

# Government's Response to the State of the Environment Report for South Australia 2003



## Action for the Environment



Government of South Australia

# Contents

<b>A Message from the Minister</b>	<b>2</b>
<b>Introduction</b>	<b>3</b>
<b>Our Environmental Priorities</b>	<b>5</b>
Water use and quality	5
Marine and coastal environment	7
Species loss	9
Climate change	10
<b>How Do We Achieve Change?</b>	<b>12</b>
Improved land use planning	12
Better information	13
Working together	13
<b>Environmental Reporting – Making a Difference</b>	<b>16</b>
<b>Atmosphere</b>	<b>17</b>
Air quality	17
Climate change	18
Ozone depletion	18
<b>Inland Waters</b>	<b>18</b>
The River Murray	18
Rivers, streams and wetlands	20
Water quality	21
Water use	21
<b>Coasts and the Sea</b>	<b>22</b>
Aquaculture	22
Fisheries	23
Health of the marine and coastal environment	24
<b>Land Resources</b>	<b>24</b>
Dryland salinity	24
Land use	25
Soil erosion and acidity	26
<b>Biodiversity</b>	<b>27</b>
Introduced species	27
Native vegetation	28
Threatened species	30
<b>Human Settlements</b>	<b>31</b>
Energy	31
Population and urban form	32
Transport	34
Waste	35
Water consumption in urban settlements	38
<b>Heritage</b>	<b>39</b>

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## A Message from the Minister



The Hon John Hill, MP  
MINISTER FOR  
ENVIRONMENT AND  
CONSERVATION

*I am pleased to present the Government's Response to the State of the Environment Report for South Australia 2003.*

Consistent with the Government's commitment to openness and accountability, and to meet community expectations for a clean and healthy environment and the sustainable use of natural resources, the Government has prepared a formal response to the State of the Environment Report's 116 recommendations.

I am pleased to say that action is already underway to address many of the report's recommendations – this response presents an overview of major initiatives in this regard.

The 2003 State of the Environment Report highlights water use and quality, the marine and coastal environment, species loss and climate change as South Australia's major environmental priorities – the Government agrees. Major programs are either in place or planned to tackle these issues.

The *River Murray Act* was proclaimed in 2003 to provide greater control over the way we use the River; Notices of Intent to prescribe the water resources in the Mount Lofty Ranges have been issued; and the *Water Proofing Adelaide* project provides us with a twenty-year plan for the wiser use of urban water supplies.

The integration of natural resource management via the *Natural Resources Management Act 2004* provides a more holistic approach to animal and plant control and soil and water management. Initiatives such as *NatureLinks* provide a long-term and landscape-based approach to biodiversity conservation.

The Government has allocated \$5 million over four years to implement the *Living Coast Strategy*, which uses an ecosystems-based approach to management that will ensure the more sustainable use of our coasts, seas and estuaries.

Work has started on the development of an industry-wide Greenhouse Strategy, due for release in 2006.

More sustainable living is a major priority for the Government and a key objective of *South Australia's Strategic Plan*. This is a goal that will drive the environmental agenda into the future. I believe that the wide range of actions outlined in this response demonstrates the extent of the Government's resolve to grapple with serious and complex environmental issues.

The Government alone cannot tackle all of the environmental problems that face us. The challenge is to work together as a community to make sure that the issues raised in the 2003 State of the Environment Report are addressed so that we can look forward to a healthier environment, a productive economy and a better quality of life for all South Australians.

A handwritten signature in black ink that reads "John Hill". The signature is written in a cursive, flowing style.

The Hon John Hill, MP  
Minister for Environment and Conservation

## Introduction

*State of the Environment (SoE) Reports provide useful and scientifically credible information and assessments about the current state of the environment, changes in environmental conditions over time and the implications of those changes for people who are in a position to effect change – be they decision-makers or the wider community. In tracking environmental changes over time, SoE Reports provide an opportunity to monitor and assess the performance of environmental policy and programs in achieving actual outcomes on the ground.*

The 2003 SoE Report makes a total of 116 recommendations that relate to actions that can be undertaken to improve the current state of South Australia's environment. This document provides the Government's response to each of these 116 recommendations and outlines the actions that are underway to address significant environmental issues.

The Government is also aware of the importance of monitoring progress on implementing the actions outlined in this Response document to ensure that these actions are making a difference on the ground. To this end, there will be a regular review of progress towards implementing these actions (see the response to recommendation SOE2 in *Environmental Reporting – Making a Difference*).

While all of the actions outlined in this response are important, it is worth noting major initiatives over the past two years that are making a significant difference to the way we manage the environment. These relate largely to institutional and legislative reforms that have been put in place to streamline processes, strengthen controls and facilitate change.

### Major institutional reform

Major institutional reforms have been put in place to provide a whole-of-Government approach to environment protection and the management of natural resources.

The Office of Sustainability was created in July 2002 to drive environmental strategies for sustainability across Government.

The Premier's Round Table on Sustainability, chaired by Professor Tim Flannery, provides an important forum for stakeholder collaboration and community participation in the development and delivery of South Australia's sustainability agenda.

The Environment Protection Authority is now an independent authority. It has greater regulatory powers and a responsibility to provide tougher enforcement.

The Department of Water, Land and Biodiversity Conservation has been created to integrate the management of natural resources. Important land management responsibilities now rest within the same agency as water management responsibilities.

The Office of Zero Waste SA was established in July 2003 to focus on working with Local Government and industry to develop an integrated strategy for waste avoidance, reduction, minimisation, disposal and recycling. Work on a new State Waste Strategy has begun and this is expected to be complete by mid-2005.

The *Greening of Government Operations Framework*, or GoGO, outlines the Government's commitment to the greening of its own operations – water, energy, waste, vehicle use, building and purchasing – and seeks to lead by example on sustainability practices.

### Major legislative reform

There has also been major legislative reform that focuses on integration, cross-Government coordination and partnerships. The *River Murray Act* was proclaimed in 2003 to provide greater controls over the way in which we use the river. The Save the Murray Levy will fund the *River Murray Improvement Program* that will see action on the ground to restore and rehabilitate wetlands and re-instate environmental flows.

The Government will contribute to a \$500 million funding commitment with the Australian, New South Wales, Victorian and Australian Capital Territory Governments to return 500 gigalitres per year of water to the River as environmental flows by 2009/10. Negotiations are continuing in an attempt to reach agreement to return 1500 gigalitres per year on average to the River over the next 15 years.

The *Natural Resources Management Act 2004* is a major initiative that provides for the integration of water and soil management and animal and plant control, and more streamlined administrative processes that include delivery of the Natural Heritage Trust and the *National Action Plan for Salinity and Water Quality*. A peak advisory Natural Resource

## Introduction

Management (NRM) Council will be formed as well as regional Boards for each of the eight NRM regions across the State. Groups within each region will ensure that local communities remain engaged and that on-ground actions are achieved.

The Government has committed \$6.8 million over the next four years starting in 2004/05 to facilitate the NRM process.

The *Zero Waste Act 2004* was proclaimed in February 2004, providing a legislative base for developing strategies to eliminate the disposal of solid waste to landfill. Further, the *Development (Sustainable Development) Amendment Bill 2004*, which proposes major changes to the State's planning system, includes proposals to increase integration between the *Development Act 1993* and natural resource management legislation.

While these initiatives have already made a difference to the way we manage natural resources and the environment, the Government believes that strong partnerships with the Australian Government, local government, industry and the broader community are essential to protect our precious natural resources and achieve further significant environmental outcomes.

### About this Report

For clarity and ease of use the Government's Response uses the same major chapter headings as the *State of the Environment Report for South Australia 2003*.

The sections in the Government's Response entitled *Our Environmental Priorities* and *How Do We Achieve Change?* respond to recommendations made in the Executive Summary of the 2003 State of the Environment Report.

For each of the State of the Environment Report's 116 recommendations the Government's Response provides an overview of the major actions already in place to address the issues, those planned and possible future directions for addressing the recommendation as comprehensively as possible.

## Our Environmental Priorities

*The Executive Summary of the State of the Environment Report for South Australia 2003 identifies four major environmental priorities for South Australia – water use and quality; the marine and coastal environment; species loss; and climate change. These are the issues that we must tackle now if we are to see a significant change in the state of our environment.*

The Government agrees with all of the recommendations relating to South Australia's environmental priorities.

### Water use and quality

The Government agrees with all the recommendations relating to water use and quality. The sustainable management of water resources is fundamental to our future and is one of South Australia's most significant challenges. Restoring environmental flows to major rivers across the Murray-Darling Basin is a priority action in *South Australia's Strategic Plan*.

**SoE 2003 Recommendation EPW1<sup>1</sup>: Focus the management of water resources on the key areas of salinity, diffuse pollution, environmental flows, wiser use and better coordination of water management activities – AGREE**

Government agrees that our efforts must be focussed on the important issues such as water quality, environmental flows and wise use. A number of initiatives<sup>2</sup> are already underway to address these.

While policy development must take into account the management of all water resources in the State, it is inevitable that on-ground work must be prioritised. Current priorities for the Government lie with improving the health of the River Murray, managing the use of water resources in the Mount Lofty Ranges and on Eyre Peninsula more wisely, and developing innovative strategies to make sure that Adelaide's water supply is secure for the long-term.

The Government agrees that a more coordinated approach to water management activities is required. The COAG<sup>3</sup> water reforms of 1994 required, among other things, a separation of water policy standards setting and regulation from service delivery. Compliance with the reforms now presents new challenges for ways to ensure more integrated service delivery. Investigations to achieve this are underway.

**SoE 2003 Recommendation EPW2: Evaluate the environmental water requirements of major rivers, streams and wetlands and take action to restore environmental flows, especially to the River Murray – AGREE**

In recognition of the significance of the River Murray to South Australia, the River Murray Act was proclaimed in 2003 to provide greater control over the way in which the River is used. The *River Murray Improvement Program* has been established, funded through the Save the River Murray Fund. This will fund a number of initiatives to improve the health of the River to increase environmentally crucial water flows.

In an important first step towards a long-term process of recovery, the Government has negotiated with other River states and the Australian Government to return 500 gigalitres per year to the river as environmental flows by 2009/10. The Government will continue negotiations seeking the eventual return of 1500 gigalitres of water per year to the River. The draft River Murray Environmental Flow Management Strategy has been released for public comment. Once adopted, the strategy will establish long-term flow objectives.

Concern about increasing rates of water use in the Mount Lofty Ranges has prompted the Government to issue Notices of Intent to prescribe all water resources in the Mount Lofty Ranges. At the same time, temporary controls are in place on taking water for new uses while the Government undertakes a detailed assessment of water resource use.

If prescription proceeds this will see the development of Water Allocation Plans for the Mount Lofty Ranges that will consider environmental water needs equally with social and economic needs.

Water Allocation Plans are being developed, or have been developed, for each of the State's twenty-one Prescribed Water Resources. These provide the primary mechanism for considering the environmental water requirements of rivers, streams, wetlands and other water-dependent ecosystems. To date, sixteen Water Allocation Plans have been adopted and are being implemented.

<sup>1</sup> Recommendations in the Executive Summary of the *State of the Environment Report for South Australia 2003* are not numbered. However, they are numbered here for cross-referencing purposes – EP refers to Environmental Priority; W refers to water.

<sup>2</sup> For more detail on initiatives please refer to the response to Recommendations in the *Inland Waters* chapter and also to Recommendations 6.24 and 6.25 in the *Human Settlements* chapter.

<sup>3</sup> Council of Australian Governments.

## Our Environmental Priorities

The Government places a high priority on the development and implementation of conservation strategies for wetlands: around 70% have been seriously degraded since European settlement. To this end, the *Wetlands Strategy for South Australia* was released in 2003, setting long-term goals for wetland management and the re-establishment of more natural flow regimes. The Government has committed significant resources to the development of an adaptive management strategy for wetlands associated with the *Upper South East Dryland Salinity and Flood Management Program*, including the Coorong.

### Possible future directions

Further work which could be undertaken in other areas of the State includes an assessment of water management outside prescribed areas; developing a better understanding of water dependent ecosystems (including groundwater dependent ecosystems); and developing a more strategic approach to the monitoring and evaluation of environmental water requirements. The establishment of regional Natural Resources Management Boards extends water resource management arrangements to cover the whole state providing a further opportunity to address these issues in priority areas.

### SoE 2003 Recommendation EPW3: Develop as a priority water conservation and efficiency policy that encourages water recycling and reuse in urban areas – AGREE

Since October 2003 a base level of permanent water conservation measures has been applied to all SA Water supplies across the State. The public education campaign for these measures has been successful, resulting in water savings in 2003/04 of over 14%<sup>4</sup> on the previous year. An extension of water conservation measures to cover other water resources in the State, not just SA Water supplies, is being considered. This action will assist the State to adjust to a future with reduced water supplies, projected as a consequence of climate change.

The Government has recently released the *draft Water Proofing Adelaide Strategy* proposing the blueprint for the management, conservation and development of Adelaide's water resources to 2025.

In response to recommendations from the State's first 'Thinker in Residence', Herbert Girardet, the Government has committed to introduce new legislation for mandatory plumbed rainwater tanks in all new homes from July 2006.

To demonstrate leadership to the community, the Government is set to improve water use efficiency across all government agencies and buildings. This will be driven by the *Greening of Government Operations Framework* (GoGO) that will develop, among other things, a high level Water Conservation Policy to guide and integrate water conservation activities by Government.

For further information on the Government's water use and water quality actions see the *Inland Waters* chapter.

- The *River Murray Act 2003* provides greater control over our use of the River
- The *River Murray Improvement Program* will see action to restore environmental flows
- **500 gigalitres of water** per year will be returned to the River as environmental flows by 2009/10
- The *River Murray Flow Management Strategy* will set long-term flow objectives
- The Government has issued **Notices of Intent to prescribe all water resources** in the Mount Lofty Ranges
- The *Wetlands Strategy for South Australia* is the first for the State and provides an holistic approach to wetland management
- The *Environment Protection (Water Quality) Policy 2003* provides a Statewide framework to protect water quality
- *Water Proofing Adelaide* will provide a long-term plan for sustainable water use in Adelaide and surrounding regions
- Recent **water conservation measures** have contributed to reduced water use in 2003/04 by more than 14%<sup>5</sup> over the previous year
- The *Greening of Government Operations Framework* will see improved water efficiency in Government buildings

<sup>4</sup> Calculated using the most recently available data for the period July 2003 to April 2004.

<sup>5</sup> Calculated using the most recently available data for the period July 2003 to April 2004.

## Our Environmental Priorities

### Marine and coastal environment

The Government agrees with all the recommendations relating to the marine and coastal environment. Our efforts are continuing to protect South Australia's unique coastal, estuarine and marine environments from *ad hoc* development and pollution. There are a number of strategies already in place to protect our precious marine and coastal environment. The establishment of comprehensive and representative Marine Protected Areas is a priority action in *South Australia's Strategic Plan*.

#### SoE 2003 Recommendation EPM1<sup>6</sup>: Give priority to the conservation and sustainable use of marine resources – AGREE

To strengthen the protection of our coastal and marine ecosystems, Government is developing a new Coast and Marine Act to replace the outdated *Coast Protection Act 1972*. The Government's aim will be to include ecologically sustainable development as one of the new legislation's major objectives.

The *Living Coast Strategy*, released in mid-2004, is a major initiative by the Government that aims to achieve the sustainable use of coasts, estuaries and the sea through the implementation of ecosystem-based management practices. Major programs arising from the *Living Coast Strategy* include a Blue Print for the establishment of Marine Protected Areas, which is also a priority action outlined in *South Australia's Strategic Plan*, and a Marine Planning Framework (see the response to Recommendation EPM2). The Government has allocated \$5 million over 4 years to implement the *Living Coast Strategy*, starting in 2004/05.

#### SoE 2003 Recommendation EPM2: Take action to protect the coastline from unsustainable development – AGREE

The Government is developing an integrated planning framework for the management and protection of coastal and marine areas. The Marine Planning Framework will guide ecosystem-based management via Marine Plans that will cover the eight marine bioregions across State waters. Each plan will establish zones based on particular environmental values and ensure that activities within each zone, such as aquaculture and fishing, are compatible with each zone's

ecological values. It is expected that Marine Planning for State waters will be finalised by 2010. A pilot, the Spencer Gulf Marine Plan, has been developed to test the concept of integrated marine planning.

The Government will also address immediate development pressures along the South Australian coastline as a matter of priority. Work is currently progressing to assess landscape values along the coastline to inform future planning and development.

One of the most effective long-term solutions to protect the coastline from *ad hoc* and environmentally insensitive development is to continuously update Development Plan policy. The Government will be working to establish strong links with Local Government so that this can be tackled collaboratively to resolve coastal issues.

#### SoE 2003 Recommendation EPM3: Apply caution in developing aquaculture and fully integrate aquaculture development with marine and coastal planning – AGREE

The precautionary principle is a critical aspect of environmental management that is applied throughout the world. This means that where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing action to prevent environmental degradation.

It is Government policy that the precautionary principle must be applied when developing the aquaculture industry. The Aquaculture Act was proclaimed in 2001 to provide for the ecologically sustainable development of the industry. The Act provides for the efficient and effective environmental regulation of the industry, while maximising community benefits from aquaculture production. All aquaculture developments undergo an ecological sustainability risk assessment before a licence is issued and environmental monitoring is an annual requirement.

The Government agrees that aquaculture planning must be closely integrated with the Marine Planning Framework (see the response to Recommendation EPM2) which uses an ecosystems-based approach to the management of coastal and marine areas. The Government is developing proposals to address this and other issues.

<sup>6</sup> Recommendations in the Executive Summary of the *State of the Environment Report for South Australia 2003* are not numbered. However, they are numbered here for cross-referencing purposes – EP refers to Environmental Priority; M refers to Marine.

## Our Environmental Priorities

### **SoE 2003 Recommendation EPM4: Focus fisheries management on ecosystems rather than on individual species – AGREE**

The Government agrees that fisheries management must be undertaken with an emphasis on whole ecosystems, not just individual species. While most of South Australia's commercial fisheries are being managed for sustainability the focus has been, until recently, on the sustainability of the particular fish species and not the wider ecosystems of which they are a part.

Consequently the *Fisheries Act 1982* is being reviewed to provide for a more holistic approach to fisheries management. Fisheries management plans are also being updated, or new plans drafted, to reflect the national *Ecologically Sustainable Development Framework for Fisheries*. All South Australia's commercial fisheries are presently undergoing assessment under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* – Rock Lobster and Abalone fisheries have already received endorsement.

#### **Possible future directions**

Further work which could be undertaken includes the investigation of population ecology and recruitment processes for marine scalefish and the impact that recreational fishing is having on marine scalefish populations.

### **SoE 2003 Recommendation EPM5: Reduce the impact of stormwater, treated wastewater and industrial discharges on the marine environment – AGREE**

Pollution of the coast and marine environment as a consequence of industrial discharges and the disposal of stormwater and treated wastewater is a major threat to water quality and ecosystem health.

Over recent years, the reuse of treated wastewater has increased. SA Water continues to evaluate opportunities to establish new wastewater recycling schemes or upgrade existing facilities to facilitate reuse. The reuse scheme at the Bolivar Wastewater Treatment Plant is the largest of its kind in Australia; over twenty seven per cent of treated wastewater was piped to the Virginia region in 2002/03 to supplement currently over-used groundwater resources.

Other Wastewater Treatment Plants, in city and regional areas, have already been, or are being, upgraded to improve the quality of treated wastewater and to facilitate wastewater recycling. The *Water Proofing Adelaide* project will guide the development of water reuse targets.

Many new sub-divisions now incorporate infrastructure that allows stormwater to be collected, stored and reused at a later date for irrigation of parks and gardens. The *draft Water Proofing Adelaide Strategy* suggests ways to increase the amount of stormwater that is captured and reused, reducing the amount of stormwater that is discharged into Gulf St Vincent.

The *Environment Protection (Water Quality) Policy 2003*, provides a Statewide approach to the protection of inland and marine water quality. It sets discharge limits for listed pollutants and has mandatory provisions to ensure that all essential practices are met. The *Adelaide Coastal Waters Study*, being undertaken by the CSIRO and led by the Environment Protection Authority with support from a number of key stakeholders, will provide by mid-2006 a greater level of scientific knowledge to manage Adelaide's coastal waters more sustainably, including water quality. As findings become available they will be used to improve the management of Adelaide's coastal waters.

The Environment Protection Authority is also overseeing the development of Codes of Practice to address a range of pollution issues affecting marine waters including codes for marinas and boating facilities, aquaculture developments and stormwater pollution. These will ultimately be linked with the Environment Protection (Water Quality) Policy.

## Our Environmental Priorities

For further information on the Government's marine and coastal actions see the *Coasts and the Sea* chapter.

- A new **Coast and Marine Act** is being developed to replace outdated legislation
- The **Living Coast Strategy** provides a strong framework for sustainable management of our coast, estuarine and marine environments
- The **Aquaculture Act 2001** provides for ecologically sustainable development of the industry
- **Fisheries Management Plans** are being updated to reflect sustainability principles
- The **Fisheries Act 1982** is being reviewed to provide a greater focus on sustainability
- **Water Proofing Adelaide** proposes water reuse targets for Adelaide and surrounding areas
- **Wastewater Treatment Plants** are being upgraded to reduce the environmental impact of wastewater discharges and to facilitate greater recycling
- **Codes of Practice** are being developed to reduce marine pollution

### Species loss

The Government agrees with all the recommendations relating to species loss. The significance of biodiversity and its role in underpinning the well-being of human society and the economy is emerging as a critical issue.

**SoE 2003 Recommendation EPSL17: Restore habitat on a landscape scale in key regions and adopt this principle into natural resource management planning – AGREE<sup>8</sup>**

The Government is currently developing a State Biodiversity Strategy incorporating a No Species Loss Policy. Due to be complete in 2007, this will provide an important policy, regulatory and operational framework to support work to protect and conserve native species, ecological communities and their habitats.

*NatureLinks*, which contributes to objectives that will be articulated in these policies, takes a long-term and

landscape-based approach to conservation. *NatureLinks* will use the State's network of parks and reserves as a core biodiversity asset, linked and surrounded by private land managed for conservation purposes. The success of *NatureLinks* will depend upon strong partnerships between land managers, the community and Government.

There are currently three *NatureLinks* projects in development: *Operation Bounceback* in the northern Flinders Ranges, *East meets West* on the Eyre Peninsula, and *Cape Borda to Barossa*, which extends from Kangaroo Island to the northern Mount Lofty Ranges. Two additional projects are being identified.

*Operation Bounceback* was established in 1998 and has already achieved significant results over 500,000 hectares in the restoration of degraded arid zone ecological communities. The program is currently being evaluated. Work is proceeding on the development of management targets and an integrated strategy for implementation of the *East meets West* and *Cape Borda to Barossa* projects, both still in their early stages.

Broadscale restoration of wetland habitat is underway in the Upper South East as part of the *Upper South East Dryland Salinity and Flood Management Program*. Requirements for environmental flows and wetland protection areas have been established and it is expected that restoration work will be complete by 2008. The program includes one of the nation's largest market-based approaches to the management and conservation of biodiversity through the implementation of a landholder-focused biodiversity stewardship and trading system.

The *Three Million Trees Program* will result in the revegetation of large tracts of open space from Gawler to Maslin Beach by 2014. This program will build on the work of the *Urban Forest Biodiversity Program*.

Stage 2 of the Greater Mount Lofty Parklands Project (Yurrebilla), planned for 2004–2008, will involve further broadscale habitat restoration in the Mount Lofty Ranges. SA Water's twenty-year restoration project on 450 hectares of grazing land surrounding the Mount Bold Reservoir has commenced and will deliver benefits for biodiversity conservation and water quality.

<sup>7</sup> Recommendations in the Executive Summary of the *State of the Environment Report for South Australia 2003* are not numbered. However, they are numbered here for cross-referencing purposes – EP refers to Environmental Priority; SL refers to Species Loss.

<sup>8</sup> The term 'restore' has been interpreted as referring to actions that would either improve the condition of existing habitats or result in the reconstruction of habitats in currently developed areas. The term 'habitat' has been interpreted as referring to the broad physical and biological environmental features required by groups of organisms, rather than its specific meaning pertaining to the requirements of an individual.

## Our Environmental Priorities

Principles aligned with *NatureLinks* have been incorporated into the Metropolitan and Regional planning strategies. The Department for Environment and Heritage is working with Interim Natural Resource Management Groups to incorporate these principles, which embody the need for habitat restoration on a large scale, into Natural Resource Management Plans and associated investment strategies.

The Government believes that biodiversity conservation should focus on maintaining natural systems rather than on the more costly option of repairing the damage – in line with recommendations by the Prime Minister's Science, Engineering and Innovation Council<sup>9</sup>. Further, it is essential to ensure that 'no species loss' goals also address ecological communities, ecosystems and landscapes. These principles will be incorporated into the State Biodiversity and No Species Loss Strategies and form an important basis for the Government's reform of natural resources management.

### Possible future directions

Areas of particular note where habitat restoration is required include River Murray wetlands, arid wetlands in the far north and north-east, desert regions in the north-west and sensitive marine environments.

### SoE 2003 Recommendation EPSL2: Develop targeted biodiversity education and awareness strategies that communicate the critical importance of biodiversity to human society – AGREE

The Government agrees that there is a need to better target and focus its biodiversity-related communication and education activities. Programs must emphasise learning strategies that achieve behavioural change, not just awareness and knowledge. Capacity building through educative processes involving all sectors is fundamental to achieving this objective. Education and communication programs must be tied to specific biodiversity outcomes that have an evaluation component to monitor performance. Outcome-focussed approaches to education are already occurring within some threatened species programs, but further work would be required to extend this.

While the Government sees the potential to better focus its biodiversity-related communication and education activities there are, nevertheless, many activities underway, coordinated primarily by the Department for Environment and Heritage, that contain a communication component. These range from general awareness-raising to targeted extension programs.

For more detail on the Government's species loss actions see the *Biodiversity* chapter.

- *NatureLinks* provides a landscape-based approach to biodiversity conservation in key regions
- **Threatened species recovery planning** has increased in recent years due to increased funding
- **Regional Biodiversity Plans** provide a regional focus for biodiversity conservation
- The *Natural Resources Management Act 2004* and the proposed *Development (Sustainable Development) Amendment Bill 2004* propose the closer alignment of regulation, planning and biodiversity objectives
- The *Three Million Trees Program* will revegetate broad tracts of land between Maslin Beach and Gawler by 2014
- *Operation Bounceback* is a highly successful landscape restoration program established over more than 500,000 hectares – with plans for expansion in the future

### Climate change

The Government agrees with the recommendations relating to climate change. In particular the development of an industry-wide greenhouse strategy by 2006, which is a priority action in the *South Australia's Strategic Plan*. This will provide a forward plan, in particular, for reducing greenhouse gas emissions.

<sup>9</sup> Prime Minister's Science, Engineering and Innovation Council: Sustaining our Natural Systems and Biodiversity. Eighth meeting – 31 May 2002.

## Our Environmental Priorities

### SoE 2003 Recommendation EPCC1<sup>10</sup>: Develop and implement a State Greenhouse Plan and Action Plan – AGREE

It is predicted that climate change will have significant and worldwide environmental, social and economic impacts that will pose an important challenge for the future. Modelling<sup>11</sup> indicates that South Australia can expect serious effects as the consequence of higher temperatures and decreased rainfall.

Stabilising carbon dioxide levels in the atmosphere to reduce our climate impacts will require a substantial global effort. The Kyoto Protocol is a first step aimed at reducing the emissions of industrial nations collectively to 95% of 1990 levels.

This Government has targeted the achievement of the Kyoto target within the first commitment period. The State Government has repeatedly called for the Federal Government to ratify the Kyoto Protocol and provide a national greenhouse policy. To date, the Federal Government continues to refuse to ratify the Protocol or develop an adequate national greenhouse policy.

Work has commenced to develop the South Australian Greenhouse Strategy due for release in 2006.

*South Australia's Strategic Plan* highlights that the development of a comprehensive greenhouse strategy is not just the responsibility of Government but that a high level of industry and community involvement is also needed.

### SoE 2003 Recommendation EPCC2: Develop transport policies and programs that integrate transport planning more effectively with urban planning and that reduce our dependency on the car – AGREE

The State of the Environment Report indicates that we remain a highly car-dependent society. While transport is essential to the way we live and conduct business, it is a major source of greenhouse gas emissions. As part of its commitment to change travel behaviour, the Government is developing ways to encourage more sustainable forms of transport. *South Australia's Strategic Plan* sets a target to double the use of public transport to 10% of weekday travel by 2018.

The Government is developing an overarching document that integrates land use planning and transport. South Australia's *Plan for Land Use and Transport* will provide for greater integration between urban form and design, and transport provision across the State.

Through the Office for Cycling and Walking and the development of South Australia's first Walking Strategy by 2005, action plans will be developed that will lead to a more coordinated, consistent and integrated approach. Work will continue to improve the *Bikedirect* program and regional cycling networks. In order to encourage a cultural change from a car dependent society to one which embraces public transport, cycling and walking options the Government is also undertaking a range of educational and support programs, such as *TravelSmart SA* and *Bike Ed*.

Significant improvements are underway to the public transport system, including the provision of a real time passenger information service – *Smart Stops* – and upgrading of the vehicle fleet to meet the needs of users with a disability.

The Government aims to establish a carbon-neutral public transport network by 2019. It will do this by increasing the use of natural gas and bio-diesel and testing innovative technologies such as dual-fuel buses and fuel cells.

For more detail on the Government's climate change and transport actions see the *Human Settlements* chapter.

- ➔ An industry-wide **South Australian Greenhouse Strategy** will be released in 2006
- ➔ A **Walking Strategy** will be developed by 2006 to encourage walking and make walking safer and easier in the metropolitan area
- ➔ The **Planning Strategy for South Australia** is being revised to better integrate the needs of walkers, bike riders and users of public transport

<sup>10</sup> Recommendations in the Executive Summary of the *State of the Environment Report for South Australia 2003* are not numbered. However, they are numbered here for cross-referencing purposes – EP refers to Environmental Priority; CC refers to Climate Change.

<sup>11</sup> McInnes, K., Suppiah, P., Whetton, P., Hennessy, K. and Jones, R. (2003). Climate change in South Australia. Report on assessment of climate change, impacts and possible adaptation strategies relevant to South Australia. Climate Impacts Group, CSIRO Atmospheric Research.

## How do we achieve change?

*Along with the major environmental issues that confront us, the Executive Summary of the State of the Environment Report for South Australia 2003 identifies three major drivers, or processes, that must also be addressed if we are to see an improvement in the state of our environment.*

These three major drivers for change are improved land use planning; reliable, consistent and accurate information; and working together in partnerships and as a community to tackle serious environmental issues.

The Government agrees with all of the recommendations relating to these issues. Current and proposed actions that address the recommendations are addressed in the following sections.

### Improved land use planning

The Government agrees with the recommendations relating to improved land use planning. A land use planning system that takes into account the needs of the environment, while at the same time providing for urban, industrial and infrastructure development that meets community needs, is fundamental to support wise decision-making and ensure sustainable development.

Another significant issue that must be addressed is the cumulative impact of development on the environment. Work has commenced to develop a set of criteria and tools to enable the assessment of a comprehensive range of medium to long-term economic, social and environmental impacts associated with certain development proposals.

**SoE 2003 Recommendation EPP1<sup>12</sup>: Address the failure of the current land use planning system and its administration to deal effectively with South Australia's priority environmental issues – AGREE**

In recognition of the significance of this issue, the Government has committed to improve South Australia's planning and development assessment process. This major review of the planning system includes making improvements to the *Development Act 1993* and its Regulations and a review of Development Plans through the *Better Development Plans Program* – the first review of Development Plans since 1983.

Outcomes of the planning system review will be more consistent planning policy, improved delivery of the *Planning Strategy for South Australia*, greater collaboration amongst stakeholders and more sustainable development, including a greater consideration of environmental issues.

In addition, the draft *Development (Sustainable Development) Amendment Bill 2004* includes proposals to increase the integration between the Development Act and natural resource management legislation. The Bill also enables the Minister for Urban Development and Planning to have regard to cumulative environmental impacts when considering whether or not to declare a development as major.

**SoE 2003 Recommendation EPP2: Review urgently the environmental impact assessment process to ensure a more integrated, strategic and cross-Government approach to managing the cumulative impacts of development – AGREE**

Environmental impacts are an important consideration at the strategic and project levels. The Government has mandated that all relevant decision-making should include environmental considerations and an analysis of environmental impacts. These impacts may need to be considered from a Statewide, regional and local perspective.

An inter-agency working party has been established to investigate ways to improve the statutory environmental assessment process. Priority areas for action have been identified, in the first instance, as aquaculture, wind farms and irrigated horticulture.

- South Australia's planning and development assessment process is undergoing major review to ensure a greater focus on sustainability
- The draft *Development (Sustainable Development) Amendment Bill 2004* proposes greater integration between development and natural resource management

<sup>12</sup> Recommendations in the Executive Summary of the *State of the Environment Report for South Australia 2003* are not numbered. However, they are numbered here for cross-referencing purposes – EP refers to Environmental Priority; P refers to Planning.

## How do we achieve change?

### Better information

The Government agrees that consistent, high quality and comprehensive environmental information is fundamental to ensure effective reporting on the state of the environment. Such information is essential to inform decision-making, provide a basis for good public policy and allow prioritisation for funding programs and actions on the ground.

**SoE 2003 Recommendation EPI1<sup>13</sup>: Develop a consistent and integrated approach to gathering, managing and sharing environmental information across Government and key research institutions with an emphasis on information that addresses South Australia's environmental priorities – AGREE**

Data collections across Government tend to be maintained to provide a support base to inform current programs rather than for long-term monitoring. The Government agrees that further work is needed to enhance its data and information base to enable effective, accurate and reliable environmental monitoring.

#### Possible future directions

Further work would be required to investigate opportunities to dedicate capacity within Government to address, on an ongoing basis, data gaps and to realise opportunities to improve the State's environmental monitoring capacity.

This work would need to be done in consultation with universities, the CSIRO and other relevant national programs such as the National Land and Water Resources Audit.

This work could include developing a State of the Environment Information Plan to address issues such as the need to establish a core data set aimed specifically at monitoring environmental conditions, and data consistency, access, distribution and analysis issues across Government.

### Working together

The Government agrees that we need to work together as a community to tackle environmental issues.

*South Australia's Strategic Plan* stresses the need for partnerships and an integrated and cooperative approach to develop solutions to the challenges that lie ahead. It is equally important that we all acknowledge personal responsibility in caring for the environment.

**SoE 2003 Recommendation EPWT1: Target and develop community education and awareness campaigns within a clear policy framework. Incorporate cost-effective and simple strategies that engage the whole community and emphasise campaigns that address South Australia's environmental priorities – AGREE**

There is a wide range of community education programs across Government that engage the community in environmental action. These include *Waterwatch* and *AirWatch* run by the Environment Protection Authority; *TravelSmart* and *BikeEd* run by Transport SA; and park-related education programs, the *Coast and Marine Education Framework*<sup>14</sup> and the Adelaide dolphin sanctuary education program run by the Department for Environment and Heritage<sup>15</sup>.

In addition, a South Australian Sustainability Education Framework will be developed to identify priority issues and cost-effective strategies to guide the development and delivery of awareness campaigns, community education and engagement practices. It is anticipated that this Framework will establish a common approach to capacity building and community engagement involving State and Local Government, regional community organisations and the broader community. It is expected to be finalised by the end of 2006.

Environmental education in the formal education sector will be aided by the *South Australian Sustainable Schools and Children's Service Initiative*. This program aims to engage whole school communities in developing the knowledge, skills, values and behaviours required to undertake sustainable water, waste, energy, travel and procurement practices in the school and at home.

To engage students, teachers and the community in exploring the information contained in the *State of the Environment Report for South Australia 2003*, an Environment Reporting Education Resource was developed<sup>16</sup>. This takes the information and messages

<sup>13</sup> Recommendations in the Executive Summary of the *State of the Environment Report for South Australia 2003* are not numbered. However, they are numbered here for cross-referencing purposes – EP refers to Environmental Priority; WT refers to Working Together.

<sup>14</sup> [www.environment.sa.gov.au/coasts/cmeducation.html](http://www.environment.sa.gov.au/coasts/cmeducation.html)

<sup>15</sup> See also the response to Recommendation EPWT3 and EPSL2.

<sup>16</sup> [www.environment.sa.gov.au/reporting/education](http://www.environment.sa.gov.au/reporting/education)

## How do we achieve change?

from the Report and puts them into a format that is consistent with the *South Australian Curriculum Standards and Accountability Framework*. The Education Resource encourages students to pursue environmental actions as a remedy to issues identified in the Report.

In a further initiative associated with the State of the Environment Report the Government has awarded an *Environment Youth Art Prize*. Young artists (aged between 15 and 26 years) were asked to select one of the four environmental priorities identified in the State of the Environment Report and portray this using a visual arts medium. It is hoped that the *Environment Youth Art Prize* will promote a greater community awareness of environmental issues, especially amongst young people.

### **SoE 2003 Recommendation EPWT2: Establish processes that will build effective working partnerships between industry, residents, business and Government – AGREE**

The Government has numerous processes underway, both formal and informal, that seek to establish partnerships between government, business, residents and the broad community. There are three peak advisory bodies that seek to channel community views to the Government and use partnerships as the basis to address significant economic, social and sustainability matters. These are the Economic Development Board, the Social Inclusion Unit and the Premier's Round Table on Sustainability.

Partnerships between community and industry groups also underpin the deliberations of a number of significant statutory bodies that consider environmental matters. These include the Coast Protection Board, the Environment Protection Authority, the National Parks and Wildlife Council and Regional Development Boards.

The increasing significance of the environment agenda over the past decade has seen a convergence of the roles of some 'single purpose' statutory authorities. Integrated natural resource management legislation is a major initiative that seeks to simplify roles, responsibilities and administrative arrangements, as well as improve linkages with Commonwealth initiatives and non-statutory community processes.

As well as statutory bodies there are numerous short and medium-term programs that seek to build community partnerships to tackle specific issues. These range from sector-specific programs such as *Local*

*Agenda 21*, through to broad community education programs, such as *Waterwatch* and *Landcare*.

A recent initiative that focuses strongly on partnerships is the *Green City Program*, a partnership of the Adelaide City Council and the Government through the Capital City Committee. This is driving a range of on-ground activities across the Adelaide CBD that will build significantly on the city's reputation as clean and green. The ultimate aim is to embed a culture of sustainability into all activities and decision-making in the city centre. Partnerships between State and Local Government, the private sector and universities are a key to the program's success.

Aboriginal communities play a significant role in the management of their heritage through partnerships and involvement in committees, heritage surveys and participation in the development of cultural heritage management plans.

The Government is keen to continue to develop novel approaches that will meaningfully engage the community, build partnerships and bring about changes in attitude and commitment that are necessary to deliver the reforms required.

The Government also wants to engage more comprehensively with the business community on sustainability issues. To this end, a detailed report outlining steps required for the establishment of a South Australian Sustainable Industries Program will be developed during 2004/05.

Systems such as the New Zealand business standard, *Enviro-Mark*<sup>17</sup> that offer simple and cost-effective ways for businesses to provide evidence of their environmental and social performance will be explored as possible tools to gain market recognition from consumers, customers and regulators.

### **SoE 2003 Recommendation EPWT3: Develop and implement strategies that encourage all South Australians to know that, as individuals, they have a crucial role to play in protecting and conserving the environment – AGREE**

The Government recognises that it is vital to engage the community in environmental issues and generate an understanding that we all have a responsibility in caring for the environment.

The Government also acknowledges that there is a continuing need to develop programs to

<sup>17</sup> www.enviro-mark.com

## How do we achieve change?

effectively engage communities. A wide spectrum of communication, education, social marketing and extension strategies are in place that seek to engage South Australians in the environmental debate. The South Australian Sustainable Education Framework is one example of coordinated policy that will improve the development and delivery of awareness campaigns and community education.

The *South Australian Sustainable Schools and Children's Service Initiative* aims to engage whole school communities in developing the knowledge, skills, values and behaviours required to undertake sustainable water, waste, energy, travel and procurement practices in the school and at home.

The Youth Environment Council of SA leads 'Youth for Environmental Action Workshops' to assist young people to develop the communication, presentation and project management skills to establish and maintain their own environmental action projects in their schools and communities.

The Sustainable Communities Program is working with Local Government and community groups to put sustainability into practice through local actions. Projects include the *Local Sustainability Exchange Scheme* and *Accelerating Local Sustainability initiative* that support Local Governments' sustainability planning and projects.

The *Green Street Awards* have been developed by the City of Onkaparinga in collaboration with the Department for Environment and Heritage, the Office for the Southern Suburbs and Messenger Newspapers. These showcase different and innovative approaches that individuals and communities are taking to limit their impact on the environment in the areas of water, energy and waste. The *Green Street Awards* are a novel approach by Local and State Government to encourage local community action to reduce environmental impacts.

There are many other community-based environmental programs that encourage people to get involved in environment-related activities. A number of these are mentioned in the response to Recommendation EPWT1. Others include *Landcare*, *Coastcare*, *Bushcare*, the *Urban Forest Biodiversity Program*, *Fishcare*, *Trees for Life*, *Our Patch* and the River Murray Urban Users Group.

- **A South Australian Sustainability Education Framework** will be developed by 2006 to better-focus education and engagement in environmental sustainability
- **The 2003 State of the Environment Report Education Resource**<sup>18</sup> encourages teachers and students to explore further, and take action on, the issues raised in the report
- **The Environment Youth Art Prize** promoted a greater awareness of environmental issues amongst young people
- **The Green City Program**, which seeks to build Adelaide as a green and sustainable city, is founded on partnerships between the public and private sector
- **The South Australian Sustainable Schools and Children's Service Initiative** will engage school communities in sustainability practices
- **The Environment Youth Council of SA** provides leadership to assist young people develop and implement environmental action projects
- **The Sustainable Communities Program** works with local government and communities to put sustainability into practice
- **The Green Street Awards** showcase innovative approaches by individuals and communities to minimise their impact on the environment

<sup>18</sup> [www.environment.sa.gov.au/reporting/education](http://www.environment.sa.gov.au/reporting/education)

## Environmental Reporting – Making a Difference

*The Government agrees with the Recommendations made by the Environment Protection Authority with regard to indicator-based reporting and the need to strengthen the policy role of State of the Environment Reporting.*

South Australia has a strong track record in environmental reporting. In fact, it was the first jurisdiction in Australia to prepare a State of the Environment Report back in 1988. At the time, the Report was acknowledged as an important benchmark of environmental conditions in South Australia.

A major objective of State of the Environment Reports is to provide scientifically credible information and objective assessments that can be linked to Government decision-making and thus help drive the future environmental and sustainability agenda for South Australia.

A series of recommendations<sup>19</sup> are made in the 2003 State of the Environment Report that aim to strengthen the role of State of the Environment Reporting. These are addressed below.

### **SoE 2003 Recommendation SOE1: Prepare a Government Response to the 2003 State of the Environment Report – AGREE**

In recognition of the important role that State of the Environment Reports can play in informing the development of environmental policy the Government agreed to prepare, for the first time, a formal and comprehensive Response to the *State of the Environment Report for South Australia 2003*. This decision pre-dated the recommendation from the Environment Protection Authority and is in keeping with proposed changes to the *Environment Protection Act 1993* that will require a formal Government Response to future State of the Environment Reports.

### **SoE Recommendation SOE2: Report annually on the Government's progress in relation to strategies outlined in its Response – AGREE**

The Government also agrees that it is important that we monitor closely our progress on implementing the actions outlined in the Government's Response.

There are currently a number of indicator-based publications that provide a mechanism to report on targets and monitor progress – these include *Green Print SA*, *South Australia's Strategic Plan* and the Economic Development Board's *A Framework for Economic Development in South Australia*. A process for reporting on progress against the Government's Response is being identified.

<sup>19</sup> These recommendations can be found in the *State of the Environment Reporting*, chapter of the *State of the Environment Report for South Australia 2003*. While not numbered in the Report, they are numbered here for cross-referencing purposes.

### **SoE 2003 Recommendation SOE3: Take into account the SoE Report and Government's Response when developing performance measures and benchmarks for the State – AGREE**

*South Australia's Strategic Plan*, released in March 2004, contains many of the performance measures and benchmarks referred to in the State of the Environment Report. These will be monitored every two years to track progress over time.

### **SoE 2003 Recommendation SOE4: Make sure that there is clarity of purpose and efficiency of effort in Government indicator-based reporting – AGREE**

The Government agrees with the Environment Protection Authority that to avoid public confusion there must be clarity of purpose for the range of indicator-based reports that are currently in circulation. South Australia's leading indicator-based report, *South Australia's Strategic Plan*, has links to other important Government documents, including *Green Print SA* and the 2003 State of the Environment Report. It is expected that, over time, all Government plans and documents will align, wherever possible, with the directions and strategies outlined in the Plan.

### **SoE 2003 Recommendation SOE5: Incorporate Government's policy response to the SoE Report into the process for developing a State Strategic Plan and give priority to embedding broad principles of sustainability into whole-of-Government strategic planning processes – AGREE**

*South Australia's Strategic Plan* was released in March 2004. The *State of the Environment Report for South Australia 2003* was used to help identify areas of strategic importance and develop relevant sections of the Plan.

*South Australia's Strategic Plan* acknowledges that environmental sustainability will boost community well-being, safeguard future generations and contribute to economic prosperity. It sets targets and actions that focus on protecting biodiversity, securing sustainable energy and water supplies, and minimising waste.

The appointment of the Premier's Round Table on Sustainability indicates the Government's increasing emphasis on the principles of sustainability to guide decision-making. In particular, the Government is placing an increasing focus on environmental sustainability and emphasising that opportunities for economic development and social gains must be explored through policy that is environmentally responsible.

# Atmosphere

## 1 Atmosphere Government's Response to the State of the Environment Report for South Australia 2003

### Air quality

The Government agrees with all the recommendations relating to air quality. A major objective of the Environment Protection Authority is to maintain and improve air quality in Adelaide and major regional centres around the State and it is implementing a number of programs to achieve this.

#### **SoE 2003 Recommendation 1.1: Develop and implement an Air Quality Management Plan for South Australia – AGREE**

In recognition of the importance of air quality as an environmental issue, the Government agrees that a comprehensive Statewide Air Quality Management Plan is required. To this end the first of a series of Position Papers, entitled Air Quality 2010, is being prepared which will be used to develop a detailed Air Quality Management Plan for South Australia. The development of an Air Quality Management Plan is expected to take around three years and will involve extensive public and stakeholder consultation.

#### **SoE 2003 Recommendation 1.2: Develop and implement an Environment Protection (Air Quality) policy for South Australia. Review the Environment Protection (Burning) Policy to reflect contemporary approaches – AGREE**

The Board of the Environment Protection Authority has approved a process to review the current *Environment Protection (Air Quality) Policy 1994*. The review will involve a significant revision of the current policy to reflect contemporary approaches to air quality management. The *Environment Protection (Burning) Policy 1994* will also be reviewed during this process. Work is expected to be complete by the end of 2005.

#### **SoE 2003 Recommendation 1.3: Update odour monitoring capabilities to comply with Australian Standards – AGREE**

The Government acknowledges that odour testing is an important aspect of air quality monitoring and that this should be based on the relevant Australian Standard. Odour testing is resource intensive as it relies on the human nose to assess odours.

The Environment Protection Authority will undertake a scoping exercise to determine the cost of establishing an odour testing and sampling facility to comply with the Australian and New Zealand Standard AS/NZS 4323.3:2001, and its likely use.

#### **SoE 2003 Recommendation 1.4: Enhance community education to improve public understanding of air quality issues. Include eco-efficiency programs that target small to medium industries – AGREE**

In recognition of the importance of air quality education in South Australia an Air Quality Education Coordinator has been appointed by the Environment Protection Authority. Target audiences for education programs include schools, industry and the wider community.

In addition, the Environment Protection Authority's *AirWatch* program attempts to influence community behaviour and educate students and school communities on air quality issues, particularly those in relation to transport and wood smoke. To date, more than seventy-five schools and one hundred teachers have been involved.

With regard to the formal education sector, the *South Australian Curriculum Standards and Accountability Framework* describes learning outcomes that relate closely to air quality issues, especially concerning sustainable energy use and greenhouse gas emissions.

The Government's *Solar Schools Program* aims to encourage schools to use more sustainable forms of energy while at the same time providing an educative focus for sustainable technologies. To date, twenty-four schools have taken advantage of the *Solar Schools Program*. A further nineteen will have installed solar power by the end of the year.

#### **SoE 2003 Recommendation 1.5: Place a high priority on risks to public health and amenity in the management of air quality. Industry Environment Improvement Programs must focus on high priority risks – AGREE**

The Government agrees that risks to public health should largely determine priorities with regard to the management of air quality. To ensure this, the Environment Protection Authority and the Department for Health hold regular meetings to discuss issues of common interest, including air quality management.

## Atmosphere/Inland Waters

Based on risks to public health, the Environment Protection Authority has identified a number of areas that must be managed as a priority, including the Upper Spencer Gulf region and the River Torrens Catchment area. An audit of the Upper Spencer Gulf region has been completed to identify major risks to public health and environmental amenity, and to develop actions to minimise their impacts. An audit of the River Torrens Catchment area will be complete by early 2005. Similar audits are planned for the South East and the Le Fevre Peninsula. Specific industry sectors will also be targeted for review/auditing, including the timber preservation industry and liquid waste treatment plants.

- The Government will develop a **State Air Quality Monitoring Plan** within three years
- The **Environment Protection (Air Quality) Policy 1994** will be reviewed to reflect contemporary approaches to air quality management
- The **AirWatch** Program encourages schools to investigate air quality issues
- An **Air Quality Education Coordinator** works with schools, industry and the wider community to increase awareness of air quality issues
- The **South Australian Solar Schools Program** supports schools in using solar power for their energy needs

### Climate change

For information on the Government's Response to the climate change recommendation from the State of the Environment Report (Recommendation 1.6) see *Our Environmental Priorities – Climate change*.

### Ozone depletion

The Government agrees with the recommendation relating to ozone depletion. South Australia's *Environment Protection Act 1993* and *Environment Protection (Ozone) Regulations 1994* are complementary to Commonwealth legislation that addresses Australia's obligations under the Montreal Protocol<sup>20</sup>.

<sup>20</sup> The Montreal Protocol came into force on 1 January 1989 and has been signed by over 165 countries. It is considered one of the most successful environment protection agreements in the world, setting out a mandatory timetable for the phasing out of ozone-depleting substances.

<sup>21</sup> Council of Australian Governments.

### SoE 2003 Recommendation 1.7: Continue to assist in meeting national targets for ozone regulation – AGREE

The Commonwealth expanded its powers with respect to regulating ozone depleting substances (ODSs) and synthetic greenhouse gases by passing the *Ozone Protection and Synthetic Greenhouse Gas Amendment Act 2003*. It intends to introduce specific national regulations that will replace State and Territory legislation to control the sale, use and servicing of ozone depleting substances and equipment containing them.

The Environment Protection Authority will liaise closely with the Commonwealth to identify any necessary amendments to State legislation to achieve the desired outcomes and to ensure that the transfer of administration occurs as smoothly as possible.

## 2 Inland Waters

Government's Response to the  
State of the Environment Report for South Australia 2003

### The River Murray

The Government agrees with all the recommendations relating to the River Murray. It is continuing to place a high priority on developing programs and strategies that will lead to the more sustainable use of the River.

### SoE 2003 Recommendation 2.1: Develop and implement policies to reduce water extractions from the River Murray to more sustainable levels – AGREE

The Government is involved in ongoing investigations at the national level to increase environmental flows to the River. These include the application of market mechanisms, water use efficiency savings and improvements in irrigation efficiency. Through the COAG<sup>21</sup> *National Water Initiative* national environmental flow criteria are being established to address sustainability issues.

### SoE 2003 Recommendation 2.2: Establish long-term environmental flow objectives – AGREE

The Government introduced the River Murray Act in 2003 to provide greater protection and control over the way in which we use the River. The Government has also established the *River Murray Improvement Program*, funded through the Save the River Murray Levy.

## Inland Waters

The Program is funding a number of initiatives to improve the health of the River Murray in South Australia including environmental flows.

The draft River Murray Environmental Flow Management Strategy has been released for public comment. Once adopted, the Strategy will establish long-term flow objectives. This will lead to a detailed appraisal of environmental water needs. The restoration of environmental flows in the Murray-Darling Basin is a priority action in *South Australia's Strategic Plan*.

### **SoE 2003 Recommendation 2.3: Return 1500 gegalitres of water per year to the River and consider the reintroduction of 500 gegalitres per year in the short-term – AGREE**

The Government will contribute to a \$500 million funding commitment with the Australian, New South Wales, Victorian and Australian Capital Territory Governments to return 500 gegalitres per year of water (as a long-term average increase in flows) to the River as environmental flows by 2009/10. Negotiations are continuing in an attempt to reach agreement to return 1500 gegalitres per year on average to the River over the next 15 years.

### **SoE 2003 Recommendation 2.4: Use risk assessments to determine the major threats to water quality within three years – AGREE**

Water quality in the River Murray remains a high priority with the Government. In acknowledgement of the significance of this issue a *Risk to Water Quality Audit* is being undertaken to determine point source and diffuse pollution risks, with the objective of developing strategies to manage the highly ranked risks. The Audit is expected to be complete by the end of 2005. Management strategies will be developed in consultation with stakeholders when the results of the audit are known.

### **SoE 2003 Recommendation 2.5: Increase the efficiency of water use and improve river and wetland health through better management, irrigation system rehabilitation and the upgrading of weirs and barrages – AGREE**

The rehabilitation of all highland irrigation systems in South Australia from open channels to pipeline systems, a process begun in the late 1970's, has resulted in reduced water usage in excess of 10 gegalitres/year.

Further water savings, as well as improvements in water quality, will be made through rehabilitation and improved management of the Lower Murray Reclaimed Irrigation Areas. The first stage of this project is expected to be complete by 2007.

The Government is undertaking a number of engineering works to achieve more natural 'wetting and drying' regimes in an effort to improve river and wetland health. These include weir pool manipulations and changes to the way that the barrages and Lake Victoria<sup>22</sup> are operated. A successful trial was conducted at Lock 5 in 2000. The ecological and public response indicated support for future trials.

### **SoE 2003 Recommendation 2.6: Establish water quality objectives and environmental values for the River within 3 years – AGREE**

Some water quality objectives already exist for the River Murray, for example salinity targets<sup>23</sup> are articulated in the *South Australian River Murray Salinity Strategy (2001–2015)*.

The *Risk to Water Quality Audit* (see the response to Recommendation 2.4) will include an evaluation of environmental values for the River Murray. This will involve wide community consultation and is expected to be complete by the end of 2006. This work will lead to the development of comprehensive water quality objectives for the River.

### **SoE 2003 Recommendation 2.7: Rationalise activities that contribute to degradation of the River and its surrounds – AGREE**

The Government agrees that there must be greater control over activities that potentially contribute to degradation of the River Murray. To meet this need, the *River Murray Act 2003* requires that new development proposals must be referred to the Minister for the River Murray for direction. Assessment of whether a development is approved must take into account the *Objectives for a Healthy River Murray*, as defined in the Act.

Specific activities underway that address degradation issues include the *Risk to Water Quality Audit* (see the response to Recommendation 2.4), the establishment of salt interception schemes, rehabilitation of the Lower Murray Reclaimed Irrigation Areas, and various Codes of Practice (see the response to Recommendation 2.11)

<sup>22</sup> Lake Victoria is a major river storage just north of Renmark.

<sup>23</sup> To maintain salinity levels at less than 800 Electrical Conductivity Units at Morgan for 95% of the time.

## Inland Waters

developed by the Environment Protection Authority. Actions arising from the *River Murray Integrated Natural Resource Management Plan* will also address degradation issues.

- The *River Murray Act 2003* provides greater control over our use of the River
- The *River Murray Improvement Program* will see action to restore environmental flows
- **500 gigalitres of water** per year will be returned to the River as environmental flows by 2009/10
- The *River Murray Flow Management Strategy*, currently out for public comment, will set long-term flow objectives
- **Rehabilitation of the Lower Murray Reclaimed Irrigation Areas** will increase irrigation efficiency and improve water quality

### Rivers, streams and wetlands

The Government agrees with all the recommendations relating to rivers, streams and wetlands. A high priority must be given to returning water to aquatic ecosystems, many of which are degraded as a consequence of pollution and excessive water extraction. The approach to date has been to direct the limited available resources to areas with the highest need. In recent years the River Murray has received a high priority for funding. The health of rivers and streams in other regions, such as the Mount Lofty Ranges, is also significant and is receiving greater attention.

#### SoE 2003 Recommendation 2.8: Implement water management programs that incorporate environmental water requirements – AGREE

Water Allocation Plans, developed under the *Water Resources Act 1997*, are the principal means of addressing environmental water requirements. The Plans require an assessment of the needs of water-dependent ecosystems (including groundwater-dependent ecosystems) and the establishment of environmental water provisions to ensure that water is allocated fairly between all users. Water Allocation Plans have been developed for 16 of the 21 Prescribed Water Resource Areas in South Australia and Plans are under development for the remaining areas.

#### SoE 2003 Recommendation 2.9: Fully implement the Wetlands Strategy for South Australia – AGREE

The Government released the *Wetlands Strategy for South Australia in 2003* to provide a framework for a more focused and integrated approach to managing wetlands. A progress report on the implementation of actions outlined in the Strategy is being developed in conjunction with Natural Resource Management groups, wetland scientists and educators, landholders, industry, non-government organisations and other government agencies.

#### SoE 2003 Recommendation 2.10: Implement inter-Governmental agreements for multi-jurisdictional wetlands – AGREE

In acknowledgement of the importance of a coordinated approach to the management of wetlands and rivers across State boundaries, Intergovernmental agreements are in place and being acted upon for the Murray-Darling Basin, the Lake Eyre Basin and the Otway and Murray Basins. Arrangements are also in place for a whole-of-basin approach to management of the Great Artesian Basin and issues relating to South East watercourses are currently being addressed in cooperation with Victorian authorities.

#### SoE 2003 Recommendation 2.11: Develop Codes of Practice for diffuse sources of pollution entering watercourses and water bodies – AGREE

To tackle the issue of diffuse pollution entering watercourses, the Environment Protection Authority, in consultation with other agencies and industry, is developing Codes of Practice for a range of activities. These include aquaculture operations, wharfs and marinas, and wineries. These will ultimately be linked with the *Environment Protection (Water Quality) Policy 2003* to ensure a consistent approach.

- **Water Allocation Plans**, which provide for environmental water provisions, have been completed for most of the State's prescribed water resources
- The *Wetlands Strategy for South Australia* provides a framework for a more integrated approach to wetland management
- **Intergovernmental agreements** are in place and being acted upon for all inter-jurisdictional wetlands
- **Codes of Practice** are being developed that target diffuse pollution issues

## Inland Waters

### Water quality

The Government agrees with the recommendations relating to water quality. Deteriorating surface water quality, particularly in the River Murray and Mount Lofty Ranges, is a critical issue that must be addressed. Groundwater in parts of the South East and the Northern Adelaide Plains is increasing in salinity, to the detriment of drinking water quality, ecosystems and irrigation-dependant industries.

The *Environment Protection (Water Quality) Policy 2003* provides for the first time a consistent, Statewide approach to the protection of water quality (marine and fresh waters).

#### **SoE 2003 Recommendation 2.12: Use a risk management approach to prioritise actions to address water quality – AGREE**

The management of water quality in South Australia has been undertaken within a broad risk management framework over the past five years, consistent with the *National Water Quality Management Strategy*. Natural Resource Management Plans incorporate similar risk management strategies at the regional level.

A *Risk to Water Quality Audit* is being conducted for the River Murray that will establish actions to address highly ranked risks (see the response to Recommendation 2.4). A review of the Environment Protection Authority's State Ambient Water Quality Monitoring Program, which takes a risk-based approach, is underway. The establishment and implementation of the Mount Lofty Ranges Watershed Protection Strategy is another initiative that is founded on a risk management framework.

#### **SoE 2003 Recommendation 2.13: Establish an independent auditing process to assess the water resource management work undertaken by Natural Resource Management Boards – AGREE**

Monitoring and evaluation of the effectiveness of on-ground activities in achieving water quality improvements is essential to ensure success. The Government agrees that an independent auditing process is required for the work undertaken by Natural Resource Management Boards as part of a broader monitoring and evaluation framework. A process and responsibilities for undertaking this work are being investigated.

- A **Risk to Water Quality Audit** of the River Murray will establish actions to address highly ranked risks by the end of 2005
- The *Environment Protection (Water Quality) Policy 2003* provides a consistent, Statewide approach to the protection of water quality

### Water use

The Government agrees with the recommendations relating to water use, however it is yet to be determined if the water saved through Government funded improved irrigation efficiencies should be returned to the environment (see the response to Recommendation 2.15 below).

#### **SoE 2003 Recommendation 2.14: Urgently develop measures for the more sustainable use of water in the Mount Lofty Ranges – AGREE**

The future prosperity of South Australia relies on a secure supply of good quality water for rural, urban and environmental uses. The vast majority of the State's population is dependent on the River Murray and reservoirs in the Mount Lofty Ranges for water supplies; resources which are threatened from over-use and deteriorating quality. The Government has proposed the prescription of the water resources of the Mount Lofty Ranges and has put in place temporary controls over new uses while the Government undertakes a detailed assessment of water resource use.

If prescription proceeds, this will see the development of Water Allocation Plans for the Eastern and Western Mount Lofty Ranges that will consider environmental water needs equally with social and economic needs.

#### **SoE 2003 Recommendation 2.15: Increase irrigation efficiency through improved practices and use water savings for the environment – AGREE**

A wide range of economic and regulatory tools are being used to increase irrigation efficiency and significant efficiencies have already been achieved (see the response to Recommendation 2.5). The Government will continue to refine and improve these.

- The Government issued a **Notice of Intent to prescribe** all water resources in the Eastern Mount Lofty Ranges in October 2003 and is currently considering the community response to that proposal
- The Government issued a Notice of Intent to prescribe the water resources of the Western Mount Lofty Ranges in October 2004 and is currently consulting the community regarding the proposal

# Coasts and the Sea

## 3 Coasts and the Sea

Government's Response to the  
State of the Environment Report for South Australia 2003

### Aquaculture

The Government agrees with all of the recommendations relating to aquaculture development. Aquaculture in South Australia is now subject to much greater regulation as a consequence of the *Aquaculture Act 2001*. There have been improvements to the management of many operations as a consequence of the new legislation. The Government acknowledges that there are other, less well established sections of the industry that require attention if the industry as a whole is to be managed sustainably.

#### **SoE 2003 Recommendation 3.1: Review the process by which the aquaculture industry is licensed and promoted to ensure there are no conflicts of interest – AGREE**

The promotional/industry development role in aquaculture is not a direct responsibility of PIRSA's Aquaculture Division; responsibility for this rests with Food SA. Whilst Food SA is a division of PIRSA, it operates under the *State Food Plan* – a State Government/industry partnership. The activities of PIRSA Aquaculture are restricted to the regulatory, policy, licensing and leasing activities specified by the *Aquaculture Act 2001*. This arrangement provides an adequate separation of regulatory and industry development roles.

PIRSA and the Environment Protection Authority co-regulate the aquaculture industry under the *Aquaculture Act 2001* and the *Environment Protection Act 1993*. These arrangements have been in place since December 2001. Review of the current regulatory arrangements and other related matters will be considered in the future.

#### **SoE 2003 Recommendation 3.2: Integrate aquaculture planning with the proposed new marine planning process and provide buffer zones between aquaculture and protected areas – AGREE**

The Government agrees that aquaculture planning must be closely integrated with the State's proposed Marine Planning Framework, which uses an ecosystems-based approach to the management of coastal and marine

areas (see the response to Recommendation EPM2 in *Our Environmental Priorities – Marine and coastal environment*). An Inter-agency Liaison Group has been established to address this and other policy issues.

Buffer zones between aquaculture development and terrestrial and marine protected areas are currently prescribed in Development Plans and various aquaculture policies.

#### **SoE 2003 Recommendation 3.3: Strengthen regulatory guidelines for aquaculture design and operations – AGREE**

Since the introduction of the *Aquaculture Act 2001*, guidelines have been developed to assist sustainable management of the aquaculture industry. The regulatory guidelines are incorporated in statutory policies endorsed by the Environment Resources and Development Committee of Parliament.

#### **SoE 2003 Recommendation 3.4: Exercise caution with regard to the farming of species that are outside of their natural range – AGREE**

The Government agrees that caution must be exercised when granting aquaculture licences for species that are outside their normal distribution to avoid species outbreaks and potential ecological disaster. This issue is already subject to assessment in accordance with principles set out in the *Aquaculture Act 2001*. A national risk assessment framework has been established and, in South Australia, assessments are based on the *Farming Fish Outside their Natural Ranges Policy*.

#### **SoE 2003 Recommendation 3.5: Ensure compliance with relevant environmental management standards – AGREE**

The Government agrees that aquaculture developments should comply with all relevant environmental management standards. To this end, South Australia's aquaculture industry is subject to environmental regulation, and licence conditions stipulate environmental provisions that must be complied with to avoid fines or licence cancellation. All aquaculture developments undergo an ecological sustainability risk assessment before a licence is issued and environmental monitoring is an annual requirement for all aquaculture operators.

## Coasts and the Sea

### SoE 2003 Recommendation 3.6: Increase research into minimising the environmental impacts of aquaculture and commit to independent long-term studies – AGREE

The Government agrees that more research is needed on the potential impacts of aquaculture on marine ecosystems. In recognition of this it is funding, in cooperation with the Fisheries Research and Development Corporation, the *South Australian Innovative Solutions for Aquaculture Access and Management Initiative*. This initiative will conduct research that will support the development of policy underpinning aquaculture management in South Australia and lead to a greater understanding of the broadscale impacts of aquaculture on the marine environment.

- The *Aquaculture Act 2001* provides a framework for ecologically sustainable development of the industry
- All aquaculture developments undergo **ecologically sustainable risk assessments** before approval
- The Government is a partner in the *Innovative Solutions for Aquaculture Access and Management Initiative* that will conduct research to support sustainable development of the industry

### Fisheries

The Government agrees with the majority of recommendations relating to fisheries, with the exception of the introduction of a licence scheme for recreational fishing (see the response to Recommendation 3.9).

### SoE 2003 Recommendation 3.7: Develop formal management plans for all fisheries that incorporate ecologically sustainable development principles – AGREE

The Government agrees that all fisheries require formal management plans. Subsequently, all fisheries' management plans are being updated or new plans drafted to incorporate the national *Ecologically Sustainable Development Framework for Sustainable Fisheries*. All commercial fisheries are also undergoing assessment under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* – Rock Lobster and Abalone fisheries have already received endorsement.

### SoE 2003 Recommendation 3.8: Take into account recreational fish catches in fisheries assessments and regularly update recreational fishing data – AGREE

Information from the *National Recreational and Indigenous Fishing Survey*, conducted between 2001 and 2002, is being incorporated into fisheries assessments wherever possible. While the Government acknowledges that recreational fishing catches should be taken into account in all fishery assessment reports, there is limited Statewide data to allow this on a comprehensive level. Further work would be required to collect this data on an ongoing basis.

### SoE 2003 Recommendation 3.9: Introduce a recreational fishing licence scheme – DISAGREE

There are technical and environmental issues that require further consideration of this recommendation. Recreational fishers are taking a significant proportion of the total catch of many fish stock, yet the sector contributes little to the sustainable management of fisheries. Alternative funding mechanisms to address the management of recreational fishing will be investigated.

### SoE 2003 Recommendation 3.10: Expand research into fish populations and recruitment processes – AGREE

### SoE 2003 Recommendation 3.11: Increase research on the impact of fishing on marine ecosystems – AGREE

In terms of the impacts of fishing on marine ecosystems, periodic research will be ongoing as part of the ecosystem-based management approach to fisheries. By-catch monitoring programs are being conducted for all fisheries. In the Spencer Gulf and Gulf St. Vincent, the Government is conducting research on the impact of prawn trawling on marine ecosystems.

#### Possible future directions

Further work would be required to initiate long-term monitoring programs so that slow, cumulative changes in the marine environment can be measured and their causes assessed.

More research would also be required to comprehensively investigate population ecology and recruitment processes for marine scalefish.

## Coasts and the Sea/Land Resources

- ➔ **Fisheries Management Plans** are being updated to reflect ecologically sustainable development principles
- ➔ The *Fisheries Act 1982* is being reviewed to ensure a greater focus on ecologically sustainable development principles

### Health of the marine and coastal environment

The Government agrees with all the recommendations relating to the health of the marine and coastal environment. This issue is identified as one of South Australia's major environmental priorities. The Government has allocated \$5 million over four years to implement the *Living Coast Strategy*. Work will commence in 2004/05.

**SoE 2003 Recommendation 3.12: Develop a new Coast and Marine Management Act and implement a Marine Planning Framework that focuses on ecosystems – AGREE**

See the response to Recommendations EPM1 and EPM2 in *Our Environmental Priorities – Marine and coastal environment*.

**SoE 2003 Recommendation 3.13: Improve coastal planning processes through revision of the State Planning Strategy and development assessment process – AGREE**

See the response to Recommendation EPM2 in *Our Environmental Priorities – Marine and coastal environment*.

**SoE Recommendation 3.14: Develop and implement estuarine and mangrove monitoring programs – AGREE**

The State of the Environment Report indicates that more work is required to monitor the health of estuaries and mangrove communities. The Government agrees and, in April 2004, released a discussion paper on the development of an Estuaries Policy for South Australia. A draft Estuaries Policy is expected to be released for public comment in mid-2005.

A number of initiatives arising from the Estuaries Policy are proposed, such as the development of a long-term State Estuarine Program (which would incorporate mangrove monitoring) and estuary information packages to assist Natural Resource Management Groups establish monitoring programs.

The Environment Protection Authority conducts regular water quality monitoring in representative estuaries across the State.

**SoE 2003 Recommendation 3.15: Encourage the reuse of stormwater and treated wastewater of a larger scale – AGREE**

See the response to Recommendation EPM5 in *Our Environmental Priorities – Marine and coastal environment*.

- ➔ The *Living Coast Strategy* will provide environmental policy directions for sustainable management of our coast and marine environment
- ➔ A **draft Estuaries Policy** will be released in late 2004
- ➔ A new **Coast and Marine Act** is being developed to replace outdated legislation

## Land Resources

4

Government's Response to the  
State of the Environment Report for South Australia 2003

### Dryland salinity

The Government agrees with all the recommendations relating to dryland salinity. Salinity is a national problem. The off-site impacts of dryland salinity combined with the high costs of its management and long time frames to see results make dryland salinity a challenging issue for Government and landholders alike. Partnerships between Government, industry, research organisations and landholders are essential to develop new solutions for living with salt and managing salt affected land.

**SoE 2003 Recommendation 4.1: Provide ongoing and adequate funding and technical support for on-ground action, monitoring and evaluation beyond the lifespan of the NAP and the NHT – AGREE**

The *Natural Heritage Trust* (NHT) and the *National Action Plan for Salinity and Water Quality* (NAP) provide the major sources of funding to address dryland salinity issues.

The Government's Natural Resources Management (NRM) Act provides for the long-term management of dryland salinity and other natural resource issues. Regional NRM Boards will play a key role in working with the community to address these issues and implementing long-term monitoring and evaluation of results beyond the lifespan of the NAP and NHT.

## Land Resources

### SoE 2003 Recommendation 4.2: Extend and maintain regional planning and investment projects and current agronomic, hydrological and biological programs – AGREE

The Government is working in partnership with regional NRM Groups and the Australian Government to develop relevant agronomic, hydrological and biological programs to tackle salinity. The level of effort directed to these programs depends upon the significance of salinity and its implications for each region.

The Upper South East is the most seriously affected region in South Australia. The *Upper South East Dryland Salinity and Flood Management Program* was extended with support from the National Action Plan in 2003. This extension provides for agronomic, hydrological and biological programs in the region. The drainage works activity is due to be complete by the end of 2006.

### SoE 2003 Recommendation 4.3: Invest in more research that will lead to profitable and sustainable options for living with salt and managing salt affected land – AGREE

The Government is one of nine partners in the Cooperative Research Centre (CRC) for Plant Based Management of Dryland Salinity. The CRC is investigating new land use systems that will make profitable use of saline and waterlogged land. South Australian based research commenced in 2003 and is still in its early stages. The Government is also a partner in the Sustainable Grazing on Saline Land Producer Participatory Research and Development program, a joint industry and Government initiative that aims to conduct research on profitable and sustainable uses of land that has been affected by dryland salinity. The program runs until 2006.

### SoE 2003 Recommendation 4.4: Extend research and development to investigate commercially viable farming, forestry and land use systems that will reduce recharge, particularly in lower rainfall areas – AGREE

The Government, in partnership with industry, is investigating opportunities to develop commercially viable farming and forestry systems that will reduce recharge. The Government considers that this research is vital for South Australia as a whole, not just for low rainfall areas.

The *Florasearch* project, funded by the CRC for Plant Based Management Solutions of Dryland Salinity, is investigating the use of locally occurring trees and

shrubs that could provide alternative land management systems for low to medium rainfall regions. More traditional research is also being done on the use of commercial crops for managing recharge, such as lucerne.

The Government is also investigating the use of bio-diesel crops (such as mustard) for low to medium rainfall areas to assist in the management of recharge. Bio-diesel crops also provide environmental benefits as they can be used as a renewable form of energy.

- The *Natural Resources Management Act 2004* will provide for the long-term management of dryland salinity
- The Government is a partner in the **Cooperative Research Centre (CRC) for Plant Based Management of Dryland Salinity**
- The *Upper South East Dryland Salinity and Flood Management Program* is undertaking extensive drainage works to alleviate dryland salinity in the region

### Land use

The Government agrees with all the recommendations relating to land use. In particular, that there must be a closer integration between the planning system and the management of natural resources. The cumulative impact of development, and its potential environmental, economic and social impacts is an associated issue that needs greater attention, particularly in terms of impacts in the Mount Lofty Ranges. There are a number of initiatives underway to address this.

### SoE 2003 Recommendation 4.5: Develop a legislative and policy framework that integrates natural resource management with the land use planning system. Incorporate land capability and suitability assessments into planning controls at all levels – AGREE

The Government agrees that integration is needed between land use planning and natural resource management. The draft *Development (Sustainable Development) Amendment Bill* will increase the level of integration between the *Development Act 1993* and natural resource management legislation. Importantly, the draft Bill enables the Minister for Urban Development and Planning to have regard to the cumulative impacts on the environment when deciding whether to declare a development as major.

## Land Resources

The forthcoming State Natural Resources Management Plan, required by the *Natural Resources Management Act 2004*, will integrate closely with the Planning Strategy.

### **SoE 2003 Recommendation 4.6: Review as a priority the environmental impact assessment process and its administration – AGREE**

See the response to Recommendation EPP2 in *Our Environmental Priorities – Improved land use planning*.

### **SoE 2003 Recommendation 4.7: Undertake strategic assessment of development proposals that involve a significant change in land use – AGREE**

The Government agrees that it is important that all applications, including those involving a significant change in land use, are subject to an appropriate policy or development assessment review. The assessment of development proposals that involve a significant change in land use is already a requirement of the *Development Act 1993*.

The Government has initiated a process to improve the State's planning and development assessment system. In addition, an inter-agency review is underway to improve the environmental impact assessment process as it applies to development applications referred to agencies in the Environment and Conservation Portfolio for advice according to Schedule 8 of the *Development Regulations 1993*.

### **SoE 2003 Recommendation 4.8: Subject all proposed major developments in the Mount Lofty Ranges Watershed that have the potential to cause harm to environmental risk assessment – AGREE**

The Government agrees that all proposed major developments in the Mount Lofty Ranges Watershed should be subject to environmental risk assessment as part of the assessment process. This already occurs to some degree under existing legislation. The Development Plans applying to the Watershed contain extensive provisions dealing with environmental protection generally and water quality specifically. In addition, a wide range of developments proposed in the Watershed is referred to the Environment Protection Authority for advice on potential environmental impacts (as required under Schedule 8 of the *Development Regulations 1993*). A decision on a referred

development application therefore includes consideration of environmental risk. The *Planning Strategy for the Inner Region*, which encompasses the Mount Lofty Ranges Watershed, is being prepared<sup>24</sup> with a major focus on ensuring an integrated approach to managing economic, social and environmental objectives. See also the response to recommendation 6.4.

### **SoE 2003 Recommendation 4.9: High priority is given to legislative reform with respect to site contamination – AGREE**

The Government is developing amendments to the *Environment Protection Act 1993*.

- The *Draft Development (Sustainable Development) Amendment Bill 2004* provides for greater integration between the *Development Act 1993* and natural resource management legislation
- A **draft Site Contamination Bill** is being developed to manage contaminated land more effectively and to encourage more sophisticated solutions
- The *Planning Strategy for the Inner Region* has a major focus on sustainable land use in the region, including the Mount Lofty Ranges

## Soil erosion and acidity

The Government agrees with the recommendations relating to soil erosion and acidity. Soil erosion and acidity are two of the most significant land management problems that have arisen in this State as a consequence of land management practices over the last one hundred and fifty years. We must tackle these issues cooperatively and on a large scale.

### **SoE 2003 Recommendation 4.10: Improve understanding on why the adoption of improved land management practices remains inadequate in many areas and implement solutions – AGREE**

Government is placing a major focus on improved sustainable land management practices across the State and is working to promote Environmental Management Systems (EMS) to landholders. A detailed Action Plan for EMS in Agriculture has been prepared and the Government has a number of EMS activities underway or planned that will feed into the National EMS Implementation Plan. These relate to education and

<sup>24</sup> The Inner Region Planning Strategy is being prepared and released for the first time and will become the third volume of the Planning Strategy (in addition to the Metropolitan Adelaide and Regional SA volumes).

## Land Resources/Biodiversity

information; facilitation, coordination and leadership; environmental policy; and research and development.

While the Government acknowledges that the rate of uptake of sustainable land management practices has been slow, particularly in some regions, the existence of groups such as the South Australian No-Till Farmers Association, Southern Precision Agriculture Association, Mallee Sustainable Farm Systems Groups and the Yorke Peninsula Alkaline Soils Group is testament to the enthusiasm in some parts of the rural sector to explore sustainable technologies.

### Possible future directions

The development of a state capacity building framework would assist regional communities to deliver effective natural resource management outcomes. More research could be undertaken to identify the economic and social barriers preventing the widespread uptake of sustainable land management practices.

### SoE 2003 Recommendation 4.11: Conduct ongoing monitoring to assess the impact of land management activities on erosion risk and the condition of acid soils – AGREE

To assess the impact of land management activities on soil erosion and acidity, the Government runs a Land Condition Monitoring Program across the agricultural regions of South Australia on an ongoing basis. The Program will soon publish its first State Land Condition Report.

→ The **State's first Land Condition Report** will be released in the near future

## 5 Biodiversity

Government's Response to the  
State of the Environment Report for South Australia 2003

### Introduced species

The Government agrees with all the recommendations relating to introduced species, with the exception of increasing research into the extent of spread of mesquite (see the response to Recommendation 5.6) which has been found to be not as extensively distributed as previously thought.

### SoE 2003 Recommendation 5.1: Enhance the level of research into Mundulla Yellows and its impacts on biodiversity. Increase the level of research into *Phytophthora cinnamomi* and monitor the effectiveness of risk management strategies – AGREE

The Government agrees that research on Mundulla Yellows must be enhanced to minimise impacts on native plants. The Department for Environment and Heritage, with support from the Commonwealth<sup>25</sup>, is funding research to establish the cause(s) of, and management solutions for, Mundulla Yellows. This research has recently identified that Mundulla Yellows may be caused by abiotic factors and that nutrients contribute to the syndrome which is also associated with a complex interaction of soil properties. The solution will now be investigated in a new research program to be undertaken by the same research team.

Due to the threat that *Phytophthora cinnamomi* poses to biodiversity, the Department for Environment and Heritage employs a *Phytophthora* Project Officer to conduct a broad-ranging program to minimise the risks associated with this pathogen. The Mount Lofty Ranges and Kangaroo Island are priority regions for this work.

In addition, Transport SA is supporting research by the University of Adelaide on the distribution and spread of Mundulla Yellows. The agency also has its own operating procedures for assessing *Phytophthora* risk at the project level.

### SoE 2003 Recommendation 5.2: Develop and implement integrated management programs for camels and deer – AGREE

In recognition of the threats posed by camels and deer, the Government has developed relevant State policies. The development and implementation of plans to manage these animals will depend upon an assessment of the impacts imposed on biodiversity assets and the associated priorities that Natural Resource Management Plans and Regional Biodiversity Plans give to these issues.

<sup>25</sup> The National Mundulla Yellows Task Group.

## Biodiversity

### SoE 2003 Recommendation 5.3: Continue the Operation Bounceback and Ark on Eyre programs and use these as models for integrated pest management programs – AGREE

The Government will continue to support the successful ecological restoration program, *Operation Bounceback*. This program includes a range of long-term initiatives to control introduced plants and animals and over-abundant native species. The *Ark on Eyre* program, still in its early stages, provides a conceptual, over-arching framework for biodiversity conservation programs on the Eyre Peninsula. Support for this program will also be continued on the basis of achievement of milestones.

The approach these programs take to manage pest species, which strategically aligns management actions with conservation objectives, will be adopted by the Government for all other integrated pest management programs across the State.

The Government is undertaking a review of the *Operation Bounceback* program, including its strengths and potential weaknesses over the past ten years. Findings will be used to improve the program's effectiveness and to inform plans for expansion during 2004–2008.

### SoE 2003 Recommendation 5.4: Introduce measures to prevent the nursery industry from selling weeds – AGREE

The Government considers that measures to prevent the plant nursery industry from engaging in the sale of weed species will be most effective if introduced at the national level because the wholesale nursery industry operates nationally rather than locally. In South Australia, the sale of proclaimed weeds is prohibited under the *Animal and Plant Control Act 1986*, and this would continue under the *Natural Resources Management Act 2004*. The Animal and Plant Control Commission has circulated updated lists of proclaimed weeds and other potentially weedy plants that are not recommended for planting to all retail and wholesale nurseries in South Australia.

### SoE Recommendation 5.5: Increase research into the impact of introduced fish on marine and freshwater ecosystems – AGREE

The management of introduced marine pests is well supported by a national approach across all jurisdictions. An Intergovernmental Agreement is being developed through the Natural Resource Management Ministerial

Council to support national funding and governance arrangements for pest preparedness, monitoring and response.

#### Possible future directions

Greater focus could be given to increasing research capacity to assess the potential economic and environmental impacts of pest species in both the marine and freshwater environments.

### SoE 2003 Recommendation 5.6: Increase research to determine the extent of spread of mesquite – DISAGREE

Mesquite is a woody shrub that forms impenetrable thickets, smothering native vegetation and hindering pastoralism. A recent survey of the distribution of mesquite in the Rangelands, carried out by the Animal and Plant Control Commission, found no new significant infestations and also that some infestations previously believed to be mesquite were *Acacia farnesiana*, a native species. The existing policy on mesquite will be updated to reflect this new knowledge.

- A *Phytophthora cinnamomi* project officer with the Department for Environment and Heritage coordinates programs to minimise the risks posed by this pathogen
- *Operation Bounceback*, a highly successful ecological restoration program, includes long-term strategies to control introduced plants and animals in the Flinders Ranges
- *The Ark on Eyre program* provides a framework for biodiversity conservation and animal and plant control on the Eyre Peninsula

#### Native vegetation

The Government agrees with all the recommendations relating to native vegetation. It is essential that we maintain and enhance our remaining native vegetation to maximise the conservation of biodiversity. This is a major environmental priority for the Government.

### SoE 2003 Recommendation 5.7: Develop a long-term monitoring program to assess the condition of native vegetation – AGREE

The condition, or health, of native vegetation in the Rangelands is being assessed as part of the Government's Pastoral Lease Assessment Program.

## Biodiversity

This Assessment program covers 42% of the State and is being undertaken over a 14 year rolling period. The second round of assessments is due to commence in 2005.

Baseline monitoring over the remainder of the State has formed part of the SA Biological Survey. This survey is being undertaken over a longer cycle and will not be completed for some years. However, the survey of agricultural regions is near completion and approximately 1000 permanently pegged monitoring sites have been established in these regions.

### Possible future directions

In the agricultural regions, measures to assess the condition of native vegetation on Heritage Agreements have been developed, however scientific techniques to measure the condition of all major vegetation communities across the agricultural regions are yet to be developed. There is some work underway in the Upper South East as part of the *Upper South East Dryland Salinity and Flood Management Program*. To build on the work already underway, further work could be undertaken to develop scientifically repeatable measures for assessing vegetation condition across the entire State.

**SoE 2003 Recommendation 5.8: Incorporate NatureLinks principles into natural resource management planning processes. Maintain existing broadscale habitat restoration trials and initiate new trials – AGREE**

The principles of *NatureLinks*, which aims to restore habitat at the landscape scale, are being incorporated into the Metropolitan Adelaide and Inner Region Planning Strategies and into Development Plans and Local Government strategic plans. Discussions have taken place with most Natural Resource Management (NRM) Groups to incorporate *NatureLinks* principles into NRM plans and investment strategies.

The Government is committed to *NatureLinks* and will develop a long-term implementation strategy up to 2010. Three major habitat restoration programs have been identified for development and implementation over the next five years. These are: *East meets West* on Eyre Peninsula, *Cape Borda to Barossa* which extends from Kangaroo Island to the northern Mount Lofty Ranges, and *Operation Bounceback* in the Flinders Ranges. Two additional initiatives are currently under evaluation.

**SoE 2003 Recommendation 5.9: Continue to develop and improve Regional Biodiversity Plans to inform natural resource management planning – AGREE**

Regional Biodiversity Plans have now been completed for all agricultural regions and associated recommendations and targets are being incorporated into natural resource management (NRM) planning where appropriate.

**SoE 2003 Recommendation 5.10: Give higher priority to the development and implementation of management plans for Heritage Agreement areas. Place a greater emphasis on establishing Heritage Agreements in arid areas – AGREE**

Over 1300 landholders in the State have now entered into Heritage Agreements with the Government. The Heritage Agreement Grant Scheme provides up to \$3,500 to assist with the development of a Heritage Agreement Management Plan. On-ground support for the managers of Heritage Agreements is available through the regional network of Bush Management Advisers, which are funded through the *Natural Heritage Trust* (NHT). Encouragement for landholders to protect remnant native vegetation from further decline and to actively manage their native vegetation is a priority action in *South Australia's Strategic Plan*.

Changes have been made to the *Pastoral Land Management and Conservation Act 1989* to enable pastoral land to be used for non-pastoral pursuits, including biodiversity conservation. This allows the registration of Heritage Agreements and other management agreements, approved pursuant to the Native Vegetation Act, to be registered on a pastoral lease or a sub-lease.

**SoE 2003 Recommendation 5.11: Give higher priority to the development and implementation of management plans for National Parks and Wildlife Reserves – AGREE**

The Government agrees that a high priority needs to be given to the development of management plans for National Parks and Wildlife (NPW) reserves. The State of the Environment Report comments that of 282 NPW reserves required to have a management plan, 94 do not have a plan developed and adopted. In fact, there are 152 NPW Reserves that do not have a management plan and a number of the adopted plans are more than ten years old and require revision.

## Biodiversity

A review of the Reserve Management Planning System is being undertaken to identify measures to improve the efficiency of planning processes and provide criteria for prioritising the development of management plans. In addition, the content and style of management plans are being reviewed to ensure that the plans provide strategic directions for park management.

### SoE 2003 Recommendation 5.12: Progress the development of a firewood strategy to ensure a sustainable firewood industry – AGREE

The *Draft South Australian Action Plan for Firewood Collection and Use* was released for public comment in June 2002 and will be finalised by early 2005. The Strategy will address the impacts of firewood removal on habitat and biodiversity. At the national level, the Natural Resource Management Ministerial Council has endorsed the *Voluntary Code of Practice for Firewood Merchants* and an associated accreditation scheme, which will be implemented nationally.

Government will continue to promote sustainable firewood use through encouraging the use of plantation-grown timber and appropriate burning practices.

### SoE 2003 Recommendation 5.13: Increase efforts to develop strategies to manage fire and fuel loads in native vegetation – AGREE

On 23 May 2003, the Premier announced a \$10 million increase in the Department for Environment and Heritage's budget over the next four years to increase fire management activities in parks and reserves across the State. The Department has implemented a comprehensive program to upgrade fire management across lands under its control. The agency is working with the Country Fire Service to ensure its program supports recommendations arising from the Premier's Bushfire Summit held in May 2003.

- The *NatureLinks* initiative is a major commitment to broadscale habitat restoration in key areas of the state
- **Regional Biodiversity Plans** have now been completed for all major agricultural regions
- **The Reserve Management Planning system is being reviewed** to ensure a more strategic focus to the preparation of park management plans

- **Fire management actions in parks and reserves** will be increased following a \$10m injection of funding in 2003
- **The *Draft South Australian Action Plan for Firewood Collection and Use*** will be finalised by the end of 2004

### Threatened species

The Government agrees with the recommendations relating to threatened species. Large scale habitat restoration and a greater focus on recovery efforts at the most relevant scales are important strategies to make sure that species do not decline further. Further, a focus on activities that maintain existing habitats is essential – an issue not covered by the recommendation.

Additionally, the Government believes that the alignment of regulatory and planning frameworks with the State's ecological and development aspirations is an essential process to be undertaken if we are to achieve a greater level of protection for native plants and animals.

### SoE 2003 Recommendation 5.14: Make sure that biodiversity policy, programs and regulatory frameworks provide for major, large-scale habitat restoration in key regions – AGREE

The restoration of habitat on a broad scale is already a fundamental component of *NatureLinks* and a number of the Government's other biodiversity related initiatives. Major programs include *Operation Bounceback*<sup>26</sup>, the restoration of wetlands in the Upper South East through the re-instatement of environmental flows<sup>27</sup>; and the establishment of core protected areas in the Lower Lakes and Coorong as part of Ramsar<sup>28</sup> planning. Through the *Ark on Eyre* and *East Meets West* programs, threatened habitats on the Eyre Peninsula have been identified and targets will be established for the management of these areas between 2004–2008.

In the Metropolitan region, the Greater Mount Lofty Parklands (Yurrebilla) were established in 2004. Stage 2 of this project, planned for 2004–2008, involves habitat restoration and the development of targets for the reinstatement of critically threatened habitats, which will contribute to the *Cape Borda to Barossa NatureLinks* project. By 2014 the *Three Million Trees Program* will have revegetated large tracts of open space from Maslin Beach to Gawler.

<sup>26</sup> See the response to Recommendation 5.3

<sup>27</sup> As part of the *Upper South East Dryland Salinity and Flood Management Program*. See the response to Recommendations EPW2 and EPSL1.

<sup>28</sup> The Lower Lakes and Coorong are RAMSAR wetlands of international importance.

## Biodiversity/Human Settlements

### Possible future directions

While there are a few, geographically discrete initiatives that are restoring habitat on a large scale, further work and restoration trials across the State could be done. Issues of note include restoring important River Murray wetlands in line with environmental flow objectives; protecting and restoring arid wetlands in the far north and north-east; and establishing programs to protect and restore sensitive marine habitats<sup>29</sup>.

### SoE 2003 Recommendation 5.15: Give a higher priority to the recovery and management of species declining at the regional level – AGREE

With regard to the recovery of threatened species, there has been an increase in efforts over recent years due to short-term funding available through State and Commonwealth resources<sup>30</sup>. These efforts have been predominantly focussed on threatened species at risk of extinction in the wild rather than just in South Australia or one of its regions. The Government agrees that a higher priority needs to be given to the recovery and management of threatened and declining species, but efforts should be undertaken at whatever scale is relevant to achieve recovery.

The Government is developing a No Species Loss Strategy (by 2007), which will provide operational, policy and regulatory frameworks for threatened and declining species at the most appropriate scales. The No Species Loss Strategy forms a component of the overarching *NatureLinks* Strategy and related biodiversity initiatives.

- ➔ Efforts to recover threatened species have increased over recent years due to funding increases
- ➔ The Greater Mount Lofty Parklands project (Yurrebilla) will expand in 2004 to further restore critically threatened habitat
- ➔ By 2014 the *Three Million Trees Program* will see the revegetation of large tracts of open space between Maslin Beach and Gawler
- ➔ By 2007 the Government will have developed a **No Species Loss Policy**

<sup>29</sup> See the response to Recommendations 5.14. and EPSL1

<sup>30</sup> Through the Natural Heritage Trust and National Action Plan for Salinity and Water Quality.

## Human Settlements

6

Government's Response to the  
State of the Environment Report for South Australia 2003

### Energy

The Government agrees with all the recommendations relating to energy. The State of the Environment Report indicates that our energy consumption continues to increase and it is clear that greater efforts are needed to reduce our dependence upon fossil fuels.

In demonstrating the Government's commitment to move towards more sustainable energy use the Government is significantly progressing the *Government Energy Efficiency Action Plan*. It has also committed to the purchase of just over 6% of its electricity requirements from renewable (wind) resources. The Government is also promoting green development through the *Green City Program* and, more recently, in agreeing to rent 10 000 square metres of office space in the five star City Central Tower building that will meet an international benchmark for energy efficiency and environmental performance.

### SoE 2003 Recommendation 6.1: Develop and implement a Sustainable Energy Policy as a matter of priority – AGREE

The Government has established a Sustainable Energy Policy Task Force to progress the development of a draft Sustainable Energy Policy. Community consultation will form part of the process in developing the final policy. Amongst other things, the Sustainable Energy Policy will address strategies to achieve targets set in *South Australia's Strategic Plan*. These relate to reducing energy consumption in Government buildings, leading Australia in wind and solar power generation and to achieve the Kyoto target during the first commitment period (2008–2012).

### SoE 2003 Recommendation 6.2: Improve incentives for the production and use of renewable energy – AGREE

The South Australian Government is lobbying for an increase in the national Mandatory Renewable Energy Target (MRET), which currently requires that an additional 2% of Australia's electricity is generated from renewable sources by 2010.

## Human Settlements

In June 2003 the South Australian Government provided a whole-of-Government submission to the Federal Government's review of the *Renewable Energy (Electricity Act) 2000* (which established the MRET) supporting an increase of the MRET to 4.5 %. The Federal Government has refused to increase the MRET target. The development of a Sustainable Energy Policy for South Australia is likely to advocate further national support for renewable energy by the Federal Government.

*South Australia's Strategic Plan* has the following sustainable energy targets and priority actions of relevance:

- South Australia will lead Australia in wind and solar power generation within 10 years;
- The use of renewable electricity will be increased so that it comprises 15% of total electricity consumption within 10 years;
- The *Solar Schools Program* will be extended so that at least 250 schools have solar power within 10 years.

### SoE 2003 Recommendation 6.3: Monitor and report on progress towards achieving targets set in the Government Energy Efficiency Action Plan – AGREE

Government is a major user of energy. Consequently the reduction of energy use by the public sector is a major goal. The Government's *Energy Efficiency Action Plan* is the Government's key energy reduction strategy and is being implemented as one of the eight priority areas of the *Greening of Government Operations Framework*. The Government aims to reduce energy use in Government buildings by 15% before 2010 (from consumption levels in the base year 2000/01) as an interim target. *South Australia's Strategic Plan* sets a revised target of 25% reduction by 2014.

The Annual Report of the Government's *Energy Efficiency Action Plan* for 2002/03 has been completed and publicly released. It shows that energy consumption in Government fell by 2.4 % in 2002/03 from 2000/01 levels. It should be noted that this calculation does not include the energy used by SA Water, which is addressing energy efficiency and greenhouse gas abatement separately through the Federal Government Greenhouse Challenge program.

All agencies are required to report their energy use and progress towards meeting the target in their annual reports.

- A **Sustainable Energy Policy** will address targets and actions set in *South Australia's Strategic Plan*
- The **Government's Energy Efficiency Action Plan** is a significant initiative that aims to reduce energy use across the public sector
- The Government has committed to the purchase of just over 6% of its electricity from **wind farms**

### Population and urban form

The Government agrees with all of the recommendations relating to population and urban form. More sustainable living is a high priority for the Government. It will be a challenge to find new and effective ways to ensure that population and urban growth is sustainable and that urban planning integrates environmentally-friendly transport infrastructure to provide the community with easy and healthy access to services, recreation and employment.

### SoE 2003 Recommendation 6.4: Ensure that the Inner Region Planning Strategy places a high priority on addressing environmental impacts associated with increasing development in the Mount Lofty Ranges. Subject all major developments with the potential to cause environmental harm to a risk assessment before approval<sup>31</sup> – AGREE

In recognition of the importance of Adelaide's outer metropolitan regions a *Planning Strategy for the Inner Region* is being developed using the guiding principle of ecologically sustainable development. This will incorporate the Northern Adelaide Plains, Barossa, Mount Lofty Ranges and the Fleurieu Peninsula.

The Inner Region Planning Strategy will address specific environmental issues within the Mount Lofty Ranges Watershed; the requirement for development to place a high priority on the preservation of core biodiversity areas; support for the regionalisation of waste management facilities; and the development of strategies that integrate transport provision with land use.

The Inner Region Planning Strategy will also require Development Plans to place an increased emphasis on environmental risk and the cumulative impact of development, particularly in the Mount Lofty Ranges Watershed. See also the response to recommendation 4.8.

<sup>31</sup> See also the response to Recommendation 4.8

## Human Settlements

**Recommendation 6.5: Collect further information on the environmental, social and economic costs and benefits of enforcing the metropolitan urban containment boundary to inform future policy development – AGREE**

The Government agrees that further information is needed to evaluate the costs and benefits of enforcing the urban containment boundary. To some extent the social and economic costs and benefits of the boundary are explored through the *Metropolitan Development Program*<sup>32</sup>. This relates to the costs and benefits associated with physical and social infrastructure capacities and requirements.

**Possible future directions**

Further work could include a 'triple bottom line' evaluation of enforcing the urban containment boundary that considers in detail the financial, economic, social and environmental impacts.

**SoE 2003 Recommendation 6.6: Address sustainable development on a whole-of-State basis and have particular regard for the integration of natural resource management principles with regional planning and development policy – AGREE**

To make sure that sustainable development is addressed on a whole-of-State basis, the *Development Act 1993* is being amended to give the planning and development assessment system a greater focus on sustainable development. The draft *Development (Sustainable Development) Amendment Bill 2004* also promotes integration between development legislation and natural resource management legislation.

The *Natural Resources Management Act 2004* will also provide mechanisms to more effectively integrate planning and development policy with the management of natural resources.

**SoE 2003 Recommendation 6.7: Give priority to the development of policies that address the divergence between population growth and the demand for private dwellings and the implications of this for sustainability – AGREE**

The monitoring of demand characteristics and land supply in the *Metropolitan Development Program* (MDP), which tracks the changing demographic patterns throughout metropolitan Adelaide, will improve our

understanding of the changing nature of the population in Adelaide, as well as changing trends in housing needs. The anticipated annual release of the MDP will provide up-to-date information that will inform Government policy regarding the current divergence between population growth rates and the demand for private dwellings.

**SoE 2003 Recommendation 6.8: Provide an overarching framework for the Green City Program through the Metropolitan Planning Strategy – AGREE**

The *Green City Program* is driving a range of activities across the Adelaide CBD that will build our reputation as a clean and green city. The Government has, through the Capital City Committee, formally funded the *Green City Program* and is working in partnership with the Adelaide City Council to ensure its success as a high priority initiative.

The *Metropolitan Adelaide Planning Strategy* provides a framework for land use planning and development, incorporating whole-of-Government policy. It also supports the Adelaide City Council Development Plan. The *Metropolitan Adelaide Planning Strategy* is critical to development of the urban environment and therefore impacts on the implementation of the *Green City Program*. Collaborative and sustained partnerships between Government, industry and the community will be a key to the success of this program.

**SoE 2003 Recommendation 6.9: Give priority to determining the environmental impact of proposed changes to population policy and the implications for planning and development processes – AGREE**

The Government agrees that priority must be given to determining the environmental impact of population policy and actions to determine this are not yet fully in place.

The recently released *State Population Policy* addresses to some extent the issue of consumption rates and patterns as population increases. The *Metropolitan Development Program*, which monitors population growth in South Australia, considers the associated implications for development and planning processes, particularly in relation to future land supply and infrastructure issues. The Government is also

<sup>32</sup> The Metropolitan Development Program (MDP) is a mechanism by which information is provided to other government departments and agencies on the forecast growth of Adelaide. This information is essential in estimating the future demand for services and infrastructure.

## Human Settlements

developing a State Infrastructure Plan, as required by *South Australia's Strategic Plan*, which will consider population growth when assessing the State's infrastructure requirements.

- A *Planning Strategy for the Inner Region*, expected by 2005, will place a greater emphasis on environmental risk and the cumulative impact of development
- Amendments are being made to the *Development Act 1993* to provide a greater sustainability focus to the planning and development assessment system
- The *Green City Program* is driving sustainability initiatives and actions across the city

### Transport

The Government agrees with all the recommendations relating to Transport. As part of its commitment to changing travel behaviour, the Government is developing ways to encourage more sustainable forms of transport, while also providing easier access to employment, leisure and education opportunities.

South Australia's intended Plan for Land Use and Transport is expected to provide, when implemented, a guiding framework for transport decisions over the next 15 years. The Plan addresses all of the transport issues raised in the State of the Environment Report, and the target outlined in *South Australia's Strategic Plan* that aims to increase public transport use to 10% of weekday travel by 2018.

**SoE Recommendation 6.10: Take an integrated approach to the development of transport policies and programs that consider land use and urban form. Ensure new residential developments incorporate integrated transport networks that meet community needs – AGREE**

The Government is committed to achieving the aims of the *National Charter of Integrated Land Use and Transport Planning* and is revising the *Planning Strategy for South Australia* to better meet the needs of walkers, cyclists and public transport. The role of roads is also to be considered in parallel with urban planning and addressed when considering new developments.

A Triple Bottom Line (TBL) approach to the assessment of capital investments in transport has been adopted

to ensure that an integrated approach to economic, social and environmental considerations is part of the infrastructure assessment process. See also the response to Recommendation 6.11.

The Government will also consider a strategy for the future development of dedicated public transport corridors across the metropolitan area taking into account land use development, infrastructure and services.

**SoE 2003 Recommendation 6.11: Focus on developing strategies and incentives that encourage public transport use, walking and cycling – AGREE**

The Government has a number of ongoing programs that encourage a cultural change away from a car-dependent society to one that uses more sustainable forms of transport. These programs include *TravelSmart SA*, *Bike Ed*, *Safe Routes to School* and *WalkingSchoolBus*.

An Office of Cycling and Walking<sup>33</sup> has also been established and is continuing the development of cycling and walking networks and the promotion of these activities through a variety of programs. The Office will have developed the State's first Walking Strategy by the end of 2005.

The Government further proposes a Transitways Master Plan in 2005 that will investigate ways to increase the efficiency of public transport and encourage improved car occupancy.

**SoE 2003 Recommendation 6.12: Develop and implement policies that reduce the age and improve the fuel efficiency and emissions performance of the State's vehicle stock. Investigate the feasibility of the greater uptake of electric and fuel cell vehicles to reduce transport emissions – AGREE**

The Government has made a commitment to achieve the goals set out in the *Integrated National Strategy for Lowering Emissions from Urban Traffic* and, in conjunction with the National Transport Commission, is ensuring that vehicle standards are upgraded to reflect best-practice international standards.

Programs will be developed to reduce the number of smoky vehicles by encouraging improved driver behaviour and regular engine tuning.

<sup>33</sup> This replaces its predecessor Bike South.

## Human Settlements

The Government proposes to establish a carbon-neutral public transport network<sup>34</sup> by 2019. A bio-diesel bus trial is currently being undertaken to gauge the efficiency and environmental benefits of this alternative fuel.

**SoE Recommendation 6.13: Develop and implement policies that encourage the greater use of rail and sea freight transport over road freight transport, and that assist freight transport operators to adopt greener technologies – AGREE**

The Government will work on an ongoing basis with rail track owners, port owners and freight operators to identify and assess measures that can be taken to encourage the greater use of rail and sea transport.

A Heavy Vehicle Access Framework is being developed that will improve links with other modes of transport and take into consideration surrounding land uses to ensure that industrial development occurs in designated regions that are close to major freight routes.

The Government has made a commitment to work with the private sector in 2004/05 to deepen the Outer Harbor channel to accommodate larger container ships and facilitate sea freight movements.

**SoE 2003 Recommendation 6.14: Develop and implement policies and programs that protect nearby communities from unacceptable noise and air emissions – AGREE**

To ensure adequate protection for communities from the impacts associated with traffic flows, it is essential to integrate transport planning with land use planning so that buffer zones or other measures can be introduced to minimise the impacts.

The Government has commenced the development of a Transport Noise Policy Framework, which addresses the impacts of transport noise on the community. The Framework covers issues such as reducing noise generation from vehicles, shielding adjacent development, and ensuring that sensitive land uses are adequately protected from traffic noise through planning provisions. This will be prepared during 2004/05.

Implementation of the Heavy Vehicle Access Framework (see the response to Recommendation 6.13) will encourage the movement of road freight away from residential areas.

Additionally, the Government proposes to introduce initiatives that will more strictly enforce and progressively tighten current regulations on smoky freight vehicles, and ensure owner maintenance of freight vehicles to improve their engine efficiency and reduce emissions.

- The State will have its first **Walking Strategy** by the end of 2005
- A **Heavy Vehicle Access Framework** will be developed to improve transport links and reduce impacts on residential areas
- The Government aims to achieve a **carbon-neutral public transport network** by 2019
- A **Transport Noise Policy framework** is being developed to minimise noise impacts on communities

### Waste

The Government agrees with all of the recommendations relating to Waste. South Australians continue to send most of their waste to landfill – an expensive approach when around 70% of this waste could be reused or recycled. To ensure a strategic focus, the Government has established Zero Waste SA to investigate better ways to minimise or avoid waste. Reducing waste to landfill by 25% within 10 years is a target set in *South Australia's Strategic Plan*.

**SoE 2003 Recommendation 6.15: Develop as a priority a Waste Management Strategy for South Australia covering liquid and solid waste – AGREE**

Zero Waste SA is developing a State Waste Strategy as required by the *Zero Waste Act 2004* that was proclaimed in May 2004. The State Waste Strategy is required to be developed within twelve months of proclamation of the Act and is currently out for consultation. The implementation of actions from the State Waste Strategy is a priority action in *South Australia's Strategic Plan*.

<sup>34</sup> Around 28% of Adelaide's metropolitan bus fleet is currently powered by Compressed Natural Gas – the highest rate in the nation.

## Human Settlements

### **SoE 2003 Recommendation 6.16: Implement kerbside recycling practices standards in accordance with recommendations from the Kerbside Waste and Recycling Audit<sup>35</sup> – AGREE**

Zero Waste's *Best Practice Kerbside Recycling Program* provides a financial incentive to councils to provide efficient kerbside recycling services. Total funding for the *Best Practice Kerbside Recycling Program* is \$1.8 million and is funded 50% by industry. This is made possible through the National Packaging Covenant's Industry Transitional Funding Arrangements.

The Zero Waste SA Business Plan proposes the implementation of programs and activities in 2004/05 and 2005/06 aimed at encouraging adoption by Local Government of best-practice kerbside recycling standards.

### **SoE 2003 Recommendation 6.17: Formulate a waste management program for State Government operations within the broader framework of sustainability and Greening of Government – AGREE**

Waste management is one of the Priority Areas of the *Greening of Government Operations Framework* (GoGO) that was launched in October 2003. By July 2005, the Government expects that GoGO projects will improve the sustainability and eco-efficiency of Government operations, including waste management.

Zero Waste SA is developing the GoGO waste management guidelines for agencies.

### **SoE 2003 Recommendation 6.18: Develop programs to increase the awareness and uptake of eco-efficiency practices by industry – AGREE**

The improvement of industry efficiency and viability in the medium to long-term are crucial issues for South Australia. The Environment Protection Authority recognises that it must be pro-active and provide increased direction and support to industry and business in this regard.

A number of programs run by the Environment Protection Authority address industry sustainability – these must be built upon. These include the ongoing *Small Business Eco-efficiency Training Program* and the *Greening the Supply Chain Program* that is currently funded up to June 2004.

Business SA, on behalf of the Environment Protection Authority, has developed and implemented the *Environmental Improvers Project*. This will give recognition to small to medium-sized businesses that have implemented environmental management systems that meet specified criteria of ISO 14001.

### **SoE 2003 Recommendation 6.19: Consider increasing the level of deposit and range of items eligible for Container Deposit Legislation – AGREE**

The value of beverage containers refundable at collection depots has varied little since the introduction of the original *Beverage Container Act 1975*. The Environment Protection Authority will seek tenders to examine whether the existing refund amount is appropriate or whether consideration should be given to increasing it. This work is expected to be complete by mid-2005.

Following a review in January 2003 South Australia's Container Deposit Legislation (CDL) now captures a broader range of beverage containers, including flavoured milk and fruit juice containers<sup>36</sup> and non-carbonated soft drink containers<sup>37</sup>.

There are no immediate proposals to extend CDL to containers other than beverage containers. However, the Minister for Environment and Conservation has publicly indicated that a deposit scheme applied to other container types is a long-term direction for the scheme.

### **SoE 2003 Recommendation 6.20: Place a greater priority on the minimisation of waste from the construction and demolition sector including improvements in infrastructure to support recycling and reuse – AGREE**

There are currently no programs that address this issue comprehensively. The Zero Waste SA Business Plan includes the development of infrastructure support for the recycling industry.

To minimise the impacts associated with the planning, design and delivery of new or refurbished Government buildings and their sites, guidelines issued by the Public Works Committee stipulate that any public works must minimise construction and refurbishment waste going to landfill.

<sup>35</sup> These recommendations are: to achieve a minimum recycling yield of 2.5 kilograms per household per week; that limit the maximum weekly waste bin capacity to 140 litres; and that provide for bin-based green waste collection in metropolitan areas [Survey and audit of kerbside waste and recycling practices and recommended kerbside service standards. Consultancy report prepared for the Environment Protection Authority by NOLAN-ITU Pty Ltd (2002)].

<sup>36</sup> With a capacity of less than one litre.

<sup>37</sup> Up to and including three litres.

## Human Settlements

### Possible future directions

A Waste Management Code of Practice for the building and demolition industry with emphasis on waste avoidance, reduction, recycling and reuse could be investigated in association with the proposed Environment Protection Policy for Waste currently being prepared by the Environment Protection Authority.

Strategies targeting the end-users of recycled construction and demolition materials could also be investigated.

### SoE 2003 Recommendation 6.21: Significantly improve household hazardous waste collection services. Manage and regulate industrial hazardous wastes in accordance with international best practice – AGREE

Zero Waste SA has commenced a *Household Hazardous Waste Collection Program* to provide a safe and accessible service for the collection, treatment and disposal of household hazardous waste. The Program covers rural and regional South Australia as well as the metropolitan area. Funding has been approved for 2004/05 and 2005/06. The Program commenced in March 2004.

South Australia has established and implemented effective industrial hazardous waste management systems.

### SoE 2003 Recommendation 6.22: Use the findings of the Radioactive Materials Waste Audit<sup>38</sup> to improve South Australia's radioactive waste management – AGREE

The Government has tabled the *Audit of Radioactive Materials in South Australia* (EPA, 2003) in Parliament. The Environment Protection Authority will be responsible for the development and monitoring of an implementation plan for the recommendations.

The Environment Protection Authority will also undertake a feasibility study for the safe handling, packaging and interim storage of radioactive waste pending the establishment of appropriate facilities for long-term management. This is expected to be complete by July 2005.

### SoE 2003 Recommendation 6.23: Support technological developments and strategies to advance on-site remediation of contaminated soils – AGREE

This recommendation will be applicable to a limited number of low-level contaminated sites and for a limited range of chemical substances occurring on such sites. The Government considers that a holistic approach to site remediation must be taken, which supports the *National Environment Protection (Assessment of Site Contamination) Measure* for the remediation of sites, and provides for the greater reuse and recycling of materials removed from contaminated sites.

The Government has allocated \$5 million over 4 years to address site contamination, most of which has been allocated to the Environment Protection Authority, with some of it going to the Department of Health.

A Site Contamination Legislative Package is being developed by the Environment Protection Authority, which includes strategies to advance technological developments for the on-site remediation of contaminated soils and groundwater. A draft Site Contamination Bill to amend the *Environment Protection Act 1993* has been prepared to provide for more effective management of site contamination issues. This will be released for public consultation towards the end of 2004/early 2005.

- The *Zero Waste Act 2004* will ensure the development of strategies to eliminate the disposal of solid waste to landfill
- A *State Waste Strategy* will be developed by mid 2005
- The *Greening of Government Operations Framework* will improve significantly Government's waste management operations
- Zero Waste SA has commenced a *Household Hazardous Waste Collection Program* across metropolitan and regional areas
- A *draft Site Contamination Bill* has been developed to provide for a more advanced technological approach to the management of contaminated land

<sup>38</sup> Environment Protection Authority (2003). *Audit of Radioactive Materials in South Australia*. EPA, Adelaide, September 2003.

## Human Settlements

### Water consumption in urban settlements

The Government agrees with the recommendations relating to water consumption in urban settlements. The sustainable use of water resources is one of the most significant issues that confronts us and innovative solutions will be required to ensure safe and reliable water supplies into the future.

See also the response to recommendations for Water use.

**SoE 2003 Recommendation 6.24: Give consideration to the regulation of best-practice water conservation principles<sup>39</sup> and implement policies to encourage reuse on a larger scale through:**

- improved urban and water supply planning;
- a review of water-pricing structures;
- the future replacement of infrastructure that encourages reuse;
- the development of reuse targets;
- the incorporation of water sensitive design principles into the Building Code; and
- better coordinated education and advice – AGREE

Since October 2003 a base level of permanent water conservation measures has been applied to all SA Water supplies across the State. The measures and associated public education campaign have contributed to water savings in 2003/04 of over 14%<sup>40</sup> on the previous year. An extension of water conservation measures to cover other water resources in the State, not just SA Water supplies, is currently being considered. This action will assist the State to adjust to a future with reduced water supplies, projected as a consequence of climate change.

The Government has released the *draft Water Proofing Adelaide Strategy* which proposes a blueprint to provide Adelaide with a reliable mains water supply beyond 2025. The Strategy considers a range of approaches such as those listed in the recommendation to improve Adelaide's water conservation and reuse performance.

One of the three major objectives of the revised *Planning Strategy for Metropolitan Adelaide* is the integration of water use and land use planning using a

whole-of-water cycle approach. This includes designing development for the efficient and integrated storage, treatment, use and disposal of rainwater, stormwater and wastewater. Outcomes of the *Water Proofing Adelaide* project will be integrated with SA Water's existing long-term infrastructure planning for water and wastewater services.

**SoE 2003 Recommendation 6.25: Adopt a coordinated approach to water management through the integration of water management authorities – AGREE**

The Government supports the aim of this recommendation, which seeks a more coordinated approach to water management, planning and policy development. A complex system of management and authorisation processes for water cycle management exists in South Australia and a more coordinated approach to water management will streamline processes and approvals.

Opportunities for improved integration exist in the areas of stormwater harvesting, sewer mining, capturing localised market opportunities and linking flood protection to alternative supply schemes. State and Local Government are currently considering the most appropriate institutional arrangements for stormwater management.

However, there is no intent to physically re-integrate regulatory authorities such as the Department of Water, Land and Biodiversity Conservation and the Department for Environment and Heritage with SA Water.

- An extension of water conservation measures to cover some other water resources, not just SA Water supplies, is proposed
- The *Water Proofing Adelaide* project will provide a twenty-year plan for more sustainable water use in Adelaide and surrounding areas

<sup>39</sup> These are: avoid, reduce, recycle, appropriate disposal and adaptive management.

<sup>40</sup> Calculated using the most recently available data for the period July 2003 to April 2004.

# Heritage

## 7 Heritage Government's Response to the State of the Environment Report for South Australia 2003

*The Government agrees with all the recommendations relating to the protection and conservation of built and Aboriginal heritage. The documentation and maintenance of heritage is crucial to ensure that our links with the past and its traditions are preserved.*

### **SoE 2003 Recommendation 7.1: Develop a systematic program for the monitoring and maintenance of State Heritage buildings – AGREE**

A systematic program of monitoring State heritage buildings is proposed in *Heritage Directions*, which provides a framework for addressing built Heritage issues over the next five years (see the response to Recommendation 7.4). Through the *Historic Buildings Conservation Program* the Government is currently conducting an audit of the more than 300 places in the State Heritage Register that are Government-owned (almost 2,200 are registered in total).

### **SoE 2003 Recommendation 7.2: Develop a program for the identification, prioritisation and conservation of Aboriginal heritage sites and objects – AGREE**

The Department for Aboriginal Affairs and Reconciliation has a continuing program to protect and preserve as practicable sites entered into the Register of Aboriginal sites and objects. Opportunities will be taken to improve administration of the Act in the context of other South Australian legislation and to increase linkages with other agencies that have lead responsibility for planning, development and heritage activities.

The Department of Human Services has indicated the lack of reference to contemporary Aboriginal culture in the *State of the Environment Report for South Australia 2003*, including acknowledgement of the important links that Aboriginal communities have with the environment. This issue will be considered for inclusion in the next State of the Environment Report for South Australia, due to be released by the EPA in 2008.

### **SoE 2003 Recommendation 7.3: Establish a framework to assist Local Government manage effectively places of heritage value – AGREE**

A commitment of *Heritage Directions* is that the Government will work with local councils to make sure that the best possible decisions are made in relation to the conservation of local and State heritage. *Heritage Directions* aims to confer on Local Government a much greater level of responsibility and control to deal with local heritage, involving strong policy, program and funding support by State Government. The Government will make amendments to the *Development Act 1993* and the *Heritage Act 1993* to introduce these reforms.

### **SoE 2003 Recommendation 7.4: Finalise Heritage Directions and set implementation targets – AGREE**

In recognition of the importance of South Australia's built heritage, the Government released in August 2003 a document entitled *Heritage Directions: A Future for Built Heritage in South Australia*. The document provides a framework for addressing the identification, management, protection and promotion of built heritage in South Australia over the next five to ten years. This comprised the first comprehensive review of the State's built heritage since the 1970s.

The Government has now developed an Implementation Strategy, which will include making amendments to the *Heritage Act 1993* and the *Development Act 1993* to achieve better support for built heritage protection in South Australia. Implementation of *Heritage Directions* will commence in 2004/05. The Government has provided \$2.9 million over four years commencing in 2004/05 to support these developments.

### **SoE 2003 Recommendation 7.5: Give greater consideration to cultural landscape values in the development assessment process – AGREE**

The Government is currently engaged in a number of initiatives that will see a greater consideration of cultural landscape values in the development assessment process. The *Better Development Plans Program* aims to enhance and improve Development Plans so that they forge stronger links with the *Planning Strategy for South Australia*. One of the major changes will be to promote statements of character as a means of informing policy development.

## Heritage

The State Government's response to the *Hills Face Zone Review* (the *Hills Face Zone Review Implementation Strategy* Feb 2004) undertaken during 2003 provides a strategic, policy and management framework to support the Government's approach to the protection and preservation of the Hills Face Zone and the biodiversity of the Adelaide Hills. The Strategy focuses on clarifying the role of the Zone, providing a stronger and clearer policy framework to manage development and the impact on cultural heritage values more effectively, cooperating on better land management approaches across the Zone, and allocating and using resources more effectively.

- **Heritage Directions** provides a framework for addressing built heritage issues over the next five years
- The *Hills Face Zone Review Implementation Strategy* (2004) provides a strong policy and management framework to support the Government's approach to the protection and preservation of the Hills Face Zone
- The *Better Development Plans Program* will place a greater emphasis on the protection of cultural landscapes