment Protection Programme to undertake activities on eco-efficiency. In March 1998, Australia hosted an Organisation for Economic Cooperation and Development (OECD) Workshop on Eco-Efficiency in Sydney. This assisted the OECD in its work of assessing the best mechanisms for the encouragement of eco-efficiency. Following the Workshop, Environment Australia hosted the First National Roundtable on Eco-Efficiency, where industry, government, and other sectors of the community, assessed this approach for its relevance to Australia, and determined a way forward.

There are many 'tools' which assist in the adoption of eco-efficiency. The Commonwealth has begun work on the development of national environmental reporting guidelines for companies, and is placing three people in industry associations to assist companies with environmental reports. National environmental accounting guidelines also will be developed. Work is being undertaken on life cycle assessment.

The Commonwealth will continue also in the promotion of cleaner production in industry, following the recommendations of the ANZECC document *Towards Sustainability: Achieving Cleaner Production in Australia*, a project for which the Commonwealth provided the Secretariat. Information will continue to be developed, updated and provided on the Internet, on cleaner production case studies in industry.

Environment Australia has developed an environmental management system for its new location in the Administrative Building, Parkes, ACT, and has sought ISO 14000 certification for this.

As a pilot project for a sectoral approach to eco-efficiency, the Commonwealth is working with the Housing Industry Association to develop strategies for improving the eco-efficiency of the housing industry.

Green Games Watch 2000

Green Games Watch 2000 (GGW) is a coalition of environmental non-government groups monitoring, and providing advice on, environmental initiatives associated with the preparation for the Sydney 2000 Olympics. To date funding for GGW has been provided jointly by the Commonwealth and New South Wales Governments on a dollar-for-dollar basis. In 1996, 1997 and 1998 the Commonwealth Government provided GGW with grants of \$80,000 which were matched by the New South Wales Government, to help fund their activities for a 12-month period, and has indicated its in-principle commitment to fund the group at this level up until the 2000 Olympic Games.

Promotion of Green Technologies for Sydney 2000

The Sydney 2000 Olympic Games will be a first-time-ever showcase for high environmental standards in the history of the Olympic Games. Environment Australia will use this opportunity to promote Australia internationally as a supplier of leading-edge environmental technologies and systems, implemented and applied as part of the 'Green Games'. The focus on Australian environment technology companies will complement broader promotion efforts by the Department of Foreign Affairs and Trade and the Office of National Tourism.

Best Practice Environmental Management in Mining and Mining Technology Promotion

The Best Practice Environmental Management (BPEM) in mining programme has been successful in raising awareness of best practice principles for sound environmental management in mining. The Commonwealth will continue to work with industry and the community to promote the voluntary adoption of best-practice environmental management in the mining industry, both domestically and internationally. To complement this approach, the Commonwealth will develop a national mining stakeholder network to formulate environmental sector policy, promote best industry practice, and facilitate opportunities for exporters of Australian technology, services and integrated management systems. Environment Australia is developing, in cooperation with AUSTMINE, the Minerals Council of Australia, and interested companies, promotional material (booklets, web sites, fact sheets, CDs) for dissemination in Australia and overseas to promote Australian environmental technologies in mining in Australia and internationally.

Best Practice Promotion in Transport

The BPEM programme is being developed in partnership with key stakeholders in the transport sector. Following the successful BPEM in mining programme, Environment Australia aims to replicate this programme in the transport sector as part of the commitment to promote BPEM in Australia and internationally. A Best Practice Framework Paper that identified the major environmental threats in the transport sector was completed in 1998-99. Based on that paper, Environment

Australia will work with the Department of Transport and Regional Services (DTRS), industry peak organisations and the manufacturing industry to promote best practice environmental management in the transport sector.

WASTE MINIMISATION

Waste Management Awareness Programme

Optimising resources and reducing the amount of waste going to landfill is the major objective of the Commonwealth's waste minimisation policy. The National Waste Minimisation and Recycling Strategy sets a national target of reducing waste going to landfill by 50 per cent by the year 2000 (based on 1990 per capita levels). The Commonwealth, working through ANZECC, has initiated and developed waste minimisation programmes in the packaging, construction and demolition (see Box 7.2), green and organic and government sectors of the waste stream. The Commonwealth Government is also working towards the development of markets for material recovered from the waste stream. (See Box 7.3).

Box 7.2: Waste Management in the Construction Industry

The ANZECC WasteWise programme pioneered best practice waste reduction in the construction and demolition industry. Five major construction companies, Fletcher Construction, John Holland, Multiplex, Lend Lease (Civil and Civic) and Barclay Mowlen, participated in the first phase of the programme and were able to identify and address technical and behavioural barriers to reducing waste on construction sites. This has resulted in significant volumes of building material waste, including concrete and steel, being reused and recycled.

A report on the first phase of the programme has been published together with a handbook on techniques for reducing construction waste. Both publications are also available on Environment Australia's website: <www.environment.gov.au/epg/wastewise/index.html>

The second phase of WasteWise broadens participation to include construction companies, designers, material suppliers, builders, demolition operators, industry associations and waste collectors.

The most significant component of the ANZECC waste reduction programme is the development of the National Packaging Covenant. The Commonwealth has a major role in negotiations between all levels of Government and industry. The Covenant, a voluntary instrument, is based on the principle of product stewardship and will equitably share the cost of recycling across the entire packaging chain. It is expected that the Covenant will stabilise the financial aspects of kerbside collection programmes and be instrumental in developing viable markets for recovered material.

In 1997, as Covenant negotiations were under way, the packaging industry called for a regulatory safety net that would address free riding by non-signatories to the Covenant. ANZECC referred the matter to NEPC and it was announced in November 1997 that a National Environment Protection Measure for Used Packaging Material (NEPM) would be developed. The Commonwealth has been involved in the NEPM development process, including financial contributions from the Natural Heritage Trust Waste Management Awareness Programme (WMAP) (see below). A Draft NEPM and an Impact Statement were released for public consultation in January 1999. The NEPC Service

Corporation will report on the outcomes of the consultation programme before June 1999.

The Commonwealth has committed, through the Natural Heritage Trust WMAP, a total of \$5 million over five years from 1996-97 to address national issues in waste minimisation. These funds are being used to undertake projects in four priority waste streams: packaging; green and organic; government operations; and construction and demolition.

Green and organic waste is a major component of the total waste going to landfill. An analysis of the opportunities for and impediments to the development of markets for green and organic wastes and derived products is being undertaken currently. The study will also consider options for the more effective capture of the benefits of research and development in the organics industry.

Box 7.3: The Clean Hunter Centre

The lack of markets for recycled materials is one of the main impediments to achieving strong and viable recycling systems. A proportion of WAMP funds (\$850 000) is being used to establish the 'Clean Hunter Centre' a Resource Recovery Centre for the Hunter Region. The Centre, which opened in November 1998 will provide new and innovative uses for recycled and recovered materials, and develop markets for recycled products. Secondary market development activities are already progressing on glass and rubber tyre materials, and strategies have been developed for paper, wood and concrete materials. It is expected that the Centre's initiatives will also be applied in other areas of Australia.

HAZARDOUS MATERIALS AND THE ENVIRONMENT

International Programme on Chemical Safety

The International Programme on Chemical Safety is a body set up by the General Assembly of the United Nations, and operates under the Memorandum of Understanding between its three cooperating agencies: the World Health Organization, the International Labour Organization, and the United Nations Environment Programme. Its aim is to provide internationally evaluated scientific bases on which countries may develop their own chemical safety measures.

The overall objective of the programme is to improve the environmentally sound management of chemicals at both national and international levels through:

- human health and environmental risk evaluation of chemicals;
- prevention and treatment of chemical poisonings;
- promotion of technical cooperation between member states, particularly developing countries; and
- manpower training and support for national programmes in the control of dangerous chemicals.

Chemicals Risk Management

The Commonwealth, in cooperation with the States and Territories, is working to reduce hazards arising from scheduled wastes. The Polychlorinated Biphenyls and Hexachlorobenzene Management Plans are being implemented and progressively incorporated into legislation or regulations in the States and Territories. A third plan, for management of unwanted organochlorine pesticides, will be

implemented through the new Chemwatch programme.

The Commonwealth participates in international meetings related to safe chemical management (including treaty negotiations and related domestic activities) to ensure that Australia's international and domestic environmental interests are reflected in relevant international outcomes. Specific activity includes: participation in negotiations to develop a binding international treaty on persistent organic pollutants, consideration of Australia's possible signature of the Rotterdam treaty (on Prior Informed Consent in international trade in certain hazardous chemicals); participation in OECD chemicals programme meetings; and completion of various technical work to develop Australia's position for these meetings on a sound and well-informed scientific basis.

Hazardous Waste Initiatives

Exports and imports of hazardous waste are controlled under the *Hazardous Waste (Regulation of Exports and Imports) Act 1989*. The Act implements Australia's obligations under the Basel Convention and ensures that hazardous waste shipments are not permitted unless they can be processed in an environmentally sound manner at the receiving facility. The Act also provides a framework under which wastes can be sent back if they cannot be processed as intended.

Australia is working with other Parties to the Convention to improve its operation, and in particular, to help countries in the Asia-Pacific region to develop their domestic capacity for hazardous waste management. Within the OECD, Australia has played a leading role in streamlining the various Council Acts that control waste shipments among OECD countries, and in minimising duplication with the Basel Convention. In the South Pacific, Australia has introduced regulations to implement the Waigani Convention, which prohibits imports of hazardous waste into the island states of the region.

Contaminated Sites

At the start of 1997-98 the Commonwealth provided additional resources to ensure a continuing Commonwealth input on essential aspects of assessment of contaminated site matters and coordination and leadership in dealing with the Commonwealth's jurisdictional interests regarding contaminated sites. The resource has facilitated Commonwealth and stakeholder involvement in the development of a National Environment Protection Measure on Assessment of Site Contamination.

Road Transport of Dangerous Goods

The Commonwealth has completed a new national uniform regulatory regime for the transport of dangerous goods by road, including substances that may be hazardous to people, property, or the environment. State and Territory jurisdictions have implemented this new legislation progressively over the last two years. Development in the future may involve extending this regime to cover rail transport, and to including three additional classes of dangerous goods: radioactive substances, explosives and infectious substances not presently covered by the implementing legislation.

ENVIRONMENT AND HEALTH

National Environmental Health Strategy

The Department of Health and Aged Care provides leadership in environmental health policies which aim to reduce community exposure to environmental hazards from all media and settings, with particular emphasis on sensitive and disadvantaged populations.

Activities undertaken with respect to environmental health during 1998-99 include the following.

- Development and implementation of the National Environmental Health Strategy.
- Development of guidelines for Environmental Health Impact Assessment.
- A national workshop on Indigenous Environmental Health in May 1999.
- A national workshop on improving water quality (including, rolling revision of the drinking water guidelines, examination of health issues in potable reuse and onsite testing from rural and remote water sources).
- A workforce development workshop, 'Environmental Health Practitioners: Future Challenges, Future Needs' conducted in April 1999.
- Guidelines for better integrating sustainable development into environmental health policies and practices.

Electromagnetic Radiation Monitoring

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

INTERNATIONAL DEVELOPMENT COOPERATION

Through the Commonwealth Government's annual contribution to the World Health Organization (WHO), Australia supports environmental health activities. The WHO Cluster on Sustainable Development and Healthy Environments, has two programmes specifically aimed at improving environmental health for countries.

- The Protection of the Human Environment Programme, is active in protecting the human environment through risk assessment and standards setting in relation to issues such as food safety, water supply and sanitation, chemical safety and occupational health. In addition, the programme is involved in research on environmental health issues of global significance, for example, climate change and radiation. This programme also provides guidance to Australia on environmental health impact assessment and the use of supportive environments for health such as the healthy cities and healthy islands frameworks.
- The Health in Sustainable Development Programme aims to ensure that health aspects are an integral part of development policies in less-developed countries and also works on strategies to deal with the effects of globalisation.

WHO research and standard-setting activities are a significant consideration in setting Australian standards on environment issues.

In 1998-99, Australia's overseas aid programme spent over \$12 million on capacity building in environmental management and institutional strengthening of environmental authorities in developing countries. This included \$5 million in assistance to BAPEDAL, the Indonesian environmental protection authority, and \$1 million each in assistance to environmental authorities in Vanuatu, Tonga and Papua New Guinea, as well as support for environmental institutions in the Philippines, Maldives and China.

Chapter 8: Atmosphere

Key Points:

- Following the Prime Minister's November 1997 Statement *Safeguarding the Future: Australia's Response to Climate Change* the Australian Greenhouse Office has been established as the world's first dedicated greenhouse office to drive the Government's progressive agenda. There is considerable international interest in its establishment and effectiveness. As the lead Commonwealth agency on greenhouse, the Australian Greenhouse Office is responsible for promoting a whole-of-government position on greenhouse issues to the broader domestic and international community.
- The National Greenhouse Strategy was released in November 1998 and provides the strategic direction for Australia's domestic greenhouse response. The National Greenhouse Strategy incorporates measures included in the Prime Minister's *Safeguarding the Future: Australia's Response to Climate Change* package and a menu of new options for action across all sectors to advance Australia's greenhouse response, including measures to enhance understanding and lay foundations for adaptation to climate change.
- The Government is providing an additional \$14 million over four years for Greenhouse Science. The measure will provide for continued investigation of climate systems, improving climate change models, detecting regional climate change and support for international climate change science.
- The Government is providing an additional \$3.8 million over three years under the Living Cities initiative to establish a viable network of publicly accessible Compressed Natural Gas (CNG) refuelling stations with an accompanying compressed natural gas market in urban areas, as a means of reducing greenhouse gas emissions and air pollution from light commercial vehicles.
- The Government supports Australia's role as a world leader in the development and implementation of effective measures to protect the stratospheric ozone layer. Strategies are being developed, and improvements made to the operation of the Ozone Protection Act to more efficiently control ozone-depleting substances.
- The Government has been active in the development and implementation of national air quality standards and strategies targeting urban air pollution.

The Government's expenditure on programmes relating to climate change, energy efficiency and the atmosphere is outlined in Table 8.1.

Table 8.1: Atmosphere--New Measures and Programme and Tax Expenditure Estimates

Description	1998-99 \$m	1999-00 \$m	2000-01 \$m	2001-02 \$m	2002-03 \$m
NEW MEASURES					
Greenhouse Science initiatives	-	2.0	4.0	4.1	4.1
PROGRAMME AND TAX EXPENDITURE ESTIMATES					
Climate Change					
International Development Cooperation					

Bilateral and regional climate change activities	23.4	na	na	na	na
Global Environment Facility (a)	4.5	5.1	7.7	9.4	10.3
Montreal Protocol Multilateral Fund	3.5	5.7	4.8	4.8	na
National Greenhouse Strategy	-	3.3	3.3	3.3	na
Climate Change Programme	4.3	3.9	-	-	-
Greenhouse Challenge	5.9	6.0	6.0	6.0	6.0
National Energy Programme (b)	1.8	1.8	1.8	1.8	1.8
CRC for Renewable Energy	1.5	1.5	1.5	1.5	na
Exemption from fuel excise of alternative fuels (c)	710.0	785.0	855.0	na	na
Household Greenhouse Action	0.7	0.7	0.6	0.3	na
Cities for Climate Protection	2.6	2.6	2.6	2.6	2.6
Light Commercial Vehicles-Compressed Natural Gas (CNG) Infrastructure	0.7	2.8	2.3	1.7	-
Bush for Greenhouse	1.2	1.1	1.1	1.1	1.1
Environmental Strategy for Automotive Industry	0.3	0.3	-	-	-
Mandatory Targets for the Uptake of Renewable Energy in Power Supplies	1.2	0.7	0.7	0.7	0.7
Efficiency Standards for Power Generation	1.6	0.6	0.6	0.6	0.6
Renewable Energy Equity Fund (d)	1.4	2.5	3.0	3.2	3.2
Renewable Energy Commercialisation Programme	2.3	4.4	6.4	6.4	10.0
National Carbon Accounting System for Land Based Sources and Sinks	3.4	3.2	2.7	1.2	2.0
CRC for Terrestrial Carbon Accounting	-	0.9	2.4	2.4	2.4
Energy Performance Codes and Standards for Domestic Appliances and Industrial Equipment	0.9	1.0	0.9	0.9	0.9

Energy Performance Codes and Standards for Housing and Commercial Buildings	0.6	0.8	0.9	0.9	0.9
Energy Efficiency Benchmarking and Best Practice (b)	1.5	2.2	2.2	2.2	2.2
Reducing Methane Emissions from Livestock	0.4	0.3	0.3	0.1	-
Accelerating Energy Market Reform	1.5	1.5	1.5	1.0	0.1
International Greenhouse Partnerships Programme (b)	2.0	2.0	2.0	-	-
Renewable Energy Showcase	3.2	4.5	3.2	-	-
Renewable Energy Technology Internet Site	0.1	0.1	0.1	0.1	0.1
Air Quality					
Air Pollution in Major Cities	3.7	3.9	4.1	4.1	-
Ozone Protection					
Ozone Protection Trust Fund receipts	-0.5	-0.6	-0.5	-0.6	na
Ozone Protection Trust Fund expenditure	0.5	0.5	0.5	0.5	na
Halon Community Collection and Destruction	8.6	5.4	-	-	-
Atmospheric Research					
National Greenhouse Research Programme	4.1	3.8	4.0	4.1	4.1
Greenhouse Gas Emissions Inventory Programme	1.0	na	na	na	na
Methyl bromide alternative research	na	0.4	0.3	0.3	0.2
CSIRO (total) (e)	20.9	21.0	na	na	na
Atmospheric composition	3.9	4.0	na	na	na
Climate processes	5.0	5.0	na	na	na
Climate modelling	2.2	2.2	na	na	na
Climate impact	2.9	2.9	na	na	na

Air quality	3.0	3.0	na	na	na
Solar fossil fuel power	2.4	2.4	-	-	-
Hybrid electric car technologies	1.5	1.5	-	-	-
Bureau of Meteorology (f)	7.0	5.5	5.5	5.5	5.5
Bureau of Resource Sciences					
Energy efficiency	0.4	na	na	na	na
Greenhouse science	na	na	na	na	na
Biospheric sources and sinks	1.8	2.2	1.8	1.0	na
Remote Sensing of Agricultural Land Cover Change	0.1	-	-	-	-
ANSTO nuclear techn. in climate change	1.0	2.3	na	na	na
Australian Radiation Protection and Nuclear Safety Agency (ARPANSA)					
Airborne radioactive discharges	0.5	0.9	0.9	0.8	0.8
Environmental radioactivity monitoring	0.3	0.3	0.3	0.3	0.4
Solar UV levels	0.3	0.3	0.3	0.3	0.3
CRC for Southern Hemisphere Meteorology	1.7	1.5	-	-	-

New measures are expressed in outturn prices and other expenditure and revenue figures are expressed in 1999-2000 prices.

Programme and tax expenditure estimates include the effect of new measures.

- denotes nil; na denotes not available

- a. These are total Australian contributions to the Global Environment Facility (GEF) (see Chapter 3). Approximately 40 per cent of GEF funds are used for climate change activities and 10 per cent for ozone-related activities.
- b. These items constitute the budget appropriation item National Energy Programme.
- c. The figures for the exemption are estimated revenue foregone.
- d. Up to \$21 million will be available to be drawn down from 1998-99 over the ten year life of the fund.
- e. This is the total of the figures against indented descriptions below.
- f. Estimates of appropriation-based Bureau of Meteorology (BoM) expenditure attributable to atmospheric monitoring, research and service provision in support of environmental objectives.

CLIMATE CHANGE

Establishment of the Australian Greenhouse Office

The Australian Greenhouse Office (AGO) was established in April 1998. In its first year of operation it has:

- negotiated Commonwealth, State and Territory agreement to a new National Greenhouse Strategy;
- established a consultative framework and work programme on emissions trading and published an initial discussion paper;
- conducted major policy development processes with States and Territories and industry on the implementation of the 2 per cent renewable energy target and efficiency standards for power generation;
- established grant programmes to promote renewable energy and completed selection of applications under Renewable Energy Showcase and Commercialisation Programmes;
- more than doubled the number of participants in the Greenhouse Challenge;
- launched the Greenhouse Allies Programme for small business;
- expanded to more than 50 councils the Cities for Climate Protection Programme in Australia;
- established the Household Greenhouse Action Programme;
- developed a strategic plan and specifications for the National Carbon Accounting System;
- contributed strongly to Australia's international position in greenhouse negotiations; and
- increased the Governments' communications capacity on the greenhouse issue.

Details of Australian Greenhouse Office programmes and initiatives and activities to deliver on them are shown on its Website (www.greenhouse.gov.au).

International

The United Nations Framework Convention on Climate Change provides the international focus for action to protect the global climate system. The Convention's ultimate objective is to stabilise 'greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic (human-induced) interference with the climate system'.

As a Party to the Convention, the Government takes very seriously its responsibility to ensure that Australia makes a realistic, sustainable, fair and effective international contribution to global action on climate change.

The Kyoto Protocol and the Buenos Aires Plan of Action

The Kyoto Protocol, and the subsequent Buenos Aires Plan of Action (adopted in November 1998), are significant steps forward in the development of an international response to global warming. However, neither addresses the issue of commitments for developing countries to reduce their emissions, and this will be a focus of ongoing negotiations under the Convention.

Box 8.1: Outcomes from International Climate Change Negotiations

At Kyoto (December 1997) developed countries agreed to reduce their collective emissions to at least 5 per cent below 1990 levels. While the Kyoto Protocol is yet to enter into force, it represents the first time that the international community has agreed to a framework incorporating legally binding emissions targets to deal with climate change. Australia will be required to limit its growth in greenhouse emissions in the period 2008-12 to 8 per cent above 1990 levels. This represents a reduction of 20 per cent from business as usual projections, which is comparable to the tasks facing other developed countries (Australia signed the Kyoto Protocol in April 1998.) Australia's ratification of the Protocol will be subject to a National Impact Analysis of the implications of ratification for Australia.

The framework agreed in Kyoto gives countries flexibility in meeting their targets. The inclusion of land use change and forestry activities (afforestation, deforestation and reforestation since 1990) will deliver an environmental benefit by ensuring that all avenues for reducing emissions are covered. Provision for international emissions trading and joint implementation with developed and developing countries (through a Clean Development Mechanism) offer further opportunities for low-cost emissions reductions.

Negotiations on the rules governing these mechanisms, and the treatment of greenhouse sinks, was progressed at the fourth Conference of Parties in November 1998, which resulted in the Buenos Aires Plan of Action. This is a blueprint for negotiations aimed at finalising the operations of various mechanisms under the Protocol at the sixth Conference of the Parties in late 2000.

Next Steps

Australia is working with other countries to advance a number of technical and implementation issues, including for example arrangements for international emissions trading and the Clean Development Mechanism with developing countries, and rules relating to carbon sequestration, through the international negotiations.

While the Protocol was agreed by countries at the Third Conference of Parties (COP3) in December 1997, it is still to enter into force. This may take several years given the ongoing international negotiations in a number of elements of the Protocol and consideration of domestic signature and ratification processes by the various countries involved in the negotiations.

Other International Activities

The Commonwealth Government:

- reports internationally on Australia's progress on Convention implementation;
- prepares and presents Australian input on scientific and technical climate change issues relevant to international fora, including: the Convention's subsidiary bodies; and other international bodies such as the Organisation for Economic Cooperation and Development (OECD) and the International Energy Agency;
- makes a significant contribution to international scientific effort. Australia actively contributes to the work of the IPCC, which operates as the authoritative international body to assess the state of knowledge on climate change. IPCC assessments are a key input to international and national climate change policy; and
- is providing \$6 million to the year 2000-01 to establish International Greenhouse Partnerships projects overseas. Funding will facilitate the establishment of commercial projects to reduce greenhouse emissions, and help meet the additional transaction costs incurred by business in

undertaking Joint Implementation and Clean Development Mechanism type projects. To date, projects have been established in Fiji, Solomon Islands and Indonesia (see Box 8.2).

International Development Cooperation

Climate change activities under the overseas aid programme

In the 1998-99 financial year, Australia spent \$23.4 million on bilateral and regional activities aimed at assisting developing countries abate greenhouse gas emissions and adapt to the adverse effects of climate change. Australia's climate change activities focus on renewable energy and energy policy, forestry, land management, and support for environmental institutions. Since 1991-92, Australia has committed \$38.6 million to the Global Environment Facility (GEF). Approximately 40 per cent of GEF funding is used to implement climate change projects.

Australia recognises the special vulnerability of small Pacific Island countries to climate change and sea level rise and has committed \$14 million to the Sea Level and Climate Monitoring Project. Under this project sea level monitoring stations, transmission networks, and computer systems have been constructed in 11 Pacific Island countries. The project also provides assistance in environmental training, education and institutional strengthening. Together with France, Australia has recently commenced a \$1.5 million programme to support the development of renewable energy in the region.

Box 8.2: Renewable Energy Training Project--Indonesia

With Government support, the International Centre for Application of Solar Energy (CASE) in Perth is undertaking a renewable energy training project in Indonesia in collaboration with the Indonesian Institute of Sciences (LIPI). The project is culminating with the installation of a solar/wind/hydro power-supply system that is being used to provide electricity to a workshop in a remote village in Irian Jaya. The workshop will process locally grown food and repair agricultural equipment as well as fulfil the role of a training centre for the region.

DOMESTIC GREENHOUSE RESPONSE

National Greenhouse Strategy

The National Greenhouse Strategy (NGS) provides the strategic direction for Australia's greenhouse response and is the primary mechanism through which our international commitments on climate change will be met. The National Greenhouse Strategy has been developed through a coordinated effort of the Commonwealth, State and Territory Governments. Local government, industry and community consultations have also made important contributions.

The National Greenhouse Strategy presents a comprehensive approach to tackling greenhouse issues, focusing action on three fronts: improving our awareness and understanding of greenhouse issues; limiting the growth of greenhouse emissions and enhancing greenhouse sink capacity; and developing adaptation responses.

The Australian Greenhouse Office has a key role in coordinating the implementation of the National Greenhouse Strategy at a Commonwealth level. Implementation planning for the National Greenhouse Strategy is expected to be completed in mid 1999. The implementation planning process will present a clear picture of actions and measures that are being pursued by each

jurisdiction and will outline the emissions saving that will be delivered by the implementation of the NGS. An allocation of \$10 million over three years has been made to fund Commonwealth National Greenhouse Strategy measures additional to those announced by the Prime Minister in November 1997.

Emissions Trading

Emissions trading should potentially minimise any economic costs to Australia of meeting its commitments under the Kyoto Protocol and any subsequent international agreements restricting greenhouse gas emissions.

Box 8.3: Emissions Trading Discussion Paper

In March 1999, the Australian Greenhouse Office released the first of its series of four discussion papers on emissions trading.

The paper, titled *Establishing the Boundaries*, discusses the comprehensiveness of a national emissions trading system within Australia, focusing on the greenhouse gases and sectors of the economy that could be covered.

For the purposes of discussion, the paper:

- provides a proposed set of principles for a national emissions trading system;
- suggests a framework for how a national emissions trading system might operate;
- analyses the relevant sectors of the economy in terms of coverage of an emissions trading system; and
- examines the 'upstream/downstream' approach to addressing the problem of diverse, dispersed and individually small emission sources.

The options canvassed in the paper are intended to stimulate discussion on emissions trading. They do not represent the final views of the AGO or the Government. The paper, as will be the case for subsequent discussion papers, was widely circulated for comment to allow the AGO to systematically develop views on the establishment of an emissions trading system in Australia.

The Australian Greenhouse Office is issuing a series of four public discussion papers as a basis for in-depth consultation with State and Territory Governments, other stakeholders and the public to assess the feasibility of various options for the possible introduction of a national emissions trading system. The consultation process will inform any policy decisions taken by the Commonwealth Government. The public discussion papers are:

- *Establishing the Boundaries*
- *Issuing the Permits*
- *Crediting the Carbon, and*
- *Designing the Market.*

Greenhouse Sinks and Carbon Accounting

The National Carbon Accounting System for land-based sources is providing the framework and services necessary to account for greenhouse gas emissions reduction and sink enhancement programmes. The work includes refining methods in the estimation of land clearing, biomass and soil carbon to reduce uncertainties for the purposes of national reporting under the Kyoto Protocol.

The Government has announced the establishment of the Cooperative Research Centre for Terrestrial Carbon Accounting, which will receive a total of \$56 million over seven years, with \$17.7 million contributed by the Commonwealth. The Centre will ensure that Australia is in a strong position to argue internationally for a comprehensive system of accounting for carbon emissions and sinks, through improvements of the fundamental science which underpins the National Carbon Accounting System.

Box 8.4: Bush for Greenhouse

Bush for Greenhouse is a Commonwealth Programme that will create opportunities for communities and industry to learn about the role of vegetation as carbon sinks and developments in 'carbon credits' and emissions trading. In particular, it will assist landholders, community groups and companies to define, measure and monitor carbon sequestration at the project level.

The Programme also aims to expand greenhouse gas sinks by facilitating corporate investment in revegetation projects for environmental purposes. In this way, it will build on investments being made through the Natural Heritage Trust, particularly Bushcare. Bush for Greenhouse will operate within the framework of the Greenhouse Challenge Programme in which participating companies may be able to negotiate arrangements with landholders to count the carbon sequestered through revegetation activities as an offset to their emissions.

The Commonwealth is providing \$5.5 million over the period 1998-99 to 2002-03 to fund the Programme.

Bush for Greenhouse

Bush for Greenhouse aims to enhance Australia's greenhouse gas sinks by facilitating greater industry investment in native revegetation.

The programme will create opportunities for companies to claim carbon offsets through the Greenhouse Challenge Programme. The programme will assist landholders, industry and government to build their capacity to measure and monitor carbon sequestration through regional revegetation projects. The Commonwealth will provide support for data gathering, extension, research and refining methods to measure carbon sequestration in native revegetation.

Funding of \$5.5 million has been provided to implement the programme over 1998-99 to 2002-03. (Also see reference in biodiversity Chapter 4.)

The Prime Minister's Statement *Safeguarding the Future: Australia's Response to Climate Change* provided \$1.9 million to the year 2001-02 to remove impediments to the development of commercial plantations to achieve the Plantations 2020 vision of trebling the plantation estate by the year 2020. This will build on the \$22 million provided to the year 2000-01 for farm forestry and the \$328 million provided to the year 2000-01 for the revegetation programme being undertaken under the Bushcare Initiative of the Natural Heritage Trust.

National Greenhouse Gas Inventory

As part of its international and national commitments, the Government prepares an annual National Greenhouse Gas Inventory (NGGI) of anthropogenic (human induced) emissions. The 1996 NGGI was released in October 1998. Considerable effort is being focused on reducing the high level of uncertainty in the emissions resulting from land-use change and forestry activities, including measurement of vegetation cover using satellite monitoring.

The NGGI is a database of human induced emissions of greenhouse gases from sources and removals by sinks completed on a sectoral basis. Annual national inventories provide a trend line that may be used to monitor and review response actions and may be used as a base to develop emissions projections.

National Greenhouse Research Programme

The National Greenhouse Research Programme aims to support, through targeted research, the development of policies and activities to deal with atmospheric change and greenhouse-induced climate change. It comprises a core component providing funding to the CSIRO, Bureau of Meteorology and National Tidal Facility; and a component supporting research projects and activities on the science and impacts of climate change undertaken by various institutions.

The Government will provide an additional \$2 million in 1999-2000 and \$4 million for each of the following three years for the National Greenhouse Research Programme. The programme aims to improve understanding of how Australia's climate will change and what the impacts of those changes will be, thus allowing more informed planning and decision making.

During 1998, the Greenhouse Science Advisory Committee, supported by eminent scientists from a range of climate related disciplines, prepared a strategy and business plan for greenhouse science covering 1999-2004 which is being considered by the Government.

Australian Nuclear Science and Technology Organisation Climate Research

The Australian Nuclear Science and Technology Organisation has developed unique expertise in Australia in isotope dating techniques and has applied these particularly to the use of long-lived radionuclides as tracers and chronometers in ice for use in global climate change studies and the surface exposed rocks and landforms for glacial chronology. Nuclear techniques have been developed for the analysis and characterisation of fine particles and for tracing large-scale air movements using radon.

Greenhouse Challenge Programme

Box 8.5: Greenhouse Challenge Programme

Greenhouse Challenge is a highly successful joint initiative between the Commonwealth Government and Australian industry designed to reduce greenhouse gas emissions from Australian industry.

Australian industry accounts for approximately 45 per cent of Australia's greenhouse gas emissions and through Greenhouse Challenge, firms are encouraged to take a voluntary and self-regulatory approach to emissions reductions.

Since the programme's launch in October 1995, over 345 enterprises have joined Greenhouse Challenge. As of December 1998, 209 enterprises have signed voluntary agreements to abate their emissions. The Greenhouse Challenge Programme's 2005 target of forecast savings of 25 million tonnes of carbon dioxide equivalent is expected to be achieved by the year 2000.

Part of the Greenhouse Challenge is the Greenhouse Allies programme launched in 1998 as a new

policy initiative that extends the Challenge to small business. The first Allies projects, involving 150 small businesses, commenced in early 1999.

Greenhouse Challenge is funded at \$6 million per annum to 2001-2002.

Greenhouse Challenge is a joint initiative of the Commonwealth Government and Australian industry, to encourage industry to reduce its contribution to greenhouse gas emissions. This is achieved through voluntary cooperative agreements consistent with growth and competitiveness. The Greenhouse Challenge is part of the Partnerships Group of the Australian Greenhouse Office, with an interdepartmental Steering Committee involving representatives of the Departments of Industry, Science and Resources, and Agriculture, Fisheries and Forestry.

Community Partnerships

The Community Partnership component of the Australian Greenhouse Office Partnerships Group comprises two programmes: Cities for Climate Protection and Household Greenhouse Action.

Cities for Climate Protection Programme

Cities for Climate Protection (CCP) is a programme that assists local governments to achieve sustainable reductions in greenhouse gas emissions. It is an International Council for Local Environmental Initiatives programme delivered in collaboration with the AGO.

The CCP programme assists local governments to quantify greenhouse emissions from both their own operations and the community, and to develop local action plans to reduce these emissions.

It has been estimated that local governments have an influence over activities that contribute up to 50 per cent of Australia's greenhouse gas emissions. The CCP programme will harness this influence to reduce greenhouse emissions at the community level.

Funding has been provided to implement the Programme with a target of 200 councils, covering 50 per cent of the population, by 2003.

Household Greenhouse Action

The Household Greenhouse Action (HGA) programme aims to optimise reduction of greenhouse gas emissions in the household sector. It uses a voluntary approach to facilitate creative partnerships across community, State and Territory Governments, industry and Commonwealth Government. It is a unique approach for which there are no models nationally. The Household Greenhouse Action Network is the primary consultative mechanism for the development and implementation of the programme. The membership of the Network includes key stakeholders from community, industry, local, State and Territory and the Commonwealth Governments.

ENERGY

The energy sector, which in 1996 accounted for 79 per cent of Australia's total net greenhouse gas emissions (excluding emissions from land clearing), remains the key focus for the Government's response to greenhouse emissions. Measures addressing the efficiency of energy supply and end-use figure prominently in the Prime Minister's Statement *Safeguarding the Future: Australia's Response to Climate Change*. These measures extend ongoing initiatives in energy efficiency.

These measures, together with other initiatives in the National Greenhouse Strategy which were approved by the Council of Australian Governments in December 1998, require cooperative action by Commonwealth, State and Territory Governments through existing Ministerial Council mechanisms for the efficient and effective delivery of joint initiatives.

Significant advances will be made also in energy efficiency in Commonwealth operations, which will be reported annually, and in cooperative initiatives with industry in the implementation of the Energy Efficiency Best Practice Programme.

Energy Efficiency Codes and Standards

Emphasis is being given to developing energy codes and standards for residential and commercial buildings and a wider range of appliances and equipment. This strategy is being supported by the Energy Efficiency Best Practice Programme for industry.

Particular emphasis is being given to extending minimum energy performance standards to appliances and equipment and a strategy has been developed to streamline processes. The Government has accepted building industry proposals for a comprehensive strategy to address building energy efficiency through voluntary industry best practice initiatives and mandatory measures through the Building Code of Australia.

Accelerating Energy Market Reform

Australia will continue to be a world leader in energy market reform, with \$5.6 million being provided to the year 2002-2003 to ensure the process continues to move toward a more competitive and efficient market in which all energy sources can compete more fairly. This will include efforts to extend electricity market reform and deliver compatible arrangements for gas and electricity in order to facilitate the delivery of integrated energy services. Mechanisms to identify the greenhouse intensity of energy trading pools will also be developed.

Renewable Energy Target and Efficiency Standards for Power Generation

Two key greenhouse measures that will help Australia lower the greenhouse intensity of its energy supply are the extra 2 per cent Renewable Energy Target and the Efficiency Standards for Power Generation measure. The Government has stipulated a requirement for electricity retailers and large buyers to purchase an additional 2 per cent of their electricity requirements from new renewable energy sources by 2010. This will take the share of renewables in Australia's energy supply to around 12.7 per cent.

The objectives of the renewable energy target are:

- to accelerate the uptake of renewable energy in grid-based applications, so as to reduce greenhouse gas emissions;
- as part of the broader strategic package to stimulate renewables, provide an on-going base for the development of commercially competitive renewable energy; and
- to contribute to the development of internationally competitive industries which could participate effectively in the burgeoning Asian energy market.

The objective of the Energy Efficiency Standard measure is to achieve movement towards best practice fossil fuel electricity generation efficiency for new, existing and refurbished plant and, in so doing, reduce greenhouse emissions.

The Government is working closely with the States and Territories in developing these measures as

well as with industry and the wider community. The Government expects to make an announcement on the implementation mechanisms for both these measures during 1999-2000.

Renewable Energy Support Programmes

While more greenhouse friendly fossil fuel use, including greater penetration of natural gas will be a major source of greenhouse abatement; increased use of renewable energy is a central component of a long-term greenhouse response. The Government has developed a programme of support for renewable energy to ensure that Australia remains at the forefront of renewable energy technology applications.

There is also considerable potential to increase exports. Many developing countries do not have adequate energy supply industries or are dependent on small-scale diesel-based or petrol-based power, and all countries are seeking ways to limit their greenhouse gas emissions.

An allocation of \$10 million has been provided for the Renewable Energy Showcase programme, a single-round, competitive grants programme to support and promote selected leading edge projects that are close to becoming commercial. Successful projects, which were announced on 22 December 1998, are:

- a biomass year-round cogeneration plant utilising bagasse (sugar cane waste) and woodwaste at the Rocky Point Sugar Mill, south of Brisbane;
- the installation of 18 'big dish' solar thermal collectors which will be integrated with conventional coal-fired generation infrastructure at the Earing Power Station near Lake Macquarie, New South Wales;
- the integration of solar thermal technology into the existing fossil-fuelled Stanwell Power Station near Rockhampton, Queensland;
- a solid-waste energy and recycling project at a municipal waste facility near Wollongong, that will produce synthetic gas to be used for electricity generation; and
- the installation of a battery storage and control system to enable the energy from an additional two variable speed wind turbines to be fully utilised in the Denham, Western Australia, diesel electricity grid.

The Renewable Energy Commercialisation Programme has been allocated \$30 million for a five-year, competitive grants programme to support and promote renewable energy initiatives that have strong commercialisation potential. There are two funding rounds per year. In the first round, which was announced in April 1999, almost \$6 million was offered for eight projects.

The Renewable Energy Equity Fund (REEF) has been allocated \$21 million to provide venture capital funding to companies which are in the early stages of development. This Government funding is to be supplemented by at least \$10 million of private-sector funds. The fund will have a life of ten years. The Government has recently advertised for a private sector manager for the fund.

The Government has also provided \$300,000 for a Renewable Energy Internet Site to promote the Australian renewable energy industry and provide information on technologies examples of their application and available government assistance. The site will become operational in mid-1999.

Box 8.6: Energy use in Commonwealth Operations 1997-98

The Government has demonstrated its commitment to improving energy efficiency in its own operations by tabling the first whole of Government energy report, Energy Use in Commonwealth Operations 1997-98. The report presents the first summary of total energy used by Commonwealth departments and agencies and the greenhouse gas emissions associated with this energy use. The report therefore provides the essential framework for measuring progress towards meeting the Government's energy efficiency targets. Targets are at present set in three end use categories and the report shows that the following reductions must be achieved by 2002-2003 in order to meet these targets: 25 per cent reduction in Office: Tenant Light and Power, 10 per cent reduction in Office: Central Services, and a 14 per cent reduction in Defence Establishments. The report shows that in general, the majority of Commonwealth agencies are well on the way to meeting their targets.

This whole-of-government report is a requirement under the policy Measures for Improving Energy Efficiency in Commonwealth Operations, which is one element of the Government's policy response to climate change announced by the Prime Minister in November 1997.

Emerging and Renewable Energy Action Agenda

In collaboration with industry and other stakeholders, the Commonwealth will develop an action agenda for emerging and renewable energy aimed at developing internationally competitive Australian renewable energy industries servicing Australian and export markets. This industry development strategy will encompass renewable energy sources, emerging technologies for generation and storage and services inputs.

Cooperative Research Centre for Terrestrial Carbon Accounting

The CRC for Terrestrial Carbon Accounting will commence on 1 July 1999 with CRC Programme funding of \$15.4 million over seven years. It will undertake research to reduce Australia's net greenhouse gas emissions from its land-based industries, such as agriculture, pastoralism and forestry while improving the sustainability of these same sectors. It will provide research to support Australia in meeting its obligations under the UN Framework Convention on Climate Change and in its negotiations following the Kyoto Protocol. An immediate priority is research to establish the 1990, current and future emissions and sinks of greenhouse gases. These estimates will form the basis of Australia's future obligations in emissions reduction and the basis for selecting mitigation approaches. The research activities will provide Australia with world's leading practice in these areas and a basis for prospective greenhouse emissions trading arrangements. Its training programme will increase the availability of skilled post-graduates in Australia and its neighbours.

TRANSPORT

The transport sector has an important role to play in reducing Australia's greenhouse gas emissions. In 1996, the transport sector accounted for 17 per cent of Australia's total net greenhouse emissions, with the majority of these emissions from passenger cars, four wheel drives and light commercial vehicles. Between 1990 and 1996, emissions from the transport sector were the fastest growing of any sector in the Australian economy, growing by 15 per cent in this period.

The key measures being pursued by the Commonwealth under the National Greenhouse Strategy

are the Environmental Strategy for the Motor Vehicle Industry, the Compressed Natural Gas Infrastructure Programme, and support for an ethanol pilot plant. The implementation of these measures is well under way.

These measures complement the Government's existing fuel excise exemption for the alternative transport fuels of liquefied petroleum gas, CNG, ethanol and other alcohol blends. The cost to revenue in 1999-2000 of this exemption is estimated to be \$710 million, the bulk of which is from liquified petroleum gas. The Government is continuing the exemption to encourage the use of more environmentally friendly transport fuels.

The Government remains committed to working with State and Territory Governments to progress microeconomic reform within the transport sector. As with a number of other greenhouse measures, strategies for the transport sector require coordinated action by the Commonwealth, State and Territory and local governments through the National Greenhouse Strategy.

Box 8.7: Environmental Strategy for the Motor Vehicle Industry

The Government has allocated \$500,000 over the years 1998-99 and 1999-00 for the Environmental Strategy for the Motor Vehicle Industry. The Environmental Strategy focuses on improving the fuel efficiency of new vehicles, reducing their greenhouse gas emissions. It includes measures to encourage the supply of more fuel-efficient vehicles to the market, as well as measures to encourage consumers (both private and fleet buyers) to consider fuel consumption in their purchase decisions. Negotiations are continuing with the motor vehicle industry on the setting of National Average Fuel Consumption (NAFC) targets for new cars, in the context of the Government's expectation of a 15 per cent improvement over business-as-usual in the NAFC by 2010. A public consultation process on a draft Australian Design Rule on vehicle fuel consumption labelling is under way. The Government is also in the process of establishing a fuel efficiency target for Commonwealth fleet operations to apply from 2003.

The Environmental Strategy also includes measures to reduce noxious emissions from new motor vehicles, including a reiteration of the Government's commitment to harmonisation with international vehicle emission standards. In this regard, the Federal Office of Road Safety is managing a major review of Australia's vehicle emission standards with the aim of introducing tighter standards early next century, and harmonising with international standards. The ultimate objective is improved air quality in Australia's major urban areas.

Vehicle Emissions

The Federal Office of Road Safety (FORS) is managing a research project investigating the noxious emissions performance of current model cars under current and proposed United States and United Nations Economic Commission for Europe emission standards. The aim of the project is to assess the relative stringency of the various tests to assist the Motor Vehicle Environment Committee in its deliberations on the introduction of tighter new vehicle standards in the early part of next century. The testing has been contracted to the Ford Motor Company's vehicle emissions laboratory. Funding for the project is \$50,000 from FORS Research Budget plus \$50,000 from Environment Australia.

COMPRESSED NATURAL GAS INFRASTRUCTURE PROGRAMME

The Government put in place a Compressed Natural Gas (CNG) Infrastructure Programme in 1998-99, and has doubled the allocation of funds to this programme to \$7.6 million over five years. The objective of the Programme is to support the development of a network of CNG refuelling stations in selected metropolitan areas where support by local organisations has been proven. The aim is to encourage fleet operators, particularly light commercial vehicles to switch to CNG. Light commercial vehicles are estimated to be a key source of growth in Australia's transport emissions to 2010. A trial of the Programme is being conducted in western Sydney with the aim of establishing up to eight refuelling sites in this region and along associated transport routes. Following the trial, the Programme will be extended to other urban areas such as Adelaide and Melbourne.

The National Standards Commission is developing standards for the testing and approval of CNG dispensers that are in use for trade. This will ensure these dispensers meet similar trade measurement requirements as petroleum and LPG dispensers.

National Bicycle Strategy

One of the areas for action identified in the National Greenhouse Strategy involves support for cycling. A revised national bicycle strategy, Australia Cycling aims to increase cycling for transport and recreation. An increase in cycling will improve transport access for many Australians, increase levels of individual health, and reduce greenhouse emissions, air pollution and congestion. The Commonwealth will provide the secretariat to the National Cycling Body, which will implement the strategy, and will continue to provide cycle facilities as part of its National Highways and Black Spots programmes.

AIR QUALITY

The Government is committed to policies and programmes that will promote improvements in air quality. Commonwealth initiatives are designed to provide national leadership and to complement work under way in the States and Territories.

Air Pollution in Major Cities Programme

The Government will provide \$4 million in 1999-2000 to continue the Air Pollution in Major Cities Programme under the Natural Heritage Trust. Building on the achievements of 1998-99, the aim is to develop national strategies and standards to minimise adverse impacts of air pollution and address key threats to sustainability with respect to air quality.

In 1998-99 the National Environment Protection Measure (NEPM) was gazetted for ambient air quality, which establishes world standard criteria for air quality adapted for Australian conditions. Steps are now being taken to develop monitoring protocols to measure air quality against the new standards. In addition, \$200,000 has been allocated in 1999-2000 towards the development of a NEPM for diesel fuel and vehicle emissions.

In 1999-2000 the Government will continue with 'Clear the Air', its \$2.1 million package of responses to the Inquiry into Urban Air Pollution. These include \$400,000 allocated to a community information programme aimed at reducing particulate emissions from wood heaters. It builds on successful pilot studies in Tasmania and Western Australia, which significantly raised awareness of the hazards of woodheaters and the methods of hazard reduction. National campaigns will be run during winter in 1999 and 2000.

Codes of practise for vapour recovery from dry cleaning businesses were established in 1998-9. In 1999-2000 \$100,000 has been allocated to facilitate vapour recovery standards for spray painters/surface coaters and printers. A programme for developing a high definition pollution forecasting system was implemented and this work will continue over two years with an injection of \$350,000 in 1999-2000. The system will provide daily reports on air quality in time for the Sydney Olympic Games.

A pilot study on the problems associated with monitoring fine particles has been completed and further work is proposed. In December 1999 a fuel quality review will be completed, providing information on the fuel quality needed for new vehicle technologies in Australia. As well, during 1999-2000 a standard will be developed for replacement and reconditioned/rebuilt engines, incorporating a performance measure for emissions.

The Government will continue its commitment to collaborative education programmes by allocating over \$300,000 to the Airwatch, Smogbusters and Travel Smart programmes. Collectively these programmes promote alternative transport strategies in city businesses and foster a greater community understanding of air quality issues.

Living Cities Programme: Air Toxics

As its second stage response to the Inquiry into Urban Air Pollution, the Government will allocate \$4.9 million over three years for the development of a national air toxics strategy under the Living Cities Programme. This strategy will monitor, establish the levels of community exposure to, and manage emissions of selected air toxics. The Government will also consider the inclusion of air toxics in a future NEPM.

OZONE PROTECTION

Damage to the stratospheric ozone layer, which protects life on earth from harmful ultraviolet radiation from the sun, occurs through the release into the atmosphere of certain widely used ozone-depleting substances.

The Commonwealth plays a leading international role in ozone protection, particularly in the development and implementation of cost-effective mechanisms to ensure the phase out of ozone-depleting substances by all countries.

The Commonwealth contributes to the Multilateral Fund of the Montreal Protocol on Substances that Deplete the Ozone Layer, which supports the transfer of 'ozone-friendly' technology to developing countries. The Commonwealth provided \$21.5 million to the Multilateral Fund between 1991-92 and 1997-98 and expects to contribute an additional \$18.7 million over four years from 1998-99 (see Chapter 3, Table 3.1). It also contributes to the Global Environment Facility, which funds ozone-related activities in former Eastern bloc countries and provides assistance to developing countries through focused bilateral projects in the Asia-Pacific region and by participation in a regional network of government ozone units.

Box 8.8: The Management of Australia's Halon Stock

Halons are very potent ozone depleting substances commonly used in fire fighting and explosion suppression applications. Phase-out of halon 1211 and halon 1301 offers the best remaining policy option for enhancing the recovery of the ozone layer.

The management of halons is a major focus of government activity. The Government continues to provide funding for Australia's National Halon Bank, which is a unique facility offering a complete 'cradle to grave' service for halons decommissioned under State and Territory ozone protection legislation.

Australia has made a significant contribution to international activities on halon management. At the Tenth Meeting of the Parties to the Montreal Protocol in November 1998, Australia (jointly with the European Commission) was successful in gaining agreement that all Parties must develop national halon management strategies.

Developed country Parties to the Protocol must submit their halon management strategies by the end of July 2000. The Government has made significant progress in the development of an Australian Halon Management Strategy, which will provide the framework for responsible management of Australia's halon stock to 2030, including appropriate arrangements for the future operation of the National Halon Bank. The strategy is to be finalised in 1999, which will enable Australia to be amongst the first nations to submit a national strategy to the international community.

In 1998-99, the Government invested in several technical studies essential to the development of Australia's international and domestic action on halon, including:

- case studies on halon management practices in key industries; and
- surveys of Australian halon stocks and essential use requirements.

The Commonwealth also contributes to international scientific effort through provision of funds to assist expert involvement in the work of the Montreal Protocol's Technology and Economic Assessment Panel (TEAP) and its committees. TEAP assessments are a key input to international and national ozone protection policy.

At the national level, the Government works with the States and Territories, industry and other stakeholders to phase out the import, export and manufacture of ozone-depleting chemicals in line with Australia's international obligations under the Montreal Protocol and where possible exceed, Montreal Protocol requirements.

In 1998-99 the Commonwealth, with State and Territory Governments commenced a major review of the National Ozone Protection Programme. The review has been initiated to provide the basis for the future development and management of the Programme to best meet Australia's international obligations to protect the ozone layer. It is anticipated that the review will be finalised in 1999-2000.

The Phase-Out of Methyl Bromide Use in Australia

Methyl bromide is an ozone-depleting substance controlled under the Montreal Protocol on Substances that Deplete the Ozone Layer.

The Government released a National Methyl Bromide Response Strategy in June 1997, which presents a national approach to phase-out methyl bromide use in Australia's horticultural industry.

Implementation of the Strategy has already commenced through commitment of the Ozone Protection Reserve to funding of a communication strategy targeting users of methyl bromide and \$695,000 to the year 2000-2001 to fund the development and field trialing of application methods for alternatives to methyl bromide.

The Ozone Protection Act

There have been significant developments in the administration of the Act in 1998-99. A quota system for the import of hydrochlorofluorocarbons (HCFCs) was introduced on 1 January 1999 to remove the risk of industry exceeding the annual HCFC import limit specified in the *Ozone Protection Act 1989*. Twelve companies were issued with transferable quotas that establish, in accordance with a formula, the quantity of HCFCs that each can import during the first one-year quota period. This regime will ensure that the Government's phase-out schedule for HCFCs is maintained.

The Government is improving the operation of the Act through a series of amendments to the licensing and quota systems, that will allow more effective and targeted regulation of ozone depleting substances. Information on the scope and requirements of the Act, along with information on the environmental implications of using fluorocarbons (eg HCFCs and HFCs) is being developed into a booklet through a project funded from the Ozone Protection Reserve.

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

ATMOSPHERIC RESEARCH

The Bureau of Meteorology is responsible for the monitoring of Australia's weather and climate, research into meteorology of the Australian region and the provision of a wide range of services to the community and major user groups. Monitoring activities include the joint management (with CSIRO) of the Cape Grim Baseline Air Pollution Station. This station monitors concentrations of greenhouse gases and ozone depleting substances. The Bureau also monitors upper atmosphere ozone concentrations at other locations. The Bureau of Meteorology Research Centre contributes significantly to the international research effort aimed at increasing understanding and prediction of the global climate system. This research forms a major input to the internationally coordinated scientific assessment of climate change undertaken by the Intergovernmental Panel on Climate Change. The Bureau is providing input to the atmosphere component of the National State of Environment report scheduled for release in 2001 and is participating in the review process for the monitoring protocols of the National Environment Protection Council Measure for Ambient Air Quality. Services provided with the Bureau include public forecasts of an UV-B index based on a system jointly developed with the Cooperative Research Centre for Southern Hemisphere Meteorology. It also provides daily air pollution and air quality advice at a number of locations. Systems to enhance this advice are being developed in cooperation with other agencies.

Monitoring of Radioactivity

The Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) ensures that the amount of airborne radioactive discharges from the Commonwealth's nuclear installations are as low as reasonably achievable and that the risk of accidental airborne releases of radioactive materials is within international standards. This involves the monitoring and review of airborne discharges from nuclear installations and assessing the risk of accidents that might lead to releases of radioactive materials to the environment. As a result, routine airborne radioactive discharges from the Australian Nuclear Science and Technology (ANSTO) reactor and nuclear facilities have been maintained at levels comparable to similar facilities elsewhere and correspond to radiation doses to individuals which are a small fraction of the national and international dose limits.

With the passing of the *Australian Radiation Protection and Nuclear Safety Act 1998* (the ARPANS Act), all Commonwealth entities involved in radiation and nuclear activities will be required to hold a

licence from ARPANSA to continue such activities. Requirements will be imposed on licensees to ensure that airborne discharges are as low as reasonably achievable, that discharge limits are met and that the safety of operations meet international standards.

In 1998, the then Nuclear Safety Bureau (now ARPANSA) undertook an initial assessment of the siting for the proposed ANSTO replacement research reactor. The assessment was undertaken against international best practice and the Bureau's Safety Assessment Principles and included advising the Commonwealth Government on the Environment Impact Statement for the proposed reactor. ARPANSA will now undertake a detailed assessment of the site before reaching a decision regarding the granting of a licence, under the ARPANSA Act, for the siting of the reactor.

The Environmental and Radiation Health Branch of the Australian Radiation Protection and Nuclear Safety Agency conducts an environmental surveillance programme involving an Australia-wide network of air and rainfall sampling stations for monitoring radioactive fallout. The purpose of this network is to enable the detection of very low levels of radioactive contamination should they arise in the Australian environment from any local or overseas source. Also, under this programme, releases of radioactivity to the environment by the Australian Nuclear Science and Technology Organisation's facility are monitored and audited by the Environmental and Radiation Health Branch and reported annually, and annual inspections and environmental monitoring are conducted at the radioactive waste storage facilities at Woomera. In addition, the Branch conducts investigative research into radon and the behaviour of radioactive aerosols in the environment.

The Australian Radiation Protection and Nuclear Safety Agency maintains a solar ultraviolet radiation (UVR) monitoring network covering the Australian capital cities, some major population centres and the Australian stations in Antarctica. The objective of this activity is to determine the character of the UVR environment and to assess the impact of depletion of the ozone layer on the UVR levels and its consequences for public health.

Chapter 9: Coasts and Oceans

Key Points:

- Australia's Oceans Policy, announced in December 1998 is the first comprehensive plan to protect and manage Australia's oceans. Initial funding of \$30 million over three years has been allocated to implement the policy, with a further \$20 million allocated subject to the sale of the next tranche of Telstra. Australia's Oceans Policy is broadly based but new initiatives focus in particular on Regional Marine Planning at the large ecosystem scale for the whole of Australia's Exclusive Economic Zone (EEZ) with actions directed to ensuring sound decisions on resource use in the EEZ.
- An additional \$3.4 million from 1999-2000 to 2001-02 will be provided for improved surveillance and enforcement within the Great Barrier Reef Marine Park.
- Some \$28.8 million will be provided in 1999-2000 for Coasts and Clean Seas activities. These include the Clean Seas Programme, Introduced Marine Pest Programme, Coastal Monitoring Programme, Fisheries Action Programme and the Marine Species Protection Programme.
- New funding of \$4 million a year from 1999-2000 to 2002-03 will be provided to deter illegal fishing in Australia's sub-Antarctic waters.
- On 16 December 1998 a notice of intent was issued to declare around 370 square kilometres of the Tasmanian Seamounts as a marine reserve. The seamounts host a rich biodiversity. If declared, this temperate water reserve will be an important contribution to Australia's National Representative System of Marine Protected Areas.
- Over 400 community groups are being supported yearly by Coastcare funding to help protect and repair coastal, marine and estuarine environments.
- The Environment and Heritage Legislation Amendment Bill 1999 was introduced to Parliament on 31 March 1999 to give effect to Australia's commitments under the Protocol to the London Convention.
- At the seventh session of the Commission on Sustainable Development (in April 1999) Australia promoted a suite of initiatives aimed to accelerate the conservation and sustainable use of marine biological diversity on a global scale. These initiatives relate to marine pollution, coral reefs, marine protected areas, conservation of biological diversity of the high seas and improving international cooperation and coordination on ocean issues.

Table 9.1: Coasts and Oceans--New Measures, Programme and Tax Expenditure Estimates

Description	1998-99 \$m	1999-00 \$m	2000-01 \$m	2001-02 \$m	2002-03 \$m
NEW MEASURES					
Oceans Policy implementation (a)	-	10.0	10.0	10.0	-
Detering illegal fishing in Australia's sub-Antarctic waters	-	4.0	4.0	4.0	4.0
Improved Great Barrier Reef Marine Park Surveillance	-	1.0	1.2	1.2	-
Funding for the GBRMPA for the Independent Monitor for the Port Hinchinbrook project	-	0.2	-	-	-

PROGRAMME AND TAX EXPENDITURE ESTIMATES					
Protection and management of our coasts and oceans					
Australia's Oceans Policy (a)	-	14.2	17.6	18.7	-
Coasts and Clean Seas (b)					
Clean Seas	15.9	13.2	13.3	10.9	0.1
Coastcare	5.7	5.4	5.3	6.2	0.1
Marine Species Protection	2.8	2.4	3.1	2.0	0.1
Capacity Building	1.1	0.6	0.9	1.2	0.1
Coastal and Marine Planning	2.3	0.8	1.0	1.3	0.1
Coastal Monitoring	1.4	0.7	0.6	0.9	0.1
Introduced Marine Pests	1.3	0.9	0.9	2.2	0.1
Marine Protected Areas	1.0	1.4	1.5	0.4	-
Marine Waste Reception Facilities	0.6	0.8	1.1	-	-
Oceans Policy Development	2.5	-	-	-	-
Australian Coastal Atlas	1.1	0.4	0.4	0.4	-
Fisheries Action Programme--marine component (c)	1.4	2.3	1.5	1.3	-
Australian Quarantine and Inspection Service Ballast Water Programme (d)	0.3	0.3	0.4	0.4	na
National Oil Spill Atlas	0.4	1.0	na	na	na
AUSLIG	0.5	0.4	0.5	0.5	0.5
Great Barrier Reef Marine Park Authority (e)	12.5	15.3	15.6	15.8	14.8
Marine Environment Protection Measures					
Regional and International Environmental Protection	na	na	na	na	na
London Convention--Dumping at Sea	0.2	0.2	0.2	0.2	na
Australian Maritime Safety Authority	3.7	3.7	3.7	3.7	3.7

Management of our Marine Resources					
Sustainable Fisheries Management					
Fisheries and Aquaculture subprogramme	0.2	0.2	0.2	0.2	-
Australian Fisheries Management Authority	12.4	10.3	10.3	10.3	10.3
Commission for the Conservation of Southern Bluefin Tuna	0.3	0.3	0.3	0.3	0.3
Southern Shark Fishery Industry Development Programme	-	2.6	-	-	-
Deterring illegal fishing in Australia's sub-Antarctic waters	-	4.0	4.0	4.0	4.0
Australian Customs Service Coastwatch (f)	na	na	na	na	na
Coastal and Marine Research					
CSIRO Marine Sector (total) (g)	22.1	22.0	na	na	na
Multi-use management of Exclusive Economic Zone	4.2	4.2	na	na	na
Marine living resources	6.8	6.7	na	na	na
Marine conservation management	2.6	2.6	na	na	na
Marine products and biotechnology	0.2	0.2	na	na	na
Estuarine and coastal waters	4.0	3.9	na	na	na
Oceanographic research vessel (h)	4.3	4.4	na	na	na
Resources sustainability	6.6	6.6	6.6	6.6	6.6
Ecosystem protection	2.9	3.2	3.2	3.2	3.2
Fisheries Resources Research Fund	0.3	0.3	0.3	0.3	0.3
Cooperative Research Centres (CRCs) (total)	12.0	12.9	12.6	11.9	10.5
CRC for Antarctica and the Southern Ocean	3.2	3.0	2.0	2.0	1.0
CRC for the Great Barrier Reef World Heritage Area	2.2	2.4	2.9	2.6	-2.5
CRC for Aquaculture	2.4	2.4	0.4	-	-
CRC for Catchment Hydrology	2.0	2.2	2.6	2.6	2.6

CRC for Coastal Zone, Estuary and Waterway Management	-	0.9	2.3	2.3	2.3
CRC for Freshwater Ecology	2.2	2.0	2.4	2.4	2.1
Australian Institute of Marine Science	18.5	21.1	22.6	22.3	23.4
Capital Refurbishment--AIMS	2.0	3.0	3.6	3.0	-
ANSTO	0.4	0.6	na	na	na
Environmental Impacts of Petroleum Operat.	0.1	0.1	0.1	0.1	-
Fisheries Research Development Corporation	11.4	12.4	12.5	12.5	12.5
Coastal and Marine Monitoring					
AGSO Urban and Coastal Impacts	0.8	0.8	0.8	0.8	0.8
Antarctic Division Marine Programme(i)	na	na	na	na	na
Bureau of Meteorology	0.5	0.4	0.4	0.4	0.4
Royal Australian Navy Hydrographic Service	na	na	na	na	na
Australian Oceanographic Data Service	0.8	0.8	0.8	na	na

New measures are expressed in outturn prices and other expenditure and revenue figures are expressed in 1999-2000 prices.

Programme and tax expenditure estimates include the effect of new measures.

- denotes nil; na denotes not available.

- a. A New Measure of \$30 million funding from the Consolidated Revenue Fund, 1999-2000 to 2000-02. A further \$20 million has been allocated to the implementation of Australia's Oceans Policy subject to the sale of the next tranche of Telstra.
- b. These figures include an allocation for Marine Group corporate overhead costs.
- c. See Chapter 6 for the inland waters component of the programme.
- d. Control of marine pests information appears under Coasts and Clean Seas Introduced Marine Pests Programme.
- e. Accrual-based estimates after 1998-99.
- f. It cannot be estimated what proportion of the Coastwatch budget is attributable to environmental purposes due to the range of activities undertaken..
- g. Funding for the Centre for Research on Introduced Marine Pests is included as part of the expenditure under Marine Conservation Management. A further \$700,000 is expected on marine pest research under CSIRO's Biodiversity Sector.
- h. This vessel has some non-CSIRO users, sometimes for non-environmental purposes.
- i. See Chapter 10 for total expenditure.

Australia's marine and coastal environments are rich in natural and cultural resources and are a focus for much of Australia's economic, social, tourism, residential and recreational activity. The Commonwealth's expenditure, aimed at the protection, conservation and sustainable use of Australia's coastal and marine environments is set out in Table 9.1.

PROTECTION AND MANAGEMENT OF OUR COASTS AND OCEANS

Australia's Oceans Policy

On 23 December 1998 the Government released *Australia's Oceans Policy*--the first comprehensive, national plan to protect and manage Australia's oceans.

Under the Oceans Policy, the Government will implement new integrated and ecosystem-based planning and management arrangements for our oceans through the development of regional marine plans. The plans will be based on large marine ecosystems and will promote ecosystem health and integrity through the integration of economic, environmental, social and cultural requirements in accommodating multiple ocean uses. State and Territory Governments will be invited to participate in the regional marine planning process which will also provide the opportunity to ensure complementary planning across Commonwealth and State jurisdictions.

The first regional marine plan will be developed to cover the south-eastern region of Australia's marine jurisdiction and will include areas within the limits of Australia's Exclusive Economic Zone and adjacent claimable areas of continental shelf. Its boundaries are likely to include waters off the south east of Australia, adjacent to south-eastern New South Wales, Victoria, eastern South Australia, and Tasmania, including Macquarie Island. A regional marine plan steering committee with non-government and government interests will oversee development of the plan.

Initial funding of \$30 million over three years has been allocated to implementation of Australia's Oceans Policy (with a further \$20 million to come from Natural Heritage Trust funds, subject to the sale of the next tranche of Telstra). Funding will be for regional marine planning development, marine environment protection, marine protected area development and national secretariat and coordination.

Box 9.1: Implementation of Australia's Oceans Policy--Major Actions during 1999

Australia's Oceans Policy is targeted to give early tangible results. A number of major actions are required to implement the policy and drive the regional marine planning process.

The **National Oceans Ministerial Board** has been established. The Board is comprised of Commonwealth Ministers responsible for the environment (Chair), industry, resources, fisheries, science, tourism and shipping. The primary function of the Board will be to oversee the regional marine planning process. The Board will develop the scope and timetable for regional marine plans and ultimately approve each plan.

The **National Oceans Office** will also be established before the end of 1998-1999 within the Commonwealth Department of the Environment and Heritage. The office will support the National Oceans Ministerial Board, the National Oceans Advisory Group and the regional marine plan steering committees. It will provide secretariat and technical support and programme delivery, in consultation with other Commonwealth agencies.

The **National Oceans Advisory Group** will be set up in mid 1999. The group is comprised predominantly of members with non-government interests to provide advice to the National Oceans Ministerial Board on the implementation of the oceans policy.

A process to develop the **Regional Marine Plan for the south-eastern Australian marine jurisdiction** will commence in mid 1999. A **Regional Marine Plan Steering Committee** will oversee

development of this plan. The steering committee will comprise key non-government and government stakeholders from each of the jurisdictions involved.

A detailed implementation schedule for Australia's Oceans Policy will also be finalised in mid 1999.

As well, the Government will hold a **National Oceans Forum** in late 1999 to promote the implementation of Australia's Oceans Policy. A broad national cross section of those with a stake in the management of our oceans will participate along with members of the National Oceans Ministerial Board.

Coasts and Clean Seas

The Coasts and Clean Seas programmes provide funding to address major marine, estuarine and coastal management issues. Coasts and Clean Seas projects are already helping to achieve Oceans Policy goals by providing funding to address important issues such as land-based sources of marine pollution, introduced marine pests, coastal degradation, fish habitat rehabilitation and marine species protection.

Under the ten Coasts and Clean Seas programmes the Government will provide \$28.8 million from the Natural Heritage Trust and other expenditure during 1999-2000. The goal is to accelerate activities in the national interest to achieve the conservation, sustainable use and repair of Australia's coastal and marine environments.

The emphasis of Coasts and Clean Seas is on partnerships. Communities, governments and industry all have a role to play as marine and coastal management is a shared responsibility. Funding is provided to community groups, water management authorities, regional organisations, scientific organisations and State, Territory and local governments.

Clean Seas

Point and diffuse sources of wastewater and stormwater pollution associated with activities such as urban development and poor catchment management are major causes of reduced water quality in estuaries along the coast.

Box 9.2: Ulladulla Tea Tree Trial--Effluent Re-use Study

In 1998-99 an innovative pilot project for effluent reuse was set up in Ulladulla with support from the Clean Seas Programme and further contributions from the Shoalhaven Council and other proponents.

The Clean Seas Programme provided \$120,500 to establish a trial to determine whether *Melaleuca linariifolia* is a suitable species for tea tree oil production in association with irrigated effluent. It was considered that effluent reuse, if applied to a commercial crop, could be a viable alternative to effluent disposal via ocean outfall.

Interim results have shown that growth rates on plants irrigated with effluent have reached harvestable levels while other plants have not yet attained this size. The oil content of the harvestable plants is also suitable for commercial production. This pilot project has shown there is already potential to reuse significant quantities of effluent from the new Ulladulla sewage treatment plant to establish a plantation oil industry.

Under Coasts and Clean Seas, the Commonwealth Government will provide \$13.2 million during 1999-2000 to directly address wastewater and stormwater pollution sources. The programme has two elements, a publicly advertised grants component for projects up to \$250,000; and a Commonwealth component for projects of national significance. The programme is focused on providing funds for on-ground work using best-available or innovative approaches to wastewater management including reuse. Projects that can be used as demonstration models in similar locations around Australia are particularly encouraged. All three spheres of government (Commonwealth, State and local), industry, water authorities, the community and scientific organisations are the programme's major stakeholders.

Coastcare

Coastcare is the community cornerstone of Coasts and Clean Seas. During 1999-2000, \$5.4 million will be provided by the Commonwealth Government to enhance Coastcare's achievements in coastal and marine management and protection. The programme provides opportunities and resources for community groups to undertake coastal management projects such as dune stabilisation, coastal habitat protection, environmental awareness, marine assessment and flora and fauna surveys. Commonwealth, State and local government all cooperate to support Coastcare groups and projects that are funded jointly by the Commonwealth and the States.

In 1999-2000 the network of Coastcare facilitators around Australia will increase from 23 to 26 funded by the Commonwealth Government. This network provides essential advice and support to those community groups working to protect and repair the coast.

Box 9.3: Communities Protecting Fringe Reefs

A project titled Fringe Reef Monitoring in the Whitsunday Islands, was one of nearly 400 projects funded under Coastcare in 1998-99. Local stakeholders and volunteers developed this project to address reef damage in the Whitsunday Islands. Volunteers have assessed anchor damage, undertaken reef assessments, installed marker buoys and moorings, and are continuing to monitor the progress of these efforts.

The project has also been incorporated into the Great Barrier Reef Marine Park Whitsunday Management Plan. Scientific evidence shows that a major environmental outcome of this Coastcare project is that degradation to the protected reefs has ceased and coral in the area is beginning to recover.

Marine Species Protection Programme

During 1999-2000, \$1.8 million will be provided under Coasts and Clean Seas for the protection of marine species. Significant funding has been identified for cetacean proposals that complement Australia's objectives at the International Whaling Commission. A number of other proposals have been approved under the local and Commonwealth components of the programme. These include proposals dealing with seals, dugong, sea turtles, seabirds, and sharks.

The Marine Species Protection Programme has several objectives:

- to take action to reduce the incidental deaths of marine species arising from fishing and other commercial and recreational operations and predation by introduced species;
- to reduce or manage the effects of disturbance on threatened or at-risk marine species arising from the use of the marine environment including industrial activities, pollution, fishing activities, and tourism; and
- to increase the ability to manage adverse environmental impacts on the key habitats of marine species.

Capacity Building

The Capacity Building Programme utilises a range of measures to improve the coastal management skills and awareness of decision-makers from industry, business, government and the community. These measures include the development of:

- guidelines and codes of practice through consultation with key industry groups; and
- national educational and skills development programmes.

In 1999-2000 \$600,000 will be provided under Coasts and Clean Seas for the Capacity Building Programme.

Coastal and Marine Planning Programme

The Commonwealth has committed \$1.4 million during 1999-2000 under Coasts and Clean Seas for the Coastal and Marine Planning Programme.

Through quality planning, the Coastal and Marine Planning Programme aims to improve the management of potential and existing pressures in the coastal zone. Pressures include increased recreational use, expanding urban development, or increased port and marine activity. These pressures can lead to negative environmental impacts such as reduction in water quality, reduced

fish-breeding environments, and reduced water bird habitats.

The Coastal and Marine Planning Programme aims to identify and deal with impediments to quality planning in targeted coastal regions. Strategies include changes to local planning instruments, protocols between managing agencies and community participation in the planning process. Coastal and marine planning projects managed under the programme cover over 33 per cent of the coastline. These areas are populated by some 90 per cent of Australia's coastal population (living in local government areas abutting coasts and estuaries).

Coastal Monitoring Programme

A sound understanding of the significant threats to coastal environments is necessary if coastal managers are going to be able to determine whether the use of the coastal zone is sustainable. The Commonwealth Government will provide \$700,000 during 1999-2000 for the Coastal Monitoring Programme to assist coastal managers and the wider community in identifying significant threats to key coastal environments and habitats and, over time, in assessing the effectiveness of policies designed to protect them.

The monitoring programme funds a range of projects through both a publicly advertised and Commonwealth component grant process. For example, in 1998-99 \$150,000 was allocated to map seagrass meadows, establish key monitoring sites and train local community groups in seagrass monitoring in the Great Sandy Region of Queensland. Priorities for the programme in 1999-2000 include assessing seagrass loss, water quality in estuaries and coastal lakes, mangrove and salt marsh loss in developed areas, eutrophication and coastal reefs.

Introduced Marine Pests Programme and Ballast Water Programme

The Commonwealth expects to commit \$900,000 during 1999-2000 under Coasts and Clean Seas Introduced Marine Pests Programme to address the impacts of exotic pest species that breach existing quarantine barriers on the marine environment. The programme supports actions that contribute to the Government's commitment in Australia's Oceans Policy to implement a national incursion management system for introduced marine pests.

In 1998-99 the programme provided substantial support for a nationally coordinated response by Northern Territory and Commonwealth agencies, research and industry bodies to the first outbreak of the serious marine pest, the black striped mussel, in Darwin. The outbreak was largely contained in Darwin and the Commonwealth is examining ongoing commitments to monitoring, legislative reviews and emergency response policies to ensure coordinated national rapid response to future marine pest outbreaks.

In addition to the Introduced Marine Pests Programme, the Commonwealth is also funding essential research and ballast water management programmes to counter the threats to the marine environment posed by introduced exotic pests. Ballast water from ships is a major vector for the introduction of exotic marine pests. The Australian Quarantine and Inspection Service (AQIS) is the leading Commonwealth agency for all matters concerning the management of ballast water, including barrier control measures.

Australia leads the world in ballast water management issues. The current development of a risk-assessment-based Decision Support System (DSS) for management of ballast water and hull fouling introductions is a world first. In addition, the shipping industry and bulk exporters, and other key stakeholders, have agreed to the introduction of a levy on shipping which is scheduled to raise \$1 million per annum to fund the Strategic Ballast Water Research and Development Programme

during 1998-99 and 1999-2000.

Improved ballast water management arrangements will be achieved through the implementation of the Australian Ballast Water Management Strategy, and application of the outcomes of the Strategic Ballast Water Research and Development Programme. The Research and Development Programme is focused on developing a risk-assessment-based DSS for use as a management tool by AQIS and other relevant authorities in Australian ports. The DSS will provide an assessment of the risk of a particular vessel voyage based on the characteristics of the port of uptake, ballast water treatment undertaken en-route, and the characteristics of the port of discharge. The Research and Development Programme will also develop methods for treating ships' ballast water and examine hull-fouling issues.

The third major Commonwealth initiative to combat introduced marine pests is the CSIRO Centre for Research on Introduced Marine Pests (CRIMP). CRIMP undertakes strategic research to understand the number, distribution, impact and possible management options to combat introduced marine pests. In 1999-2000 CRIMP will complete a national survey of Australia's major ports and document the scale of the marine pest 'problem', undertake a world-first study on genetic and ecological approaches to marine pest management which will seek natural parasites and predators, and collaborate internationally on projects examining the impacts of major pest species. CRIMP also provides the biological scientific support for the Australian Quarantine and Inspection Service's decision support system, and provides advice to Environment Australia on options to deal with pest incursions.

Marine Protected Areas

An initial action under Australia's Oceans Policy has been to provide \$7 million over three years to resource conservation assessments of prospective Commonwealth marine protected areas (MPAs). The funding will also provide for consultative processes in the establishment, planning and subsequent management of the new MPAs.

The development of the National Representative System of Marine Protected Areas (NRSMPA) is one of the Government's key marine priorities. The Commonwealth will provide \$1.4 million during 1999-2000 through the Marine Protected Areas Programme for development of marine protected areas in State, Territory and Commonwealth waters. Projects for 1999-2000 will be designed specifically to help expand the existing system of marine parks and reserves. These will include habitat survey, community consultation, planning and pre-declaration projects, and development of a number of key national projects designed to address issues across all jurisdictions.

A Strategic Plan of Action for the NRSMPA has been prepared through ANZECC. The plan sets out priorities for the Commonwealth, States and the Northern Territory for the next three years for developing and understanding the NRSMPA.

The Commonwealth Government is pursuing declarations of marine protected areas in Commonwealth waters. In addition to the Tasmanian Seamounts, investigations are being carried out in the Macquarie Island, Heard and McDonald Islands, Lord Howe Island and Cartier Island and Hibernia Reef regions, with a view to establishing marine protected areas. Conservation and resource use, including use by extractive industries, will be accommodated, where appropriate, within multiple-use marine reserve arrangements. The primary aim will be the long term conservation of identified biodiversity values.

Box 9.4: Tasmanian Seamounts

The Tasmanian Seamounts are a distinct geological feature within Australian waters. They include around 70 submerged mountains, approximately 170km south of Tasmania. They rise from water depths of between 1000 and 2000 metres from the sea floor, and are 200 to 500 metres high and several kilometres across at their base. A survey conducted by CSIRO discovered that the seamounts host a rich biodiversity and support a distinct bottom dwelling community of animals, any of which are unique to the Tasmanian Seamounts. CSIRO reviewed the likely impact of trawling for orange roughy on the seamount fauna and recommended that the area become a permanent marine protected area.

On 16 December 1998 the Director of National Parks and Wildlife issued a Notice of Intent announcing his intention to recommend the declaration of the Tasmanian Seamounts Reserve under the Commonwealth *National Parks and Wildlife Conservation Act 1975*. The reserve would be approximately 370 square kilometres, including 15 of the seamounts. This area is believed to be representative of the fauna of the seamounts. Public consultation on the proposed marine reserve closed on 15 March 1999. Comments received are currently being assessed by Environment Australia after which a proposal for proclamation of the reserve will be presented to the Minister for the Environment and Heritage for his approval.

The management arrangements for the proposed reserve anticipate a split-water column approach where the bottom-dwelling communities will be protected by a strict protection regime below a 500-metre depth which would not allow any resource extraction. Existing tuna fishing would be permitted in the surface waters above 500 metres. These innovative management arrangements have been devised with the assistance of the CSIRO.

Environment Australia and the Australian Petroleum, Production and Exploration Association (APPEA) have signed an agreement to increase and improve communication and cooperation. This cooperation is being facilitated through an annual work plan. Among other institutions, APPEA, Environment Australia and the Western Australian Department of Conservation and Land Management have announced jointly their intention to work towards the development of a multiple-use conservation strategy to protect environmental and heritage values of Commonwealth waters surrounding Montebello and Barrow Islands off the North West Shelf of Western Australia. This initiative may provide a model for cross-jurisdictional management of multiple objectives in the marine environment.

Marine Waste Reception Facilities Programme

The Marine Waste Reception Facilities Programme, with funding of \$2.5 million over three years, aims to improve water quality at ports, marinas and harbours, and increase awareness of marine waste reception requirements through:

- funding analyses of the need for waste reception facilities at individual port, marinas and boat harbours;
- funding the installation of improved facilities at selected demonstration sites in conjunction with owners and managers;
- promoting best practice as illustrated by the new facilities.

Australian Coastal Atlas

The Australian Coastal Atlas (ACA) is a national initiative being facilitated by the Environmental Resource Information Network (ERIN) of Environment Australia. The Government will provide \$360,000 during 1999-2000 for the project. The atlas is a Geographic Information System (GIS) that provides spatial coastal information via the Internet for use by the community. The ACA will be a

source for maps and will allow users to gain access to existing coastal information relating to their specific geographic and subject interests. A wide range of government, community and industry groups nationwide are involved in the ACA as both users and data suppliers.

Fisheries Action Programme

The Fisheries Action Programme aims to protect and restore fishery habitats in freshwater, estuarine and marine environments and to raise awareness of associated issues, by encouraging community participation, research, and facilitating community projects.

Some \$2.3 million has been allocated from Coasts and Clean Seas to support the marine component of the Fisheries Action Programme during 1999-2000. Projects undertaken by the programme will help to address fisheries and aquatic environment issues such as aquatic pest control, fisheries habitat rehabilitation and the development of sustainable fishing practices and management plans. Rivercare is providing \$1.1 million to support the riverine component of the programme in 1999-2000 (see Chapter 6).

National Oil Spill Atlas

The National Oil Spill Atlas is being developed through the Australian Maritime Safety Authority (AMSA) with the active participation of the States and the Commonwealth. The atlas will expand the current State-based coastal resource atlas to provide a national uniform database system for oil spill incidents to protect Australia's coastal environments.

Australian Surveying Land Information Group

Australian Surveying Land Information Group (AUSLIG) is responsible for defining Australia's marine jurisdictions in accordance with the United Nations Convention on the Law of the Sea (UNCLOS) and provides technical advice to government agencies to assist in the administration, surveillance and protection of Australia's ocean territory. AUSLIG is developing the Australian Maritime Boundaries Information System (AMBIS) to satisfy these requirements. Work undertaken by AUSLIG will be instrumental to implementing Australia's Oceans Policy.

Great Barrier Reef Marine Park Authority

The Great Barrier Reef Marine Park Authority is responsible for managing one of the world's premier natural resources. This Commonwealth statutory authority, in partnership with Commonwealth and Queensland Government agencies, undertakes a wide range of functions to ensure that the conservation and world heritage values of the Great Barrier Reef are preserved for future generations. In 1999-2000 the Commonwealth will provide \$15.3 million to the Authority to manage the marine park. In addition, \$5.8 million is received from a Special Appropriation, which is funded by the Environmental Management Charge on permitted commercial operations within the Marine Park. Further contributions, including those estimated from the Queensland Government, would bring the total budget for the Authority to \$28.3 million for 1999-2000.

Conservation of the Great Barrier Reef is the Authority's primary obligation. The Authority's challenge is to ensure that valuable tourist and commercial fishing industries, worth around \$1.3 billion per annum, and other important uses, such as adjacent land use, shipping and recreational activities, operate on an ecologically sustainable basis. The outcome of the Authority's activities will be the protection, wise use, understanding and enjoyment of the Great Barrier Reef through the care and development of the Great Barrier Reef Marine Park.

In 1998-99 the *State of the Great Barrier Reef World Heritage Area* was released. The report is the

first ever attempt to integrate information on the state of the environment, human pressures on the environment and management responses to those pressures for the whole World Heritage Area. The report concluded that, overall, the Great Barrier Reef is in good shape and in good hands.

Also in 1998-99 the report of a five-year study of the effects of trawling was released. The Government subsequently announced that it would pursue major reforms to the management arrangements for trawling and would implement a crack down on illegal trawling in the marine park. The fine for illegal fishing will be increased and \$3.4 million will be available from 1999-2000 to 2001-2002 for targeted surveillance and enforcement activities. The Government has also indicated that it will ensure the mandatory use of turtle exclusion devices and by-catch reduction devices in the trawl fishery by March 2000.

There are four key issues to be addressed in providing funding for the protection and management of the Great Barrier Reef Marine Park and World Heritage Area.

- **Conservation and World Heritage:** protection of the natural values of the World Heritage Area and meeting the obligations of the World Heritage Convention includes protecting threatened species, reviewing the system of protected areas to ensure adequate representation of all habitat types (this is done under the Authority's Representative Areas Programme) and improving the understanding of the effects of large-scale disturbances, such as the Crown-of-Thorns starfish. The Authority will continue to protect dugong through even more effective levels of surveillance and enforcement in Dugong Protected Areas.
- **Tourism and recreation:** tourism is the main commercial use of the marine park, it contributes over \$1 billion to the Australian economy per annum and brings over 1.4 million visitors to the Great Barrier Reef. Park management aims include reducing the risk of adverse tourism impacts while providing diverse tourist opportunities.
- **Fisheries:** The maintenance of ecologically sustainable fisheries will be achieved in collaboration with Queensland fisheries management agencies. The Authority is working to obtain a better understanding of fishing activities and their impact on the Great Barrier Reef through a number of strategies including: a comprehensive research programme into the effects of fishing, monitoring fishing catch and effort, identifying major or critical habitats and actively supporting technology to reduce fishing by-catch.
- **Water quality and coastal development:** The risk of degradation to the Great Barrier Reef through water pollution, impacts of coastal development and land use must be minimised. The Authority is working with Queensland and local governments on management arrangements to reduce sediment, nutrient and other land-based runoff that impacts on the health of adjacent marine areas. Long-term monitoring programmes are being conducted to determine the state of water quality throughout the reef and assess threats from pollution. The Authority is working with the Australian Maritime Safety Authority on improving oil spill contingency planning and response, navigational aids, and ship reporting systems.

Protection and management of multiple marine use is provided for through development of plans of management for high priority areas and zoning plans. In 1998-99, the preparation of management plans for the Cairns, Whitsunday and Hinchinbrook areas was progressed. Zoning plans are being developed currently for the Far Northern and Gumoo Woolabuddee sections of the Marine Park. Work has commenced to add to the Marine Park, 27 new areas in the Great Barrier Reef region which are not yet in the park.

The Authority works jointly with a range of Commonwealth and Queensland Government agencies, such as the Queensland Department of the Environment and the Queensland Fisheries Management Authority, to achieve marine park management objectives. Field management of the marine park is

implemented through day-to-day management programmes, many of which are carried out by Queensland Government agencies.

Regional and International Environmental Protection

Australia is a major supporter of regional coastal and marine initiatives implemented through a range of institutions and programmes. Australia's actions at the international level have the dual role of integrating Australian marine and coastal objectives into international policy, and ensuring the effective operation of the marine and coastal programmes of work of international and regional fora with which Australia is involved.

International fora in which Australia is involved include the Coordinating Body on the Seas of East Asia (COBSEA), South Pacific Forum Secretariat, South Pacific Regional Environment Programme (SPREP), South Pacific Applied Geoscience Commission (SOPAC), Forum Fisheries Agency (FFA), South Pacific Commission (SPC), East Asian Seas (EAS) Action Plan, Asia Pacific Economic Cooperation (APEC), Marine Resources Conservation Working Group, the Global Programme of Action for the Protection of the Marine Environment from Land Based Activities (GPA), the Association of South East Asian Nations (ASEAN) the Commission on Sustainable Development (CSD) and the United Nations Convention on the Law of the Sea (UNCLOS).

Priority focal areas include: promoting and implementing the international aspects of Australia's Oceans Policy; marine pollution; integrated coastal management, including marine protected areas; and sustainable fisheries.

In April 1999 Australia promoted a suite of initiatives on oceans and seas to the seventh session of the Commission on Sustainable Development (CSD), aimed to accelerate the conservation and sustainable use of marine biological diversity on a global scale. These initiatives, which relate to marine pollution, coral reefs, marine protected areas, conservation of biological diversity of the high seas, combating illegal, unreported and unregulated fishing and improving international cooperation and coordination on oceans issues, will continue to be pursued in accordance with the outcomes of the CSD.

Australia is also a strong supporter of marine conservation organisations such as the International Coral Reef Initiative (ICRI), of which Australia was a founding member. Australia signed the 1994 Convention for the Conservation of Southern Bluefin Tuna, is an active participant in the International Maritime Organisation (IMO) and is playing an important role in the development of the ballast water annex to the Convention for the Prevention of Marine Pollution from Ships (MARPOL).

Commonwealth legislation strictly regulates the dumping of waste at sea. Australia is a party to the London Convention 1972, an international agreement that promotes effective control of pollution from ocean disposal which is hazardous to human health, could harm marine life, or could interfere with other uses of the sea. In 1996 a new Protocol to the Convention was agreed, which provides for a more rigorous approach to dumping wastes at sea, allowing only seven classes of material (including dredge material, vessels and platforms) to be dumped at sea after issue of a permit. The Government signed the Protocol on 25 March 1998. The Environment and Heritage Legislation Amendment Bill 1999 was introduced to Parliament on 31 March 1999 to give effect to Australia's commitment to the Protocol.

The Commonwealth Government is represented at the IMO's London Convention Consultative Group and London Convention Scientific Group Meetings, and is also a member of the IMO's Marine Environment Protection Committee (MEPC). These organisations meet each year to develop and

promote mechanisms to deal with international marine pollution issues. As part of the MEPC's Antifouling Working Group, the Government is developing an international instrument to implement a global ban on harmful antifoulants.

Through its development assistance programme, Australia contributes financially to programmes and projects managed by SPREP, SOPAC, FFA and SPC. In addition, Australia funds a number of other regional and bilateral projects promoting Integrated Coastal Zone Management and sustainable marine fisheries. For example, the \$4 million ASEAN-Australian Economic Cooperation Programme (AAECP) Coastal Zone and Environment Resource Project aims to enhance the national capacity and infrastructure of ASEAN countries to better address coastal zone management issues. The project's objectives include regional collaboration, efficient collection and utilisation of data, human resource development in information technology and coastal zone resource management. Australia has also funded a \$1.1 million study on the development of a coastal zone management plan for Papua New Guinea.

The \$4.5 million Samoa fisheries project is making a significant contribution to the sustainability of Samoa's inshore and offshore marine resources and the continuing development of the nation's village-based and commercial fisheries. In Papua New Guinea, Australia has committed \$6.5 million over six years to the National Fisheries College Project. The project will assist the country's domestic fisheries industry to sustainably utilise its marine resources.

Commonwealth initiatives in the Torres Strait will assist the fulfilment of environmental obligations as a party to the Torres Strait Treaty while helping the Torres Strait Islanders to sustainably manage their marine and coastal environment.

The Australian Maritime Safety Authority

The Australian Maritime Safety Authority (AMSA) is a statutory authority responsible for maritime safety, that is primarily funded by the shipping industry from fees and levies, but also receives Commonwealth funding for search and rescue operations.

AMSA provided around \$4.6 million in 1997-98 from shipping levies to work with State Governments, shipping, oil and exploration industries to implement the National Plan to Combat Pollution of the Sea by Oil and other Noxious and Hazardous Substances.

MANAGEMENT OF OUR MARINE RESOURCES

Sustainable Fisheries Management

The Commonwealth Government provides leadership in ensuring that fisheries resources are managed in accordance with the principles of ecologically sustainable development. The Commonwealth's Fisheries and Aquaculture subprogramme develops policies and legislation for the sustainable management of Australian fisheries and aquaculture. This includes addressing the environmental impact of fishing.

The Commonwealth Government takes a leading role in managing Australia's participation in fisheries working groups for regional agreements, such as APEC, and international bodies such as the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR), the Indian Ocean Tuna Commission and the Commission for the Conservation of Southern Bluefin Tuna (CCSBT). The objective of the CCSBT is to ensure, through appropriate management, the conservation and optimum utilisation of southern bluefin tuna (SBT). Currently, other signatories to the Convention

and members of the Commission are Japan and New Zealand. Efforts are being made under the Convention for other SBT fishing nations, including Taiwan, Indonesia and Korea, to comply with the Convention's management arrangements.

Fish stocks in the Australian Fishing Zone are managed jointly by the Commonwealth and States depending on agreed arrangements. The Australian Fisheries Management Authority (AFMA) is the Commonwealth statutory body responsible for the day-to-day management of Commonwealth fisheries resources. Under the *Fisheries Management Act 1991*, AFMA is charged with maintaining and managing the sustainable use of Commonwealth fisheries resources on behalf of the Australian community and key stakeholders, such as the commercial fishing industry. The Commonwealth will provide \$14 million to AFMA in 1999-2000. This represents approximately 60 per cent of AFMA's annual operating budget (with the remaining 40 per cent provided by industry). There is a new budget appropriation for sub-antarctic surveillance and an increase in the base level funding for foreign fishing vessel apprehensions.

Australian Fisheries Management Authority:

- incorporates environmental issues into fisheries management considerations;
- maintains and develops networks with Government environmental agencies and non-government environment organisations; and
- ensures its own environmental objectives and activities are consistent with other Commonwealth environment legislation.

Illegal fishing response initiative for sub-Antarctic waters

This new programme will undertake patrolling of Australia's remote sub-Antarctic waters. Expected outcomes are prevention of illegal fishing in the Australian Fishing Zone (AFZ) and the consequent protection of important fishery resources, especially of the Patagonian toothfish. The Government will provide nearly \$4 million to this initiative in 1999-2000.

Southern shark fishery industry development programme

The Government has committed \$2.6 million to carry out an industry development programme for the southern shark fishery. AFMA introduced an individual transferable quota system in early 1999. The new system aims to reduce school shark catches by 35 per cent.

Coastwatch

Coastwatch has a marine civil surveillance and response role that is multi-faceted. It performs activities relating to the detection of attempts to import illicit drugs and illegal immigrants. Coastwatch also gathers and disseminates environment protection information to client Commonwealth resource and environment management agencies. In addition, through these coordinating Commonwealth agencies, Coastwatch provides information and services for several State authorities.

Coastwatch contributes to Australia's internal environment protection programmes through regular surveillance of the Great Barrier Reef Marine Park, other marine conservation areas, and Australia's Coral Sea and Indian Ocean territories. Coastwatch provides immediate reports of significant wildlife or sea-life concentrations or mortality, oil pollution or other environmental damage. Coastwatch's activities are fundamental to the cost-effective implementation of Australia's Oceans Policy.

The total expenditure for the Coastwatch surveillance programme in 1999-00 is \$39 million.

However, the proportion of this funding that is considered to provide an environmental benefit cannot be estimated due to the range of tasks carried out by Coastwatch.

COASTAL AND MARINE RESEARCH

The Commonwealth is funding extensive research and development essential for the multiple use of Australia's marine and coastal environments. Organisations such as the CSIRO and the Australian Institute of Marine Science (AIMS) play a leading role in coastal and marine research and development. The Australian Antarctic Division, the Bureau of Meteorology, the Great Barrier Reef Marine Park Authority, Cooperative Research Centres and the Australian Geological Survey Organisation (AGSO) are also undertaking Commonwealth-supported research programmes.

CSIRO Marine Sector

The CSIRO is a major contributor to Commonwealth-funded marine research and development. CSIRO conducts scientific research throughout Australia's coastal waters and oceans as well as participating in international programmes and providing scientific research under contract to other nations, particularly our near neighbours in the Asia Pacific area and Indian Ocean.

CSIRO provides scientific research to address strategic issues of importance to both the Commonwealth Government and to private sector industry partners. CSIRO's main focus is to identify and assess marine resources, predict the impacts of resource use, and to provide strategies to assist in the ecological sustainable development and conservation of Australia's coasts and oceans. Predicting the impact of land use and climate on the productivity of marine resources is an important aspect of this. Research on the marine environment is linked to other CSIRO research areas particularly, climate and atmosphere, biodiversity, aquaculture, and petroleum exploration and development. CSIRO has a demonstrated capacity to undertake complex multidisciplinary projects over large ocean areas. Resource assessment, integration of knowledge and building predictive models are areas where CSIRO is considered a world leader. CSIRO works in collaborative partnerships with industry, CRC's, AIMS, State and university research teams.

CSIRO's allocations on research to the marine sector in 1999-2000 include:

- \$4.2 million to develop strategies for multiple-use management of Australia's EEZ through better understanding of the resources and processes involved;
- \$6.7 million to undertake research on marine living resources around Australia (northern, southern and internationally shared);
- \$2.6 million to improve evaluation and management of marine biodiversity;
- \$200,000 to research value-added marine products and biotechnology;
- \$3.9 million to develop measures for the improved health of estuarine and coastal waters; and
- \$4.4 million for an oceanographic research vessel which is a national facility that CSIRO manages access to and use of by the Australian marine science community.

Fisheries Research

The sustainable management of fish stocks and habitats in Commonwealth and international waters is highly dependent on ongoing fisheries research. A significant proportion of Commonwealth funding provided for marine and coastal research is dedicated to research to support sustainable fishing practices. The CSIRO and AIMS, along with organisations such as the Fisheries Research and Development Corporation, Bureau of Resource Sciences, and the Australian Antarctic Division,

conduct and support fisheries-related research in a number of fields.

The Commonwealth Government has allocated \$12.4 million in 1999-2000 to the Fisheries Research and Development Corporation (FRDC). The FRDC aims to provide a planning and funding mechanism for increasing industry investment in, and improving the cost-effectiveness of, fisheries research for both State and Commonwealth-managed programmes, and facilitating the dissemination, adoption and commercialisation of the results of research and development. In 1999-2000 the FRDC will undertake projects to increase knowledge of wild fish resources for sustainable management; and to develop and evaluate sustainable fisheries and ecosystems management.

Within AFMA's annual expenditure (of \$14 million in 1999-2000) \$1 million is allocated to the AFMA Research Fund predominantly for stock assessment and other fisheries-related research.

The role of the Fisheries Resources Research Fund is to appropriate funds, amounting to \$300,000 in 1999-2000, to organisations (primarily ABARE and BRS) to conduct fisheries research into issues of public interest, including environmental issues such as ecosystem protection.

Commonwealth-supported fisheries research in areas, for example, fish stock assessment, non-target species interactions and environmental impacts, allow Australia to make significant contributions to various international marine-based agreements such as, the Convention for the Conservation of Southern Bluefin Tuna and the Convention for the Conservation of Antarctic Marine Living Resources.

Cooperative Research Centres

The Cooperative Research Centre (CRC) for the Great Barrier Reef World Heritage Area is investigating the effects of a wide range of regional and local stresses, including environmental, social and engineering problems, associated with increasing use of the marine park by tourists, recreational and commercial fishers. The CRC has undertaken a shipping risk analysis that provided the basis for the Commonwealth Department of Transport's policy to move current concentrations of bulk shipping away from the inner route of the Great Barrier Reef. The CRC has also provided key research into dugongs that has led directly to the establishment of new dugong protection areas and the development of strategies to reduce the impact of gillnetting on dugongs.

Research at the CRC for Aquaculture aims to provide a technological basis for an environmentally sound and internationally competitive aquaculture industry.

Cooperative Research Centre for Coastal Zone, Estuary and Waterway Management

The CRC for Coastal Zone, Estuary and Waterway Management will commence on 1 July 1999 with CRC Programme funding of \$14.7 million over seven years. It aims to deliver a framework and tools for the effective management and use of our coastal resources. Outcomes of the CRC will include more effective and informed decisions, a management framework that takes into account social, economic and ecological values and attributes, a fair and transparent process to resolve conflicts over resource use, an integrated knowledge of the coastal system, solutions to environmental management challenges and training for coastal planners, resource managers and the community.

Another three CRCs undertake research on aspects of the environment relevant to coasts and oceans, namely the CRC for Antarctica and the Southern Ocean, the CRC for Catchment Hydrology, and the CRC for Freshwater Ecology.

Australian Institute of Marine Science

The Australian Institute of Marine Science (AIMS) conducts scientific research in all tropical Australian seas and coastal regions. The Institute's objectives are to promote the conservation and sustainable development of Australia's marine resources and to support internationally competitive Australian industries. Since it was set up, AIMS has established itself in strategic basic marine science, supporting both public and private interests. The Institute has built strong links to Australian industry and to the wider Asia-Pacific region; established a long-term environmental monitoring programme and built skills and knowledge in resource assessment, especially in tropical mangrove and coral reef systems; and is recognised as a leader in setting environmental assessment standards.

The Government will commit \$19.7 million to the AIMS research and development programme in 1999-2000. The programme involves long-term research that is geared towards an improved understanding of marine systems and the capability to predict the behaviour of complex tropical marine systems. Priority areas include, improving our understanding of the impacts of natural and human-induced changes in the marine environment, assessment of living marine resources and marine biotechnology (such as pharmaceuticals). These efforts sit within the following strategic directions.

- The Ocean Environment: understanding the circulation of water, nutrients and sediments.
- Marine Biodiversity: characterising species richness and genetic variety.
- Marine Living Resources: identifying valuable marine plants and animals.
- Ecologically Sustainable Development: understanding and documenting natural changes and human impacts.
- Technological Innovation: developing advanced instruments and techniques.

The Government has committed a further \$9.6 million from 1999-2000 to 2001-02 as part of a capital refurbishment programme for AIMS. The funding is for the refurbishment of existing infrastructure and research capacity, the construction of a new laboratory wing and the replacement and refurbishment of research vessels.

Australian Nuclear Science and Technology Organisation

The Australian Nuclear Science and Technology Organisation (ANSTO) uses radiotracing and nuclear analysis to investigate anthropogenic inputs to the sea through man-made structures, sewage outfalls and river systems.

Environmental Impacts of Petroleum Industry Operations

The Commonwealth, through the Australian Geological Survey Organisation's programme on Environmental Impacts of Petroleum Operations provides advice and undertakes research relating to impacts of offshore petroleum exploration and drilling. The objective of this programme is to facilitate petroleum exploration, development and production operations with minimal environmental impacts and with appropriate assessment of the effects of all operational activities, compatible with sustainable resource use. Research and information generated on areas subject to petroleum industry operational impacts include the time frame for recovery, remediation and related issues.

COASTAL AND MARINE MONITORING

Monitoring Programmes

Long-term baseline monitoring studies are necessary to increase understanding of the marine and coastal environment, assess impacts of human activities and support research across a range of environmental issues. The CSIRO and AIMS regularly collect a range of baseline monitoring data including physical oceanographic data on temperature, salinity, oxygen and nutrients from vessels and satellites, and coastal water-quality data from monitoring stations around Australia.

The CSIRO, the Australian Antarctic Division and the Bureau of Meteorology collaborate on the acquisition and analysis of sea surface and sub-surface and climate data from ships, drifting buoys and satellites. The Bureau of Meteorology is the major focus for Australian planning towards participation in the Global Ocean Observing System (GOOS) and the Global Climate Observing System (GCOS).

As discussed earlier in this chapter, a Coastal Monitoring Programme has been established under Coasts and Clean Seas to help coastal managers and the wider community in identifying significant threats to key coastal environments and habitats.

Urban and Coastal Impacts Project

In 1999-2000, nearly \$800,000 has been allocated for the Australian Geological Survey Organisation Urban and Coastal Impacts project. The objective of the project is to develop management strategies for State, regional and local government and industry associations, for estuaries and coastal waters adjacent to urban populations. Strategies are designed to ameliorate and manage the effects of pollution from catchment activities, sewage treatment plants and industrial discharge into coastal waters. During 1998-99 as part of the National Eutrophication Management Programme, advice was provided on the processes affecting estuarine sediments and their role in excessive plant growth in the Wilson Inlet area of WA. A final report was also delivered to the Brisbane City Council on processes in sediments, controlling both water and sediment quality in Moreton Bay and the Brisbane River.

Chapter 10: Australian Heritage and Antarctica

Key Points:

- The Government is providing \$70.4 million to fund the Federation Cultural and Heritage Projects programme for the two-year period 1999-2001 of which a total of \$18 million will go toward heritage conservation and restoration work throughout Australia in 1999-2000.
- The Government is providing approximately \$4 million per annum over the next three years to fund a Cultural Heritage Projects Programme. This includes new funding of \$6.7 million in 1999-2000 to 2001-02, and conversion of the Taxation Incentives for Heritage programme to a grants programme.
- The Commonwealth Government will establish a Sydney Harbour Federation Trust to manage and rehabilitate five Sydney Harbour foreshore properties when the Department of Defence relocates.
- An Australian Heritage Places Inventory is being developed to act as a 'one-stop-shop' for Australian Heritage Registers.
- A draft National Heritage Places Strategy is being developed to rationalise existing Commonwealth and State arrangements for the identification, protection and management of places of heritage significance.
- In June 1998 the Greater Blue Mountains Area was nominated for inclusion on the World Heritage List.
- The Commonwealth will continue its work to improve the management of World Heritage properties through the cooperative development of consistent and best practice management arrangements for all properties.
- The Commonwealth will provide \$15 million for the protection and management of State-managed World Heritage properties in 1999-2000.
- The Commonwealth Government continues to place emphasis on understanding global climate change and protection of the Antarctic environment and will provide \$92.8 million to the Australian Antarctic Programme in 1999-2000.
- As a New Measure, shipping support will be provided for Australia's Antarctic Programme.

Under its Australian and World Heritage programmes, the Commonwealth seeks to protect those elements of Australia's natural and cultural heritage which are of value for this and future generations, on national and global scales respectively. Funding for these programmes is set out in Table 10.1.

Table 10.1: Australian Heritage and Antarctica --New Measures, Programme and Tax Expenditure Estimates

Description	1998-99 \$m	1999-00 \$m	2000-01 \$m	2001-02 \$m	2002-03 \$m
NEW MEASURES					
Shipping Transport support for Australian Antarctic Programme	-	na	na	na	na

Cultural Heritage Projects Programme	-	2.2	2.2	2.3	-
Incentives for Heritage Programme	-	1.1	1.1	1.1	1.1
PROGRAMME AND TAX EXPENDITURE ESTIMATES					
National Heritage					
National Heritage Funding	6.5	6.3	6.2	6.2	6.6
National Estate Grants Programme (a)	1.7	-	-	-	-
Federation Funding:					
Federation Cultural and Heritage Projects (b)	-	70.4	na	na	na
Major Federation Fund Projects (c)	-	22.8	na	na	na
Cultural Heritage Projects Programme (d)	-	4.1	4.1	4.2	na
Grants in Aid to National Trusts	0.8	0.8	0.8	0.8	0.8
Heritage Protection and Environment Programme	2.5	4.2	na	na	na
Historic Shipwrecks Programme	0.4	0.5	0.5	0.5	0.5
Norfolk Island penal settlement	0.4	0.4	-	-	-
World Heritage					
World Heritage Area management and upkeep (e)	15.5	15.0	15.0	14.6	na
Antarctica					
Australian Antarctic Programme (f)	93.6	95.3	95.3	94.7	95.1
CRC for Antarctica and the Southern Ocean	3.2	3.0	2.0	2.0	na
Grant to Mawson's Hut Foundation	0.3	-	-	-	-

New measures are expressed in outturn prices and other expenditure and revenue figures are expressed in 1999-2000 prices.

Programme and tax expenditure estimates include the effect of new measures.

- denotes nil; na denotes not available.

- a. The National Estate Grants Programme has been subsumed into the Cultural Heritage Project Programme.
- b. & c. These figures cover the 1999-2001 period.

- d. This programme subsumes the Taxation Incentives for Heritage Conservation Scheme and the previous National Estate Grants Programme (\$800,000).
- e. These figures include monies allocated by the Natural Heritage Trust. For the funding for Uluru-Kata Tjuta and Kakadu National Parks see Commonwealth Protected Areas in Table 4.1, and for the Great Barrier Reef World Heritage property see Great Barrier Reef Marine Park Authority in Table 9.1.
- f. Covers the total cost of operating the Antarctic Programme, which has a major, but not exclusive, focus on environmental programmes.

NATIONAL HERITAGE

The Register of the National Estate

The Commonwealth is working with State, Territory and local governments and the community to identify and protect Australia's National Estate. Australia's National Estate comprises all those natural, historic and indigenous places that should be kept for the future and that have aesthetic, historic, scientific or social significance or other special values for this and future generations. The Register of the National Estate (RNE), maintained by the Australian Heritage Commission, is Australia's premier list of such places.

Australian Heritage Places Inventory

In 1998-99 the Commonwealth developed the 'Australian Heritage Website' with links to the web sites of State, Territory and non-government heritage agencies.

In 1999-2000 the Government will continue to develop a central database for all Australian heritage data from the 'Australian Heritage Website'. The database, called the Australian Heritage Places Inventory, is intended to act as a 'one-stop-shop' for Australian Heritage Registers. It will hold key information from the Register of the National Estate and the various heritage registers maintained by the States and Territories with a link to the originating database. To date the RNE data has been placed in the Inventory, and work is progressing on other State Registers.

The National Heritage Places Strategy

Following the Council of Australian Governments agreement in November 1997, the Commonwealth Government is developing a National Heritage Places Strategy in order to improve intergovernmental arrangements for the identification, protection and management of places of heritage significance.

A consultation paper has been released to enable comment from industry and business groups, State and local governments, and conservation groups. Intergovernment negotiations to develop details for the implementation of the strategy are continuing.

National Heritage Coordination

The National Heritage Coordination programme represents a major commitment by Commonwealth and State and Territory Heritage Ministers aiming for a more efficient and effective system of national heritage administration.

The programme focuses on the historic environment, is long-term, and encompasses several projects. Achievements include accreditation agreements in assessment procedures with Victoria

and the ACT; placing the RNE on the internet and establishing database links with several States and national research projects on Federation sites; assessment standards and heritage advisory services.

Following an audit of the 'National Heritage Coordination Strategic Plan 1996-98' a new joint workplan is being developed which focuses on education, research, national standards and resourcing. The programme will be a key factor in implementing the National Heritage Places Strategy.

Sydney Harbour Federation Trust

The Commonwealth Government will establish a Sydney Harbour Federation Trust to manage and rehabilitate five Sydney Harbour foreshore properties when the Department of Defence relocates. The Trust will be a statutory authority with six members, four of which will be nominated by the Commonwealth and two by the Government of New South Wales.

Commonwealth-owned Heritage

The Government is preparing its response to the recommendations of a Committee of Review into the management of Commonwealth-owned heritage properties.

Heritage Funding

National Heritage Funding

In 1999-2000 the Commonwealth will provide \$6.3 million for the identification and conservation of the National Estate.

Federation Funding

The Commonwealth Government is providing \$70.4 million for the four-year period from 1998-1999 to 2001-2002 to fund the Federation Cultural and Heritage Projects Programme (FCHP) of which a total of \$18 million will go toward heritage conservation and restoration work throughout Australia in 1999-2000.

The Government will also provide from the Federation Fund a further \$22.8 million funding for heritage conservation and restoration of significant heritage buildings and precincts across Australia for the 1999-2001 period.

Cultural Heritage Projects Programme

The Commonwealth has created the Cultural Heritage Projects Programme. This programme, which subsumes the Taxation Incentives for Heritage Conservation Scheme, will provide funds of approximately \$4 million per annum for the next three years to community, non profit organisations and private owners for heritage conservation projects. The programme encourages and enhances community ownership and responsibility for preservation of our heritage and increases funds available for heritage conservation.

Grants in Aid to National Trusts

The Government is providing grants to support activities that increase public awareness, understanding and appreciation of Australia's cultural heritage, and enhance and promote its conservation and assist the National Trusts to work for heritage protection.

Heritage Protection and Environment Programme

The Heritage Protection and Environment programme seeks to:

- preserve and protect places, areas and objects of particular significance to Aboriginal and Torres Strait Islander peoples;
- return to indigenous ownership and management culturally significant property from overseas and Australian collections; and
- ensure that Aboriginal and Torres Strait Islander peoples participate equitably in, and contribute to, the development and implementation of environmental policies at all levels of government.

In 1999-2000 the Commonwealth will contribute approximately \$4.2 million for the protection, preservation, acquisition and management of cultural property by the indigenous community and for the participation of indigenous people in environmental management and conservation policies and programmes.

In 1998-99 responsibility for the administration of the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* was transferred from the Aboriginal and Torres Strait Islander Commission to the Department of the Environment and Heritage.

Historic Shipwrecks Programme

The Commonwealth will provide \$500,000 in 1999-2000 for the Historic Shipwrecks Programme. Through this, the Commonwealth Government in cooperation with the States, the Northern Territory and Norfolk Island, aims to conserve Australia's maritime heritage as a cultural resource of the nation.

Norfolk Island Penal Settlement

The Commonwealth is continuing to support the conservation and management of the penal settlement in the Kingston and Arthur's Vale Historic Area on Norfolk Island by contributing \$400,000 in 1999-2000. The Norfolk Island Government also provides funding for this area.

WORLD HERITAGE

Under the World Heritage Convention, the Commonwealth has agreed to identify, protect, conserve and present World Heritage properties in Australia (see Box 10.1).

Management and Monitoring of Properties

The Commonwealth has provided a total of more than \$15 million in 1998-1999 for the management of Australia's World Heritage properties. These funds have been directed at implementing on-ground management actions in accordance with agreed plans for management. This level of funding will continue to 2000-2001.

The Government places considerable importance on the cooperative development and implementation of plans for the management of all World Heritage properties. This was further progressed during the 1998-99 financial year with the implementation of strategic planning processes for three properties: Central Eastern Rainforest Reserves (Australia); Lord Howe Island Group; and Australian Fossil Mammal Sites (Riversleigh/Naracoorte).

Box 10.1: World Heritage Properties

World Heritage properties are areas of outstanding universal cultural or natural significance which are included on the UNESCO World Heritage List. Australia is a member of the World Heritage

Committee, which inscribes properties on the World Heritage List.

At present, there are 13 Australian properties on the World Heritage list. The Commonwealth is directly responsible for management of the Uluru-Kata Tjuta and Kakadu National Parks (see Chapter 4) and Heard Island and McDonald Islands. The Commonwealth works jointly with Queensland on the management of the Great Barrier Reef World Heritage property (see Chapter 9), and works with the States to ensure sound management of the other nine properties which are the Lord Howe Island Group, Tasmanian Wilderness, Willandra Lakes Region, Central Eastern Rainforest Reserves (Australia), Wet Tropics of Queensland, Shark Bay, Fraser Island, Australian Fossil Mammal Sites (Naracoorte/Riversleigh), and Macquarie Island.

As an element of best practice management arrangements, the Commonwealth has initiated the development of a comprehensive monitoring strategy for all World Heritage properties.

In the 1997-98 financial year, funding for the Willandra Lakes Region Financial Package was successfully completed. The Commonwealth is undertaking an evaluation of the Financial Package to assess its effectiveness in achieving its objectives. These include creating a basis for effective on-going cooperative management of the region's World Heritage values which meets the interests of landholders and Aboriginal groups traditionally affiliated with the area.

Nomination of New Properties

Following a joint assessment process with New South Wales, the Commonwealth nominated, in June 1998, the Greater Blue Mountains Area for inclusion on the World Heritage List.

ANTARCTICA

The Antarctic region significantly influences the world's major environmental systems. Much of Australia's Antarctic research is directed at improving our knowledge of these processes, leading to improved predictions of events involved in global climate change. Substantial research effort is directed also towards protection of the Antarctic environment and protection of the Southern Ocean ecosystem and marine resources.

The Commonwealth Government has committed to entering tender negotiations for an Antarctic Shipping programme beyond the 1999-2000 summer so that Australia's Antarctic Programme can continue while flexible logistics, including multi-ship operations and air transport options are investigated.

In its efforts to gain greater knowledge of the mechanisms of global climate, the Commonwealth Government will continue support for research of the Antarctic sea-ice zone. The dynamics and thermodynamics of the Antarctic sea-ice cover are intricately linked with the ocean-atmosphere exchange of heat, water and gas. Antarctic sea-ice is thus a major element in the global climate system, and should therefore be a sensitive indicator of the effects of global change on physical and biological systems. The Australian Antarctic Division's study of sea-ice and coastal polynyas will advance understanding of Antarctica's role in the global climate system.

The Commonwealth Government will continue its vigilance and efforts to protect the Australian fishing zone adjacent to Heard Island from illegal fishing. The Government will also continue concerted efforts to advance measures within the Commission for the Conservation of Antarctic Marine Living resources aimed at sustainably managing Southern Ocean fisheries.

The Antarctic Pack-ice Seals programme continues to receive Government support. This is an international programme to quantify the role of seals as predators in the Southern Ocean ecosystem and to determine their circumpolar distribution and abundance.

The Australian Antarctic Division will continue work on environmental management of the abandoned Wilkes Station in East Antarctica and the old ANARE Station on Heard Island.

As part of its support and commitment to the management of the Southern Ocean Sanctuary for whales, the Government is supporting the Australian Antarctic Division's role in collaborative research into the seasonal distribution, feeding patterns and effects of physical and biological processes on whales and other cetaceans in the southern hemisphere.

The Australian Antarctic Division administers the Australian Antarctic Territory and the Territory of Heard Island and McDonald Islands. Effort is aimed primarily at protecting the Antarctic environment, and includes administering environmental legislation dealing with environmental impact assessment and measures for the conservation of flora and fauna.

The Commonwealth will provide \$95.3 million in 1999-2000 to the Australian Antarctic Division to carry out Australia's programmes in Antarctica.

Cooperative Research Centre for Antarctica and the Southern Ocean

The CRC for Antarctica and the Southern Ocean undertakes research designed to characterise the oceanic and atmospheric circulations of the region, their interaction with sea ice and the continental ice sheet, their relation to global environmental change and their relation to the carbon cycle. The Commonwealth will provide funding of \$3 million in 1999-2000.

Chapter 11: Conclusion

Successful efforts to protect and enhance the environment require the combined efforts of governments at all levels, corporations, community groups and individuals.

Information is essential to this combined effort, and not least information on the nature and size of spending on the environment.

The Budget Statement on the Commonwealth's environment expenditure is part of the Commonwealth's contribution to answering the need for information on government actions.

It documents such spending mostly under different aspects of the environment, such as inland waters, oceans or the atmosphere. It covers Commonwealth spending in direct forms, as well as indirectly through the tax system in the form of tax concessions.

This is the third such Budget Statement. Apart from providing spending figures, both summary and specific, it has proven to be a valuable reference for written descriptions of Commonwealth Government environment-related activities across portfolios. Provision in the text of this third Statement of the names of the relevant agency or department with a phone contact number will make it even more user-friendly.

A fundamental aspect of ecologically sustainable development (ESD) is the integration of economic and environmental policies and decisions. The Budget Statement is a reflection of the Government's commitment to ESD, as the Statement shows the extent to which environmental considerations are included in spending decisions in other areas.

As well as recording ongoing environmental spending and policy involvement across most Commonwealth portfolios, and new spending in areas such as Oceans policy and Living Cities, this Budget Statement records how spending on the Natural Heritage Trust will be extended a further year with an allocation of \$250 million being added to the original \$1 billion.