



EXECUTIVE SUMMARY

Introduction

This is the fifth State of the Environment Report for South Australia, the first was published in 1988. Progressive reports have documented continually declining trends for many indicators of environmental health, in spite of government acceptance and positive response of the recommendations. This report continues that history.

This report identifies key trends for seven environmental themes and calls for action in relation to each of them. The themes are:

1. Atmosphere
2. Inland Waters
3. Coasts and the Seas
4. Land

5. Biodiversity
6. Human Settlements
7. Heritage

The 41 recommendations for action covering the themes are summarised in the next section *Key Findings*. Specific recommendations in relation to environmental governance, including the role of the South Australia Strategic Plan, are included later in this section.

South Australians have a proud history of working together to improve their environment and to build resilience in a changing world. This experience will be invaluable in meeting the challenges identified in this report of protecting the state's natural heritage for future generations in the face of climate change, natural resource depletion and pollution.

Drawing on the growing body of research and evidence, the report identifies the environmental challenges facing South Australians and the actions needed to address them. It emphasises the important relationship between a healthy environment, human wellbeing and economic prosperity and the need for government, business and the community to urgently consider the impacts of their decisions and actions on each of these pillars of a sustainable society.

As a Priority it is Recommended that Government:

- Improve incentives and support for environmental stewardship on private land, including for the control of invasive plants and feral animals by 2012. (Recommendation 5.5).

South Australia continues to have a strong reliance on the River Murray, which supplies almost half of the total water used in the state. In recent years the Murray-Darling Basin has been subject to the impacts of a combination of an extended drought and increased demand to supplement irrigation. This has resulted in declining health of the rivers, streams, lakes and wetlands in the River Murray floodplain. A significant shift in the management of available water resources is needed to set South Australia's water future on a more secure and sustainable path. While there has also been a marked increase in re-use of stormwater and wastewater over the reporting period, there remains a significant opportunity for a more systematic approach to the efficient use of available water resources.

As a Priority it is Recommended that Government:

- Double the capture and re-use of stormwater and wastewater by 2012 (Recommendation 2.3).
- Use a combination of water allocation planning, pricing, incentives and water rights to ensure sustainable water use by 2012 (Recommendation 2.4).

Since publication of the 2003 report, climate change has become a major focus in public discourse and policy development. Scientific research has provided increased certainty about the likely impacts of climate change, resulting in significant actions to reduce greenhouse gas emissions to mitigate impacts and to adapt to the unavoidable predicted impacts. It is important that South Australia remains at the forefront by increasing renewable energy sources and efficient energy use, and to build upon the resilience of communities to adapt to the impacts of climate change.

As a Priority it is Recommended that Government:

- Develop adaptation strategies based on assessed vulnerability and opportunities under different climate change and population scenarios for:
 - o human health
 - o water security
 - o biodiversity and natural resources
 - o asset protection, infrastructure and emergency services, especially in relation to fire and sea level rise (Recommendation 1.2).
- Promote public discussion and understanding of the possible consequences of climate change, with an emphasis on what South Australians can do to reduce their emissions and adapt to climate change (Recommendation 1.3).

A significant development since the 2003 report has been the introduction of the *South Australia Strategic Plan (SASP) in 2004* (revised 2007), which sets a number of environmental targets under the objective of 'Attaining Sustainability', including to reduce the state's ecological footprint. It also has targets to reduce waste, manage water resources within sustainable limits, increase environmental flows in the River Murray, lose no species, and become more energy efficient.

The 2007 update of SASP acknowledges the need to consider the interactions between targets and provides examples of key interactions, including:

1. Economic growth (T1.1) and greenhouse gas emissions (T3.5)
2. Economic growth (T1.1) and ecological footprint (T3.7)
3. Exports (T1.14) and sustainable water supply (T3.9)
4. Population (T1.22) and greenhouse gas emissions (T3.5)
5. Investment in science, research and innovation (T4.9, T4.10, T4.11) and greenhouse gas emissions (T3.5)

While some measures have been undertaken to draw out those interactions and develop more holistic policy responses, more can still be done.

A recurring theme in the report is the need for greater coordination and integration of environmental

As a Priority it is Recommended that Government:

- Include environmental representation in strategic planning and decision making within government to ensure explicit consideration of interactions between economic, social, and environmental objectives within policies and plans. (Recommendation Exec 1)
- Develop and use measures of greenhouse gas intensity as a means to evaluate the sustainability of government policies by 2012 (Recommendation 1.5).
- Include complementary indicators to those already in the SASP to assess the interactions between targets and progress across economic, social and environmental targets, for example environmental impacts in measuring growth, by 2012 (Recommendation 6.1).

management. Good progress has been made through regionalising the SASP, establishing common regional boundaries for all government agencies, increasing integration of land use planning (Planning Strategy), implementing more coordinated natural resources management (state and regional NRM Plans) and introducing marine planning (Marine Planning Framework).

There are remaining opportunities for greater efficiency through improved coordination of environmental monitoring, research, and reporting. There is also an urgent need for information management that would deliver better data for future environmental reporting requirements.

As a Priority it is Recommended that Government:

- Introduces an annual reporting requirement to monitor progress against the recommendations made in this report by 2010. This could be integrated with reporting under the SASP (Recommendation Exec 2).

State of the Environment Reporting in South Australia (2008)

'State of the Environment (SoE) reporting began in the United Nations Environment Programme (UNEP) in the 1980s and is now an internationally accepted approach to assessing environmental performance and the condition and trend of natural capital.'

State of the Environment Reporting

Background

State of the Environment (SoE) reporting began in the United Nations Environment Programme (UNEP) in the 1980s and is now an internationally accepted approach to assessing environmental performance and the condition and trend of natural capital. SoE reporting is conducted by all Australian States and Territories, with the exception of the Northern Territory, and is also undertaken at the national level by the Australian Government. Local governments also participate in SoE reporting; in New South Wales annual SoE reporting is a legislative requirement. Although there is no formal requirement in South Australia for local government SoE reporting, a number of councils produce reports.

SoE reports are based on scientific data and provide a key diagnostic tool to assess the condition of the environment, identify trends over time, quantify pressures influencing these trends, and identify emerging environmental issues. These reports also assess the effectiveness of government policy interventions and programs to protect, enhance and conserve the environment, and make recommendations for action.

The first comprehensive South Australian SoE report was published in 1988 – the first in Australia. Since that time, reports have been produced for South Australia on a five-yearly basis.

During the preparation of the 1993 South Australian SoE report, the state's *Environment Protection Act 1993* was amended to incorporate more comprehensive reporting requirements. Section 112 of the Act very broadly defines the core requirements of the report as follows:

- include an assessment of the condition of the major environmental resources of South Australia;
- include a specific assessment of the state of the River Murray, especially taking into account the 'Objectives for a Healthy River Murray' under the *River Murray Act 2003*;

- identify significant trends in environmental quality based on an analysis of indicators of environmental quality;
- review significant programmes, activities and achievements of public authorities relating to the protection, restoration or enhancement of the environment;
- review the progress made towards achieving the objects of the Act; and
- identify any significant issues and make any recommendations that, in the opinion of the Authority, should be drawn to the attention of the Minister

South Australian SoE reports are delivered by the Environment Protection Authority (EPA), an independent statutory body. The report provides independent recommendations for action to government.

The requirement to provide a specific assessment of the River Murray has been introduced since the 2003 report. Accordingly this report provides the second assessment of the health of the River Murray.

Reporting Framework

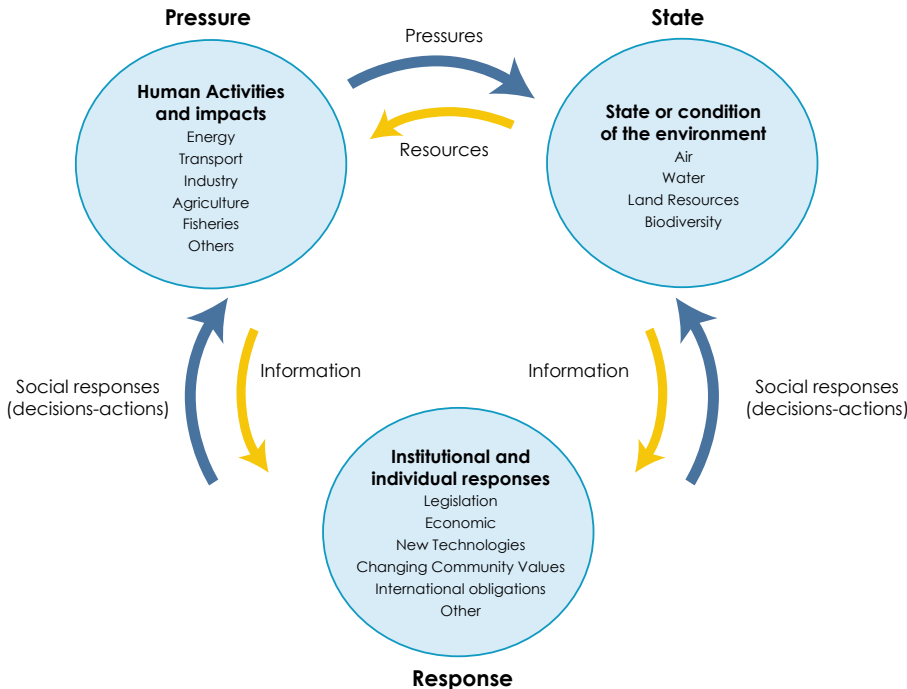
This report maintains the structure set by previous South Australian SoE reports in that it is centred on seven major environmental themes: Atmosphere, Inland Waters, Coasts and the Sea, Land, Biodiversity, Human Settlements and Heritage. While this thematic classification provides a convenient basis for reporting, environmental themes are often interconnected and there is a degree of cross referencing between chapters.

As in the 2003 South Australian SoE report, the pressure-state-response model developed by the Organisation for Economic Development (OECD) forms the basis for reporting (Figure 1). The model is also used in other jurisdictional SoE reports.

Environmental Indicators

Since the 1993 South Australian SoE report, environmental indicators that support quantitative reporting,

Figure 1 The OECD model reflects the causal relationship between human activity, the pressures it places on the environment, and the actions that are taken in response to these pressures.



Student taking part in National Tree Day event, 2007

Source: Adelaide City Council

as opposed to qualitative, have been developed. This reduces the subjectiveness of reports, enabling more informed and accurate decision making and policy development. The majority of indicators were used for the first time in the 1998 SoE Report, and again in the 2003 SoE Report, and have been carried forward in this report to enable consistent monitoring of progress over time.

The availability of consistent and complete data is essential to effectively report against these indicators. Coordination and standardisation of data collection and management is essential for long-term accurate reporting. This is currently not the case at either state or national level.

A Collaborative Effort

This report is the result of a whole-of-government process overseen by the SoE Executive Steering Committee, whose members represent different levels of government, academia and the private sector, and whose experience reflects a wide range of knowledge across SoE topics. The Steering Committee is a committee of the EPA Board, which is ultimately responsible for delivery of the

report and whose members have actively participated in the development of the report.

To ensure the integrity of the information presented, the report has been subjected to a rigorous independent review process. Its contents have been scrutinised by experts across the various disciplines covered in the report, and also reviewed by the Steering Committee and the EPA Board.

Where to from Here?

One of the key elements of SoE reporting is the provision of independent recommendations to government on priorities for future action. This year's report provides more than 30 recommendations calling for action. Under section 112 of the *Environment Protection Act 1993*, the Government is required to provide a formal response to the recommendations within a reasonable time of receiving the report. It also provides an opportunity for government to provide information on how it intends to deal with the identified issues.