State of the catchments 2010

Economic sustainability and social well-being

Murray region

State Plan target

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

Background

This report focuses on links between changes 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.

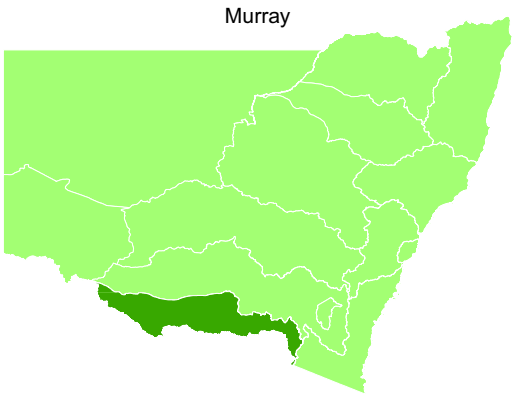
Understanding ESSW in the Murray region

Representatives of two key stakeholder groups – landholders and townspeople – were consulted via focus groups and interviews. Current social research, focused on NRM issues in the Murray region, was reviewed. No overall assessment of the condition (strength and number) of the links between natural resource decisions and ESSW is given because 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, is considered critical by both groups. Other important factors are:

- managing regulatory changes in water availability to reduce community uncertainty
- future profitable and sustainable agriculture
- maintaining morale by enhancing personal connections, social networks and community participation which have been negatively impacted by the pressures of dry conditions
- maintaining population levels to continue access to vital services, eg health and education.

What is the state of ESSW across the region?

ESSW across the Murray region is variable. Dry conditions have had a significant impact, especially in the western parts of the region. People are concerned about low water allocations and low commodity prices. Other key aspects include:

- the struggles of some rural areas in the region to maintain population and infrastructure, with the younger generation leaving the area for employment and education reasons
- newcomers bringing skills and enthusiasm, and successfully demonstrating local opportunities for adapting to dry conditions
- drier conditions in the western parts of the region impacting strongly on communities and towns reliant on agricultural economies.

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.

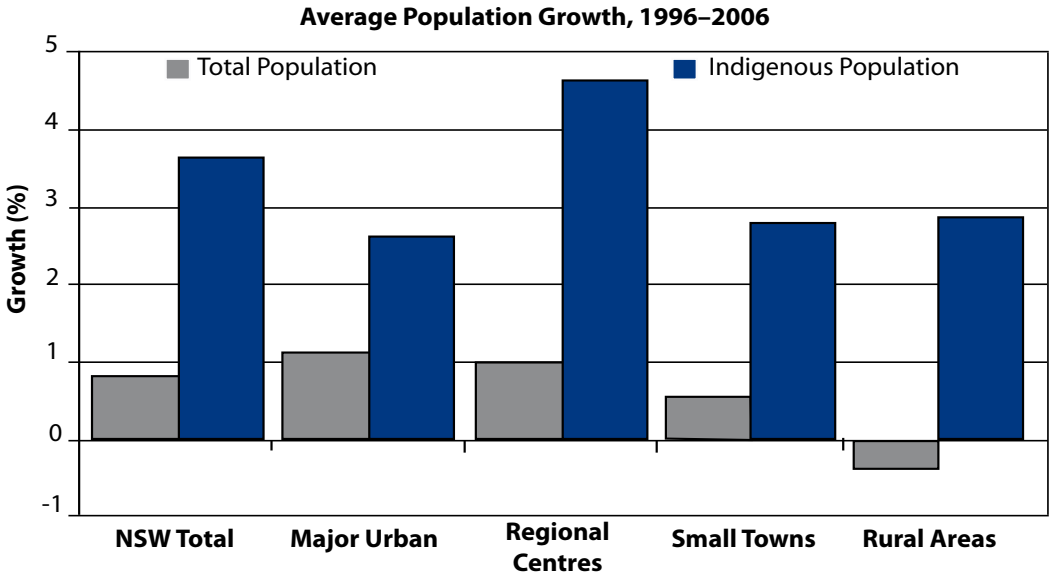


Figure 1 Growth of indigenous population compared with general population

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 decline in the number of trees, due to the overriding influence on water and vegetation levels of the drought
- a decrease in runoff and general decline in riverine health, although there has been significant fencing to keep stock out of waterways
- increasing amounts of remnant vegetation protected and significant numbers of new native plants across the catchment – these measures, along with better fox control, have contributed to an improvement in the numbers of native animals and birds
- groundcover levels thought to be higher than previous dry times due to less stock, increased use of stock containment areas and reduced rabbit numbers, although dust storms are more frequent
- a trend towards less agricultural land used for grazing and an increase in cropping and softwood plantations.

Primary industry

Environmental impacts on the condition of farm production assets and regulatory changes are diminishing ESSW and motivation for farmers, but NRM improvements give a sense of achievement. Other issues include:

- declining profitability from the rising cost of farm inputs and reduced carrying capacity due to drought, which impede landholders' capacity to practise improved NRM
- an increase in off-farm work, which is important for income stability
- many farm families leaving the area
- a change in land-use from agriculture to plantations which is seen as potentially threatening to established NRM improvements, although mining and softwood plantations have provided off-farm work opportunities
- a decreased ability to manage high debt levels which is diminishing control over lifestyles
- the reduced employment in agriculture – employment in this sector declined by more than 10 per cent across NSW (1996–2006) although it was somewhat less than this in the Murray region (Figure 2).

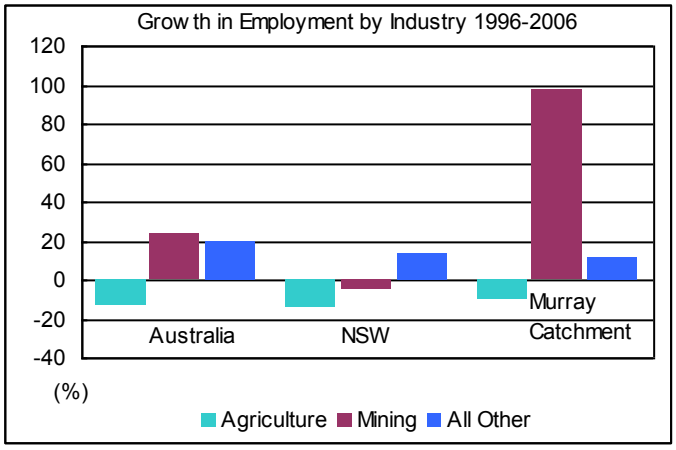


Figure 2 Decline in agriculture employment over 10 years

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

Townscapes

Albury, the major regional centre, is thought to be faring well, although local economies dependent on agriculture are slowing and small businesses have declined. Other key impacts include:

- vulnerability of towns that are reliant on major employers, eg Deniliquin has been heavily affected by the rice mill closure
- many social and individual benefits from urban people's involvement in on-ground works, with positive contributions to heightening environmental awareness in the region, eg addressing climate change concerns locally
- population decline, especially of younger people, in some rural areas in the region which has reduced community participation and the capacity for additional roles to be undertaken, although this adversity is thought to also strengthen community ties.

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		↑	H	Whole-farm planning and drainage recycling systems have substantially increased productivity. Lucerne and saltbush established for salinity control have helped reduce the watertable and provided extra feed during drought.
Increased employment		↔	M	Murray Catchment Management Authority (CMA) incentives for drainage recycling systems were dependent on whole-farm plans. This created further employment in surveying and earth works. Other Murray CMA funding has generated business through fencing and farm construction works and has enabled the continuation of local business.
Gaining more formal and informal skills		↑	M	CMAs have influenced improved farming practices, such as the development of whole-farm plans, appropriate sized dams and more controlled grazing.
Community networks and interaction		↑	M	A strong sense of 'togetherness' and enhanced community resilience is one positive to come from the drought. Field days and meetings provide an opportunity for people to come together and exchange knowledge and experience. Continuation of social activities is important.
Participation in NRM		↑	M	Funding to complete on-farm work is an excellent incentive, and provides focus and motivation in tougher times. Funding has provided both farming and health benefits, and allows farmers a chance to complete work that would not normally get done.
More effective NRM decision-making		↔	M	Drought and environmental water buy-backs have increased uncertainty about the future of water allocations. The transition from the National Action Plan for Salinity and Water Quality/Natural Heritage Trust to 'Caring for our Country' funding program for NRM work has caused frustration, due to delays in the arrival of funds.

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

Pressures

A number of pressures, largely centred on water availability, are influencing land-use change, rural adjustment and are 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.

- population change – across NSW, rural areas have experienced decline while small towns (200 to 1000 people) have had low growth. There have been relatively low mobility rates for the rural population in this region between 2001 and 2006; however, the region as a whole is experiencing population decline. Almost half of the region population (approximately 100,000) live in Albury, while other parts of the catchment are sparsely populated. 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. Additionally, 'tree changers' may take time to develop the broad civic duty values that rural communities exhibit. There is little capacity for more voluntary work in NRM in rural areas in this region

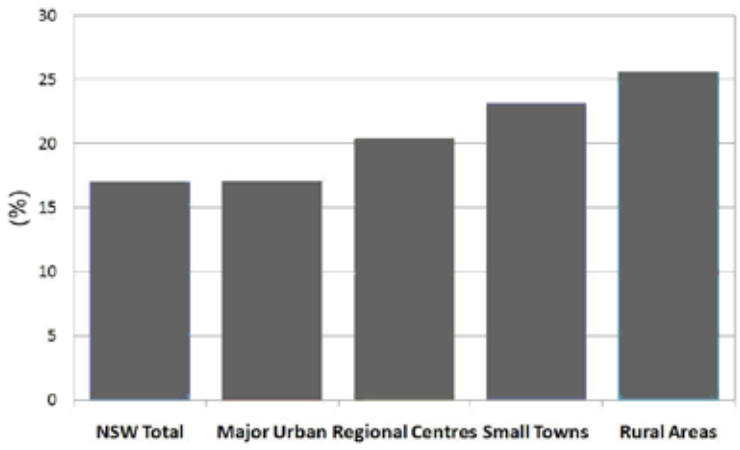


Figure 3 Percentage of population who volunteer (2006)

Graph provided by BRS from ABS data, 2008

- drought/climate change – prolonged, significantly reduced water availability is prompting enterprise change
- technology – greater use of precision agriculture that matches inputs with land capability is increasing profitability and the capacity to use marginal land
- market incentives – high grain prices have underpinned a trend towards greater cropping of land. There are also emerging opportunities for trading environmental assets, eg forestry in the eastern parts, carbon trading and biobanking.

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
- I&I's work with the Murray CMA to demonstrate the use of fine-scale socio-economic information, eg gender differences in biophysical decision-making
- identifying Aboriginal cultural heritage assessment priorities and progress assessments to assist land-use planning and NRM investment decision-making
- implementing the Aboriginal BioBanking Program
- development of 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.

Regional level

The Murray CMA is undertaking the following regional activities in relation to the socio-economic target:

- social benchmarking
- community consultation on important NRM issues, eg the establishment of Murray Aboriginal Advisory Group
- projects to protect and increase understanding of Aboriginal cultural heritage
- incentives to integrate Aboriginal cultural heritage into property management plans.

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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