

STATE of SOUTH AUSTRALIA

Trends and Issues 2006 Update

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STATE OF THE ENVIRONMENT Andrew Lothian

Introduction

The Strategic Plan's Objective 3, Achieving Sustainability comprises the core environmental objective with eight targets.

Update of Key Trends

The target and progress is summarised from the Government's review, and a commentary is provided.

River Murray

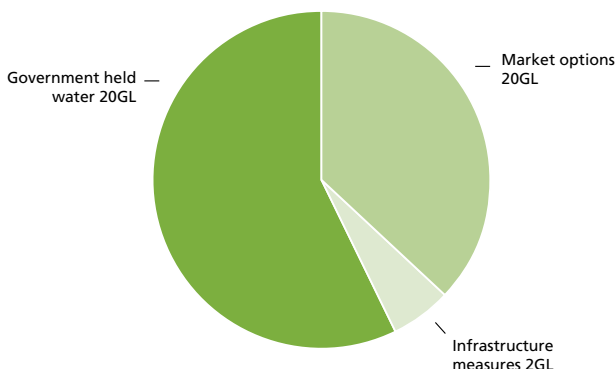
Target

Increase environmental flows by 500 GL in the Murray Darling and major tributaries by 2008; achieve 1500 GL by 2018.

Progress: little/no/negative movement

Agreements signed with other States which will recover 240 GL over 5 years. South Australian proposed contribution is 35 GL. Target date proposed to change to 2009.

Potential Water Recovery Measures under the SA Water Recovery Package (35GL)



Comment: Progress on paper only, no additional water yet in the River.

Energy Consumption - Government

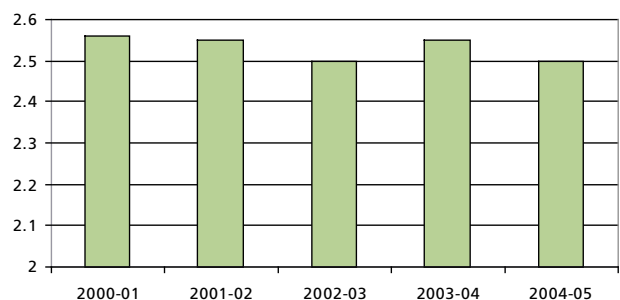
Target

Reduce energy consumption in Government buildings by 25% within 10 years.

Progress: progress, but unlikely to be achieved

Energy use decreased from 2.57 PJ in 2000/01 to 2.50 PJ; 3.1% reduction over 5 years. This needs to be 7% to achieve the target. Target date proposed to change to 2014.

Energy use in Government buildings



Comment: Progress assessed on basis of two years but energy use has varied over the five years. In 5 years, energy use is likely to be nearly 0.45 PJ over target.

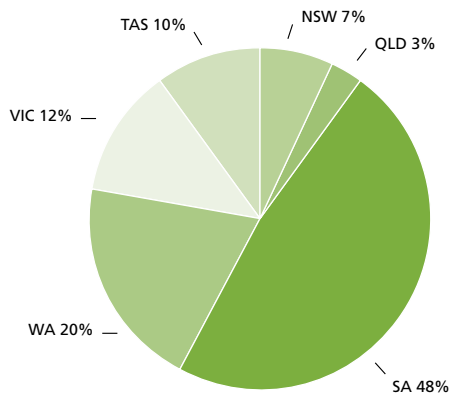
Target

Lead Australia in wind and solar power generation within 10 years.

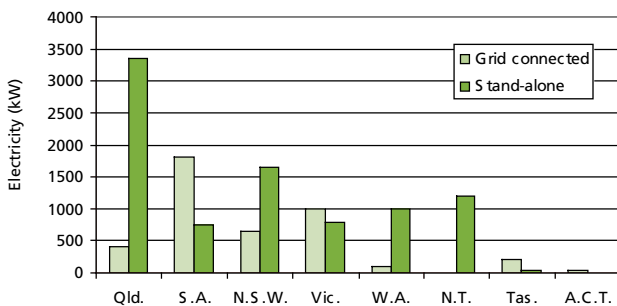
Progress: On Track

South Australia leads Australia with 318 MW installed wind capacity and nearly 2000 kW in grid connected photovoltaic systems. Propose to add geothermal energy.

Installed wind capacity, Nov 2005



Photovoltaic Installed Systems, Nov 2005



Comment: Major success in commissioning renewables.

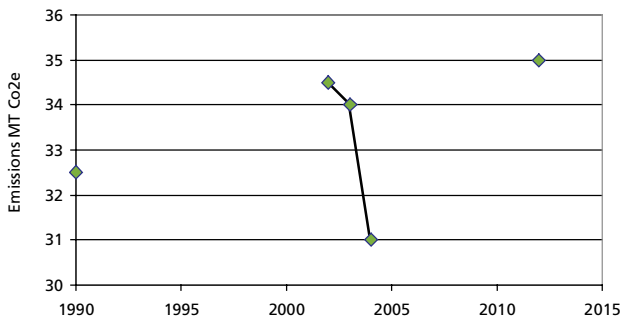
Target

Greenhouse emissions: Achieve the Kyoto target by 2008 – 12

Progress: On Track

Emissions have reduced from 34 MT in 2003 to 31 Mt in 2004 but are likely to increase to 35 MT by 2012. Emissions likely to grow beyond 2012.

SA's Greenhouse Gas Emissions, projections to 2012



Comment: While it appears to be on track, major economic development could result in an increase in emissions before the first commitment period (2008-12) has ended.

Target

Land biodiversity: Have five well established biodiversity corridors linking public and private lands across the state by 2010.

Progress: On Track

Three corridors have been identified: East West (Eyre Pen. to WA), Flinders – Olary Ridge, and Cape Borda – Barossa. Planning for further two underway: arid lands and River Murray – Coorong. Recognised need to maximise ecological outcomes in face of climate change.

Comment: The objective is connected habitats across the State, comprising a comprehensive system of core protected areas, buffered and linked by lands managed for conservation objectives. This provides an integrated approach to conservation management in South Australia.

Target

Marine Diversity: Create 19 Marine Protected Areas (MPA) by 2010.

Progress: On Track

MPAs include sanctuaries, aquatic reserves, historic shipwrecks and marine parks. Community consultation is underway. Pilot marine park "Encounter" issued. Plan to define 18 remaining areas during 2007. These will be dedicated under proposed marine parks legislation – draft Bill to be released.

Comment: The mid 1990s saw a massive expansion of South Australia's marine protected areas, expanding to over 250,000 ha. Achievement of the target will involve further expansion of the MPAs.

Target

Native vegetation clearance – offset any clearance of native vegetation by significant biodiversity benefit by 2005.

Progress: Achieved

Currently at or better than target level. Broad acre clearance halted except under regulated conditions Heritage Agreements area – up 12% from 1998 to 2005. Area of national parks & wildlife reserves – up 1.6% from 1998 to 2005. Revegetation activity – stable, no change since 1998.

Comment: South Australia has led Australia in ending broadacre vegetation clearance. Clearance of scattered and isolated trees for primary production purposes however is continuing.

Target

Native vegetation - Integration: Integrate native vegetation/ biodiversity management in South Australia's eight Natural Resource Management regional plans by 2010.

Progress: On Track

Following passage of the NRM Act in 2004, the State NRM Plan was released in Feb 2006. This provides a framework for the eight regional NRM plans. These are now being developed, to be completed by 2009.

Comment: It is too early to assess the effectiveness of the NRM Act, the new State and Regional NRM Boards, and the plans.

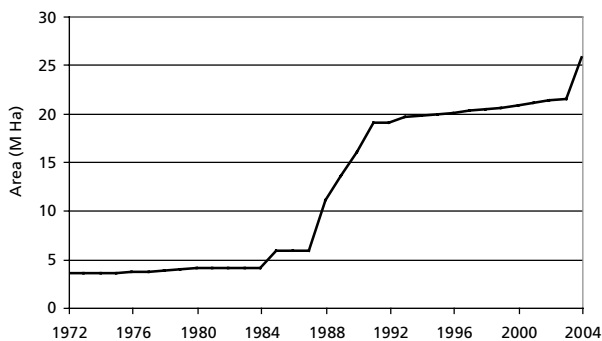
Target

Native vegetation – species loss: lose no species.

Progress: Unclear

Measurement of species loss is problematic. The area of protected areas is a proxy for the target. Proposed to revise the target to “Lose no known native species as a result of human impacts before 2030”.

Area of Protected Areas in SA



Comment: While protected areas offers some measure of protection of native species, it assumes adequate management, complementary off-park protection measures, robustness in response to climate change, etc. Revised target supported.

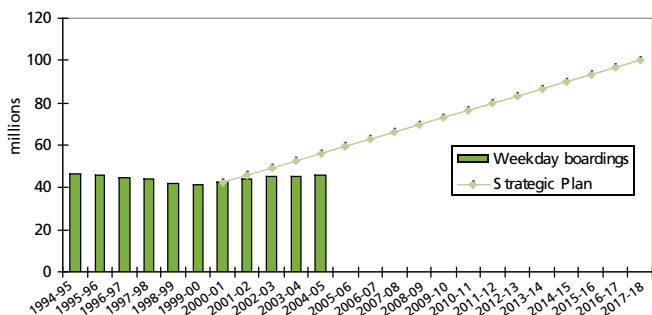
Target

Use of public transport: Double the use of public transport to 10% of weekday travel by 2018.

Progress: Progress, but unlikely to be achieved

Weekday boardings of public transport increased from 54 million in 2003-03 to 55 million in 2004-05. However this is well below the 60 million required to be on track.

Annual Number of Weekday Boardings for Metropolitan Adelaide



Comment: The recent increase in petrol pricing may encourage public transport use. The relative price signals of public and private transport along with their convenience and comfort are likely to be key factors. A 10% increase in patronage over such a long period (to 2018) would seem achievable.

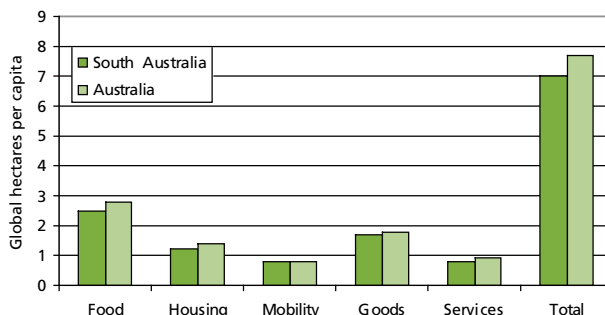
Target

Ecological footprint: reduce our ecological footprint to reduce the impact of human settlements and activities within 10 years.

Progress: Unclear

Measurement is problematic. South Australia's ecological footprint is 7 Global ha/capita compared with 7.7 Gha/cap for Australia. However it compares poorly with the OECD average of 5.2 Gha/cap and the world average of 2.2 Gha/cap. The global capacity to support human population is estimated at 1.8 Gha/cap.

Area of SA's & Australia's Ecological Footprint



Comment: The target is vague as it does not specify a target reduction. Merely being less than the national figure is an insufficient target. The OECD average would be an effective stretch target.

Subsidiary targets were defined covering aspects of the ecological footprint.

Target

Renewable energy: increasing the use of renewable electricity so that it comprises 15% of total electricity consumption within 10 years.

Progress: On Track

Wind farms in operation or under construction have the capacity to supply 10% of South Australia's electricity. Applications have been submitted for a ten-fold increase. It is therefore proposed to increase the target to 20%.

Comment: With the Federal Government's decision not to expand the Mandatory Renewable Energy Target above its current 2%, it is doubtful whether all the proposed wind farms in South Australia will be constructed.

Target

Solar schools: extend the current Solar Schools program to 250 schools in 10 years.

Progress: On Track

In its first year (2003-04), solar panels were installed in 25 schools with a further 48 in the following year, totalling 73.

Comment: The target should define what proportion of the school's energy is to be derived from solar panels, e.g. a target of 50% electricity in 250 schools by 2015.

Target

One million trees: extend the program to 3 million trees in South Australia within 10 years.

Progress: On Track

By mid 2005, 863,000 trees had been planted.

Comment: The location of plantings and the area of land restored from degradation may be more important than the number of trees. A 2004 Report on the Condition of Agricultural Land in South Australia found that current plantings amounted to 5 – 6,000 ha per annum whereas 20 - 50,000 ha/an were required to address dryland salinity and soil erosion.

Target

Energy efficiency of buildings: increasing energy efficiency of dwellings by 10% within 10 years by such means as the 5 star energy requirement for new houses by May 2006.

Progress: Unclear

Measurement is problematic.
The basis for measuring the target has not been defined.

Comment: Unless the energy efficiency measures extend beyond new houses to the existing housing stock, it seems improbable that the target could be achieved. The target may need to be restricted to new housing.

Target

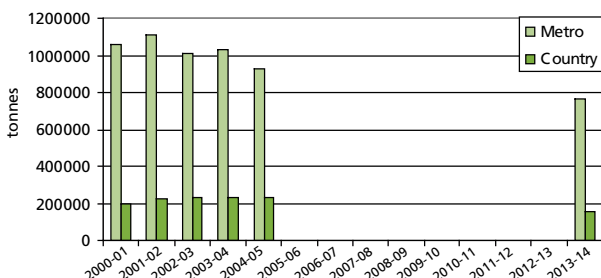
Zero waste: reduce waste to landfill by 25% within 10 years.

Progress: On Track

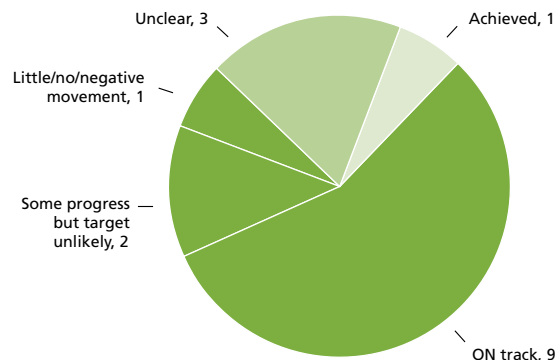
Metropolitan and country solid waste decreased 8.4% between 2003 and 2004.

Comment: The provision of kerbside recycling across Adelaide and in country towns is greatly increasing the tonnage of recyclables recovered.

Solid Waste to Landfill for South Australia



Scorecard



On the basis of the progress recorded, over 60% of the targets have either been achieved or are on target to be achieved. Clarification of the three unclear targets could lead to their achievement.

Overall the targets range from the easily achievable to real stretch targets, allaying the concern that they could be defined to pose no risk of failure. However some targets have been weakened by extending the target date, e.g. the dates for the River Murray water and Government energy use targets. Some targets need to be more specific – e.g. solar schools, ecological footprint.

Policy Directions

Other key areas that could be considered for targets are:

- Business and sustainability – the extent to which business adopts more environmentally sustainable practices.
- Greening of Government - demonstrating exemplar behaviour in adopting environmentally sustainable practices throughout Government.
- Environmental industry – development of green industries in South Australia of benefit to the environment.

Dr Andrew Lothian has had a lifelong involvement in environmental policy and environmental management. He has worked at a senior level in the South Australian Department of Environment for several decades and has made significant contributions in advancing ecological sustainability, addressing greenhouse gas emissions and climate change, developing state of environment reporting, advancing environmental valuation studies and the development of environmental industry.

In late 2002 he established Environmental Policy Solutions, a consultancy providing services in environmental policy and landscape quality assessment. He has published on a wide variety of environmental subjects. He is a past President and Secretary of the Environment Institute of Australia (South Australian Division).

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