

Purpose

To identify socio-economic indicators to assess the:

1. capacity of landmanagers to change and adopt sustainable management practices
2. capacity of regional groups to make decisions on natural resource management (NRM) issues, including the impact of institutional change/responsiveness
3. interlinkages between the above and their relationship to the achievement of longer term changes to the:
 - condition of the natural resource base
 - capacity of regional communities to respond and manage for effective NRM outcomes
 - economic viability of agriculture.

1. Landmanagers

(Nelson, Webb and Byron 2005)

Landmanagers are responsible for managing approximately 60% of the Australian land area. The following indicators relate to their capacity to change and adopt sustainable management practices.

Indicator status: Headings (in bold) and indicators have been recommended by SENCC.

Aspirations of landmanagers

Goals/priorities for property/business: **social/lifestyle**, **environmental**, **economic and production**

Long term plans for property/business: expansion, add new enterprises, move out of enterprise, sell or scale back, pass property to family

Capacity of landmanagers

Human: technical skills, labour availability, landholder's health/age/life stage, training history

Social: support network, landcare involvement, government program involvement, industry involvement

Physical: property size, current and potential enterprise mix

Financial: farm income, non-farm income, farm equity/debt levels, income stability

Natural: soil health, water quality and availability, pest plants and animals, native flora

Attributes of NRM practices

Extent to which the practice contributes to the goals for the property:

social/lifestyle, **economic/production**, **environmental**

Extent to which landmanagers have access to resources to implement the practice:

human, social, financial, physical, natural

Extent to which outcomes from the practice can be evaluated:

observability, **trialability**

External influences

Broader issues affecting region/industry: isolation, communication infrastructure, age/gender/socio-economic status

Generalised trust in NRM stakeholders: **neighbours**, **local government**, **state government**, **Australian Government**, **regional groups**, **industry groups**

Reciprocity: awareness of off-site impacts from actions on their property, perceptions that others account for off-site impacts of their actions

Outcomes of improved NRM

Level of adoption of management practices: soil conservation practices, water conservation practices, biodiversity conservation practices, productivity improvement practices

Post adoption success: **workload/lifestyle**, **production/profitability**, **environmental conditions**

2. Regional NRM Groups

(Fenton 2006)

Members of regional NRM groups make important decisions on the planning and implementation of NRM initiatives, which can have profound impacts on the community and landmanagers. The following indicators relate to organisational performance and the social and institutional foundations of NRM programs.

Indicator status: Indicator headings (in bold) and indicators have been recommended by SENCC.

Capacity

Regional organisations have the capacity to make decisions on regional NRM issues:

Management Capacity:

- appropriate decision making processes
- appropriate mix of people in decision making
- good decision making processes
- organisational cohesion (shared vision of staff/board)
- staff training and development
- board member training and development
- level of job satisfaction
- job satisfaction (staff turnover)
- adequacy of staffing levels
- competency in human resource management
- leadership competency (composite index)
- competency in financial management
- financial management performance

Program capacity:

- capacity to review the NRM plan/investment strategy
- use of NRM advisory panels
- effectiveness of NRM advisory panels
- effective utilisation of NRM information
- ability to access external sources of NRM information
- effective local facilitator networks (composite)
- knowledge of NRM (composite)
- external leadership in NRM
- capacity to prepare NRM funding submissions
- ability to lever external NRM investment

Engagement

A shared NRM vision and ownership at the regional level:

- adequate community engagement strategy (composite)
- implementation of a community engagement strategy
- evaluation of the community engagement strategy
- community knowledge of the regional NRM process
- scale of NRM engagement (composite)
- level of NRM engagement
- effectiveness of the engagement process
- effectiveness of engagement with new community groups
- opportunities for NRM engagement
- diversity of NRM engagement
- inclusiveness of NRM decision making
- quality of NRM engagement process (composite)

Partnerships

NRM partnerships between government and regional organisations are underpinned with trust and confidence:

- trust in institutional partnerships
- transparency of decision making
- flexibility in negotiation
- effectiveness of the partnership
- consistency of information

Recognition

Governments and regional organisations recognise the importance of the social foundations of NRM:

- social foundations of NRM in policies, frameworks and guidelines (Australian Government and state government)
- investment in the social foundations of NRM (Australian Government and state government)
- opportunities for investment in social processes (composite)
- social foundations of management action targets
- funding the social foundations of NRM
- use of social information
- social expertise of board members
- social expertise of advisory structures
- social expertise of employees
- use of external consultants or advisors with social expertise

Contextual Information

Key descriptive measures about each regional body:

- town location of regional body
- year commenced operations
- years since current NRM plan (strategy) developed
- years since last review of NRM plan (strategy)
- years since last investment strategy developed
- existence of independent chair
- number of current board members
- legal standing of the regional body
- number of current full-time and part-time employees
- existence of documented engagement strategy
- year engagement strategy first developed
- number of local NRM facilitators employed
- level of state and Australian Government funding during the last financial year

3. Community

(Burnside 2007)

Broader community members shape the desired outcomes for the region, and can be impacted upon unintentionally through the flow on effects of land degradation or reduced resource access.

Indicator status: SENCC have not identified indicators in this area as regional planning and regional trade-off analysis requires a sound understanding of the specific NRM issues and the socio-economic pressures operating in each region. Instead the focus has been on improving regional access to existing data that can be cut and tailored to service specific regional needs.

In 2008 the ABS will provide data from the ABS Agricultural and Population and Housing Census, which has been cut to NRM Regional boundaries. SENCC will provide advice on standard outputs.

A scoping study of indicators of community vitality, viability and health has been overseen by SENCC. The report will be used to identify future co-investment opportunities.

Other work highlights the range of available indicators that can be used depending on the nature of regional NRM strategies and their relevant social and economic impacts:

- Webb, T.J. and Curtis, A. (2002)
- Cavaye, J. (2003).

Status of data to populate the indicators
Font colour indicates current availability of indicators:

Black = currently available

Red = requires standardised methodology and data collection

Blue = requires data collection

The role of the National Land & Water Resources Audit (the Audit)

The Natural Heritage Ministerial Board has tasked the Audit (2003-08) with coordinating the collation of data to support reporting on natural resource condition required under the National NRM Monitoring and Evaluation Framework (NM&EF). As described in the NM&EF “the health of the nation’s natural resources is being assessed to provide a continuing reference point against which the appropriateness and effectiveness of national policies, strategies and programs may be judged. This assessment assists Ministerial Council to identify areas of concern and to better target the use of resources”.

The NM&EF aims to use nationally agreed outcomes and measures to report on the conservation, sustainable use and management of Australia’s land, water, vegetation and biological resources. The Framework identifies three requirements for monitoring natural resource condition:

- a set of resource condition indicators to measure progress toward the agreed national outcomes on a medium and long term basis
- a set of indicators for monitoring community and social processes relevant to or affected by NRM programs, as well as measures of the adoption of sustainable development and production techniques
- contextual data pertinent to the indicator being considered.

The Natural Resource Policies and Programs Committee (NRPPC) and Natural Resource Management Standing Committee (NRMSC) have endorsed national data coordination arrangements proposed by the NLWRA to underpin the natural resource condition monitoring under the NM&EF. The roles and responsibilities of sponsor agencies and National Coordination Committees (NCCs) have now been agreed. These arrangements have been established to support the development and consistent use of standards for the attribution, collection, management and on-going delivery of data and information.

The role of the Socio-Economic National Coordination Committee (SENCC)

The Social and Economic National Coordination Committee is tasked with reviewing and revising socio-economic indicators and is sponsored by the Department of Agriculture, Fisheries and Forestry. SENCC has representatives from the Australian Government and state jurisdictions and observers from major national socio-economic data providers/research institutions.

The role of SENCC is to advise on national socio-economic indicators and:

- provide advice on national needs relating to NRM socio-economic data and information products, data management and related applications
- oversee implementation of the socio-economic workplan and ensure it is relevant to the design, delivery and monitoring of NRM policies and programs
- identify and support opportunities for generating national efficiencies in socio-economic data collation, collection, integration, analysis and reporting
- assist in the development of consistent standards, methods for the collection, management, documentation and sharing of socio-economic information
- provide coordinated advice on socio-economic projects submitted to relevant national funding initiatives.

Projects to date

Projects commissioned under the Audit’s socio-economic workplan, Signposts for Australian Agriculture project, and other co-investors, which will progress indicator development and data collation/collection include:

Author	Title
Nelson, R., Brown, P.R., Darbas, T., Kokic, P., Nicholls, A., Griffin-Warwicke, J. and Cody, K. (2007)	<i>Potential to map the adaptive capacity of Australian landmanagers for NRM policy using ABS data</i> , CSIRO, ABARE, ABS, NLWRA for NLWRA.
Hanslip, M. and Byron, I. (2007)	<i>Sourcebook for social and economic surveys: Assessing landmanagers’ capacity to change and adopt sustainable management practices</i> , BRS for NLWRA.
Hodges, A. (2007)	<i>Nationally Coordinated Industry Survey</i> , ABARE for NLWRA (under contract).
Burnside, D. (2007)	<i>The relationship between community vitality, viability and health and natural resources and their management – A brief review of the literature</i> , URS for NLWRA.
Burnside, D. (2007)	<i>The relationship between community vitality, viability and health and natural resources and their management – Final Report</i> , URS for NLWRA.
Byron, I., Nelson, R., Webb, T. and Cody, K. (2006)	<i>Socio-economic indicators and protocols for the national NRM monitoring and evaluation framework: Capacity of landmanagers to adopt sustainable management practices</i> , BRS, ABARE, NLWRA for NLWRA.
Fenton, D.M. (2006)	<i>Pre-implementation review of the methodology to assess the capacity of regional organisations and the social foundations of NRM</i> , EBC for NLWRA (under contract).
Fenton, D.M. (2006)	<i>Socio-economic indicators and protocols for the national NRM monitoring and evaluation framework. The social and institutional foundations of NRM</i> , EBC for NLWRA.
Fenton, D.M. and Rickert, A. (2006)	<i>Monitoring and evaluating the performance of NAPSWQ regional bodies in Queensland</i> (state summary report), Burdekin Dry Tropics NRM, EBC for NLWRA.
Fenton, D.M. and Rickert, A. (2006)	<i>Refining indicators for monitoring and evaluating the social and institutional foundations of regional NRM programs</i> , EBC for DEH/DAFF.
Hassall & Associates (2006)	<i>Signposts for Australian Agriculture – National data and information priorities on business management practices</i> , Hassalls & Associates for DAFF and NLWRA (under contract).
Webb, T. and Byron, I.A. (2006)	<i>The development and piloting of a set of indicators, survey methodology and tools to assess landmanagers’ capacity to change and adopt sustainable management practices</i> , BRS for NLWRA (under contract).
Nelson, R., Webb, T. and Byron, I. A. (2005)	<i>Socio-economic data: Prioritising collection to support Australian Government natural resource management programs: principles and priorities</i> , ABARE, BRS for NLWRA.
Cody, K. (2004)	<i>Socio-economic workplan</i> , NLWRA.
Day, P. (2004)	<i>Signposts for Australian agriculture – Research and development corporations’ data and reporting</i> , LWA for NLWRA.
Fenton, D.M. (2004)	<i>Socio-economic indicators for NRM: Indicators of capacity, performance and change in regional NRM bodies</i> , EBC for NLWRA.
Fenton, D.M. (2004)	<i>Monitoring and evaluating the social foundations of regional NRM programs</i> , EBC for LWA.
Nelson, R. (2004)	<i>Socio-economic indicators for natural resource management: Capacity to change and adopt sustainable management practices in Australian agriculture</i> , ABARE for NLWRA.
Sincock, A. and Smith, T. (2004)	<i>Social and economic data sources for natural resource management</i> , ABS for NLWRA.
Webb, T.J., Cody, K., Mues, C. and Harrison, B. (2004)	<i>Social and economic information for NRM: An initial discussion paper</i> , BRS, NLWRA, ABARE, ABS for NLWRA.

For more information on the Audit’s socio-economic theme see http://www.nlwra.gov.au/Natural_Resource_Topics/Socio-economic.

For copies of reports see http://www.nlwra.gov.au/Publications_and_Tools/Project_Reports/index.aspx#Socioeconomic.

Other references

Cavaye, J. (2003) *Integrating economic and social issues in regional natural resource management planning – A framework for regional bodies*, Department of State Development, QLD Government.

Haberkorn, G., MacGregor, C., Kelson, S. and Charalambou, C. (2001) *Compiling a database of socio-economic indicators for the rangelands*, for NLWRA 1 Rangelands Project.

Webb, T.J. and Curtis, A. (2002) *Mapping regional capacity. A method to map regional capacity to adopt more sustainable NRM practices*. BRS for LWA (BRR20).