

State of the catchments 2010

Economic sustainability and social well-being

Lower Murray Darling region

State Plan target

Natural resource decisions contribute to improving or maintaining economic sustainability and social well-being.

Background

This report focuses on linkages between change in natural resource management (NRM) and ESSW which can be influenced by government. These changes are hard to measure, due to the complex interactions between the environment, society and individuals.

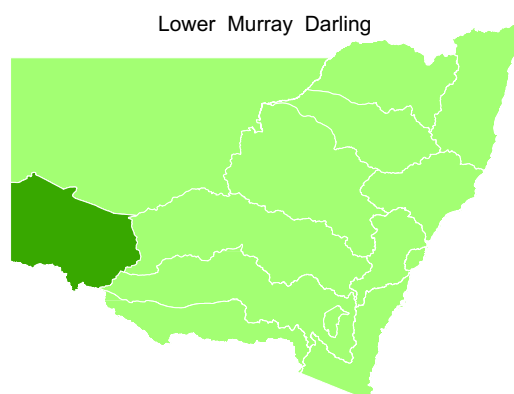
Understanding ESSW in the Lower Murray Darling region

Representatives of three key stakeholder groups – landholders, Aboriginal people and townspeople – were consulted via focus groups and interviews. Current social research, focused on NRM issues in the Lower Murray Darling region, was reviewed. No overall assessment of the condition (strength and number) of the links between natural resource decisions and ESSW is given, as the distinctions between stakeholders' perceptions and experiences are significant. These differences are critical to understanding the likely contributions of natural resource decisions to ESSW in different parts of the community.

A detailed technical report describes the methods used to derive the information contained in this report. At the time of publication of the *State of the catchments (SOC) 2010* reports, the technical reports were being prepared for public release. When complete, they will be available on the I&I website: www.industry.nsw.gov.au/info/mer.

Note: All data on natural resource condition, pressures and management activity included in this SOC report, as well as the technical report, was collected up to January 2009.

Map of the catchment



Overview

What do people in this region see as important to maintaining community vitality?

Secure employment, especially close to home, was considered critical by all groups. Other important factors include:

- access to education, from kindergarten through to the tertiary level, for the general community and continuing education for practice change for landholders
- primary industries, including profitable and sustainable agriculture
- enhancing personal connections, social networks and community participation that have been affected by the pressure of prolonged dry conditions
- strong regional leadership and a proactive community to best adapt to difficult conditions.

What is the state of ESSW across the region?

ESSW is variable across the region, with dry conditions having had a significant impact. People are concerned about low water allocations and low commodity prices. Other key aspects include:

- Aboriginal communities are not faring as well as other stakeholders
- some rural areas in the region are struggling to maintain population and infrastructure, which has had a demoralising effect on those remaining
- ongoing stress from difficult conditions and uncertainty is reducing community participation and putting pressure on interpersonal relationships
- the economy of larger towns has slowed down, but is still fairly healthy.

Aboriginal interests – connections to culture

The well-being of Aboriginal communities, as well as their ability to access land and its natural resources, is entwined with the health of the environment. Limited access and its associated impacts on cultural practice have created a history of socio-economic disadvantage.

Studies demonstrate that participation by Aboriginal people in the Australian Government’s ‘Caring for our Country’ initiative benefits both the environment and social cohesion. Meaningful NRM jobs provide many tangible, individual and family benefits as well as an increased sense of worth within Aboriginal communities.

Figure 1 shows that, over the past 10 years, the NSW indigenous population has grown at a faster rate than the total population. The indigenous population growth is around 3700 people per year; however, this number is considerably smaller than the total population increase of around 51,000 per year. The Australian Bureau of Statistics (ABS) has suggested that the high level of indigenous population growth may be a result of both high natural growth and more people being prepared to identify their indigenous origins in the census.

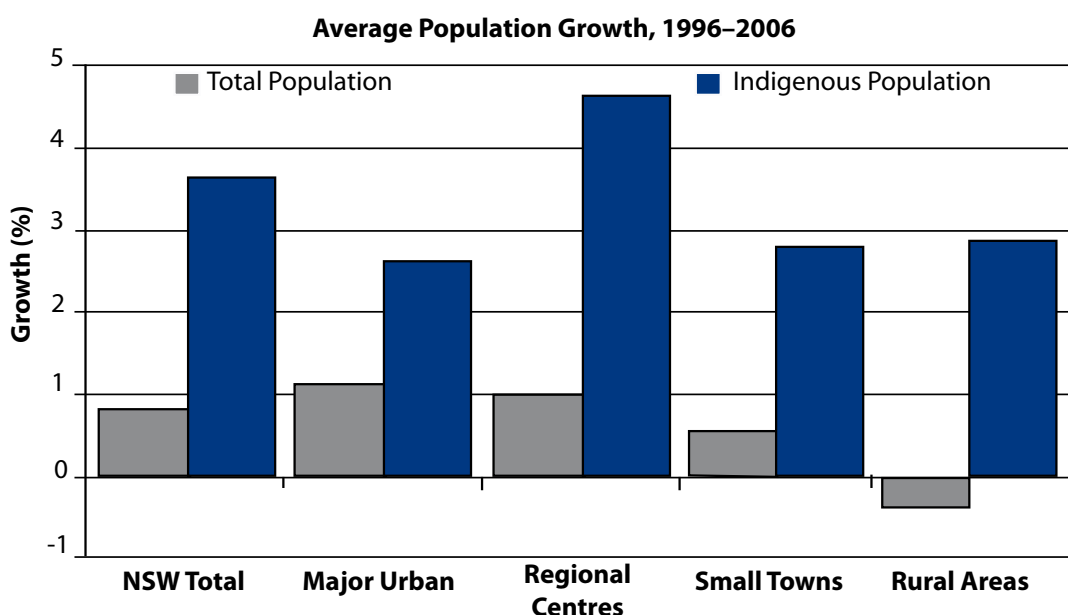


Figure 1 Growth of indigenous population compared with general population

Graph provided by Bureau of Rural Sciences (BRS) from Australian Bureau of Statistics (ABS) data, 2008

Trends – community views

Landscape changes

Changes to the landscape include:

- significant numbers of native trees dying along rivers and wetlands due to drought being the overriding influence on water and vegetation levels – runoff has decreased and some water storages are drying up
- environmental flows have had a positive effect on vegetation, although billabong health is generally declining
- some waterways are suffering from salinity issues, eg Fletchers Lake, although water tables have dropped. Furrow and overhead irrigation systems are largely being replaced with drip systems on farms
- groundcover levels are thought to be higher than previous dry times due to less stock, rotational grazing and reduced rabbit numbers

- kangaroo numbers have increased but birdlife has decreased
- there has been less vegetation clearing for cropping, partly due to regulations.

Primary industry

Strong environmental impacts on the condition of farm production assets, particularly from low rainfall and regulatory changes, are diminishing ESSW and motivation for farmers. Other issues include:

- an increase in large commercial producers, with significant reductions in small family farms in some areas, which contributes to decreasing agricultural employment
- declining profitability from the rising cost of farm inputs, low commodity prices and reduced carrying capacity due to drought, all of which impede landholders' capacity to practise improved NRM
- high debt levels of farms
- off-farm work opportunities are important to farm families remaining on the land, such as those provided by mining and tourism
- satisfaction from managing farms for healthier land, through improved farm practices, means people on the farm are less stressed
- the reduced employment in agriculture – although employment in this sector declined by more than 10 per cent across NSW (1996–2006), it has fallen more significantly in the Lower Murray Darling Catchment (Figure 2).

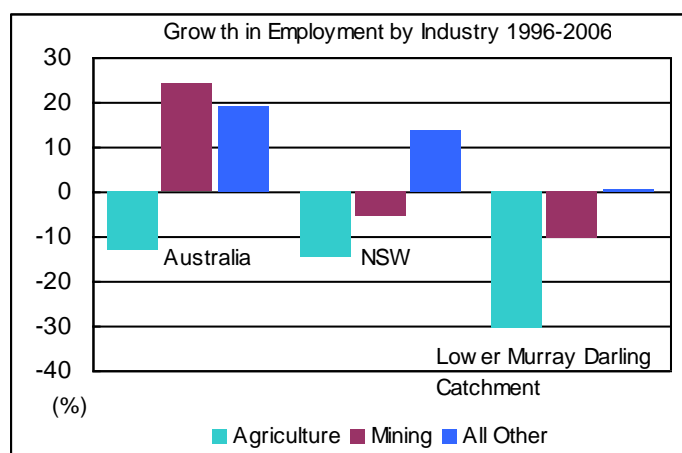


Figure 2 Decline in agriculture employment over 10 years

Graph provided by Industry & Investment NSW (I&I) from ABS data, 2008

Townscapes

Poor water quality in some regions is affecting various health and hygiene issues. Local economies are slowing and small businesses have declined. Other key impacts include:







- distress caused by water restrictions as, historically, there was sufficient access to this resource – although water recycling is practised in some urban areas, the towns look less appealing. Green gardens, parks and sporting fields are important to an attractive townscape
- environmental watering during the drought has been controversial

- population decline in some rural areas reduces the amount of community participation and the capacity for additional roles to be undertaken.

Table 1 provides a summary of comments made by the key stakeholder groups.

Table 1 ESSW check and group comments

Likely impact of NRM decisions on ESSW	Condition	Trend	Data confidence	Typical group comments
Business sustainability/ profitability and expansion		↑	M	<p>Significant – improved knowledge and better use of resources on a property via conversion of overhead or furrow to drippers.</p> <p>Big savings in water from converting flood to centre pivot – still a lot of evaporation though.</p> <p>Not much impact, especially on productivity, due to care being taken.</p>
Increased employment		↔	M	<p>Reduction from 400 to 70 landholders around Wentworth – less employment.</p> <p>Healthier land, due to rotational grazing, means people have more time for off-farm work.</p>
Gaining more formal and informal skills		↑	M	<p>Irrigation courses have helped the conversion to drip irrigation. The Lower Murray Darling CMA has been a base that landholders could go to for information and support.</p> <p>Landholders benefited from CMA support for their NRM education. However, they felt that the drought postponed their ability to implement their new skills.</p>
Community networks and interaction		↔	M	<p>The community is now consulting with people around Lake Victoria, which was not done in the past.</p> <p>More free time is needed for community members to participate in activities and events.</p>
Participation in NRM		↑	M	<p>90–95 per cent of irrigators have participated in irrigation courses – this is an increase. This training is mandatory to receive CMA funding.</p>
More effective NRM decision-making		↑	M	<p>The CMA has only been established for four years and the region has been dry, thus it is hard to assess changes.</p>

Condition	Trend	Data confidence
 Very good	↑ Improving	H High
 Good	↔ No change	M Medium
 Fair	↓ Declining	L Low
 Poor	?	
 Very poor		
 No data		

Pressures

A number of pressures, largely centred on water availability, are influencing land-use change, rural adjustment and modifying links to ESSW in the region. These links affect people’s ability to use environmental services but can be felt individually as financial, relationship and time pressures.

Major pressures come from overall resource condition (eg soil health), availability (eg increased competition for water), access (eg for recreation, traditional foods and medicines) and quality (eg water quality). Additionally, people with long-term associations with an area – particularly Aboriginal people with cultural responsibilities for landscape health – can feel strong emotional and spiritual connections to the land which increases overall ESSW.

Key pressures include:

- population change – across NSW, rural areas have experienced decline while small towns (200 to 1000 people) have had low growth. In the Lower Murray Darling region, there were relatively low mobility rates for the rural population between 2001 and 2006, although the region still experienced population decline. The region has less than 30,000 people overall, with two thirds located in Broken Hill. Maintaining a viable population is critical, as NRM is labour-intensive
- community capacity – community capacity is often measured by a community’s level of volunteering, optimism and participation in community life. Although rural communities traditionally have a high rate of volunteers (as shown in Figure 3), they also have an ageing membership and are experiencing decline. There is little capacity for more voluntary NRM work in rural areas of this region

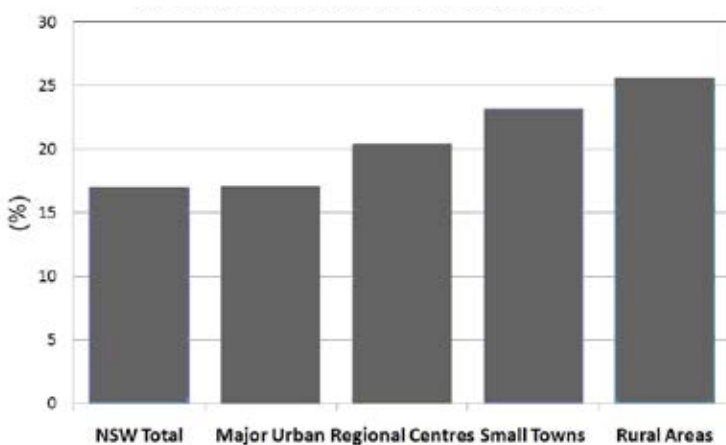


Figure 3 Percentage of population who volunteer (2006)

Graph provided by BRS from ABS Data 2008

- drought/climate change – reduced water availability is prompting structural change in agriculture
- market incentives – increased mechanical harvesters have displaced seasonal workers in agriculture
- industry – mining contributes positively to the economy but can have strong social impacts, such as skewed social structures from mines bringing in their own non-local workforce, eg the new sand mines at Pooncarie.

Management activity

Monitoring ESSW is an evolving field for government and, as such, monitoring work has been developed to mesh with national approaches. Fieldwork has gathered qualitative data on the impact of CMA actions and also larger scale government investments in NRM. Monitoring occurs through several processes, including key stakeholder focus groups and interviews, with larger community samples improving reliability where possible.

State level

The State Plan target requirement is to ‘contribute more effectively to natural resource investment decision-making achieving socio-economic outcomes’. The NSW Government aims to achieve this through improved priority identification and decision-making capacity of CMAs and agencies. A socio-economic training module designed to extend Industry & Investment NSW’s (I&I) monitoring, evaluation, reporting and improvement processes, is currently being developed. I&I is working with several CMAs and state target themes to ensure the effectiveness of this module.

Other socio-economic activities being undertaken at the state level include:

- developing common guidelines for country-wide socio-economic analysis
- identifying Aboriginal cultural heritage assessment priorities and progress assessments to assist land-use planning and NRM investment decision-making
- implementing the Aboriginal BioBanking Program
- developing a state-wide Aboriginal Land and NRM Action Plan ‘Healthy Country – Healthy Communities’ – this will assist in developing clear policies, principles and tools to improve socio-economic outcomes for Aboriginal people through enhanced capacity to participate in land management and NRM
- the Aboriginal Heritage Mapping and Assessment Program, which is a whole-of-Government program that provides a coordinated and consistent approach to collecting, managing and using spatial information for Aboriginal heritage values – the program incorporates cultural mapping standards, regionally based assessment and appropriate management of Aboriginal information. It aims to develop inter-agency priorities and key deliverables for Aboriginal heritage information, assessment and mapping.

Further reading

Australian Bureau of Statistics 2006, *Map Stats by Natural Resource Management Region*, [www.censusdata.abs.gov.au/ABSNavigation/prenav/TopicList?method=Place%20of%20Usual%20Residence&subaction=1&producttype=MapStats&areacode=NRM104&action].

Australian Bureau of Statistics 2006, *Population Characteristics, Aboriginal and Torres Strait Islander Australians: New South Wales*, Cat. no. 4713.1.55.0001.

Graphs for employment change by Information and Library Services 2008, NSW Department of Primary Industries, Orange.

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