

Healthy Savanna Planning Systems: Project Overview 2005–2006

Evaluation supporting adaptive management in regional NRM



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For more information on the project and to access reports to date visit:

http://savanna.cdu.edu.au/research/projects/healthy_savanna_pla.html

http://savanna.cdu.edu.au/publications/books_reports/natural_resource_ma.html

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1. Overview

Developing effective regional planning arrangements in savanna regions is a challenge for governments and communities alike. In any region these arrangements for natural resource management (NRM) include the range of resource users and managers, planning and management activities, and the links and relationships between them. Evaluation in this setting plays an important role in supporting an adaptive management approach to NRM policy, planning and implementation in regions. This works best when experiences from different regions are recognised and shared.

Regional policy frameworks are now widely adopted in Australia at the state, territory and federal levels to provide a strategic response to sustainable development imperatives. Importantly, the regional turn of governance reflects a global trend to devolve decision making to reflect the aspirations of local communities. This includes the development of innovative planning systems and approaches to integrate economic, social and environmental policies in a spatial context (e.g. statutory growth management in regions such as South East Queensland). It also includes approaches that seek to address many natural resource management issues such as water quality, biodiversity and salinity through strategic regional investment (e.g. National Action Plan for Salinity and Water Quality and the Natural Heritage Trust). Finally, the regional approach decentralises decision-making to enhance NRM at the property or local scale and facilitate a more open, participatory and community-based approach to setting and achieving NRM targets.

By using a set of criteria designed for evaluating regional planning systems, this project is tracking the progress of regional arrangements across northern Australia. This is being done by taking two successive snapshots—or *benchmarks*—the first during 2004–05 and the second during 2005–06. This evaluation is being conducted through the Tropical Savannas Management CRC as part of the Regional planning and management research theme. As such the project has a special interest in lessons from recent planning experiences relevant to regions in Australia’s tropical savannas.

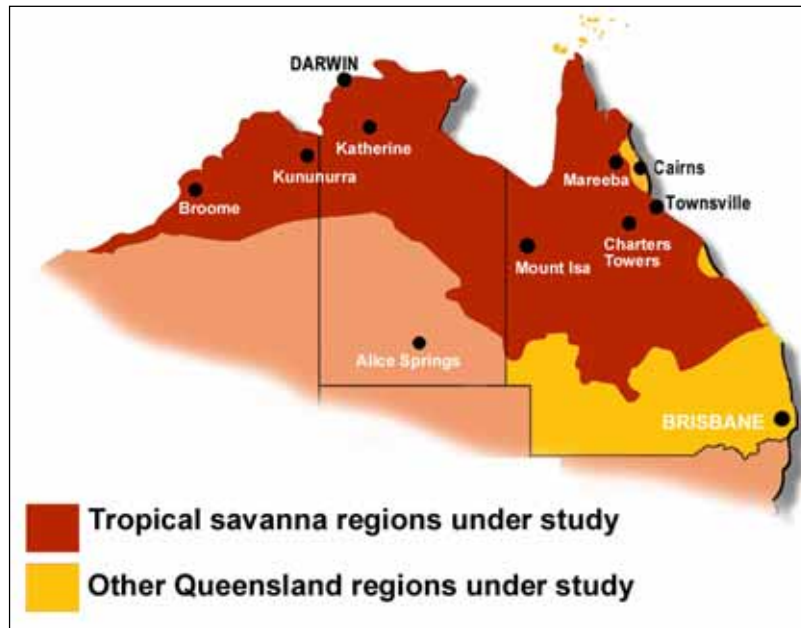
2. Objectives

The main goals of the project are to track progress of regional NRM, identify emerging constraints, lessons and adaptive management opportunities for improving regional planning systems in Australia’s tropical savanna regions. The specific objectives are:

- To develop, **test and refine criteria and methods** for evaluating regional NRM plans and institutional arrangements for natural resource management in regions;
- To collaborate with regional planners and relevant government agencies to **apply the evaluation framework in savanna regions**.
- **To support adaptive management** of regional NRM policy, regional arrangements and planning practices through evaluation.

3. Scope of the project and study area

The project covers the three jurisdictions of Queensland, the Northern Territory and Western Australia. The TS–CRC’s primary interests are the tropical savanna regions within these jurisdictions. However, the project’s partnership with Queensland’s Department of Natural Resources and Mines has provided the resources to include Queensland’s non-savanna regions in the evaluation (see map below). The project team are interested in evaluating the ‘system’ of regional planning. The regional planning system includes the range of different sectors, managers, statutory and voluntary planning activities and the interactions between these at the regional level.



4. Evaluation criteria and methods

The criteria used for the evaluation are organised within a four-part framework:

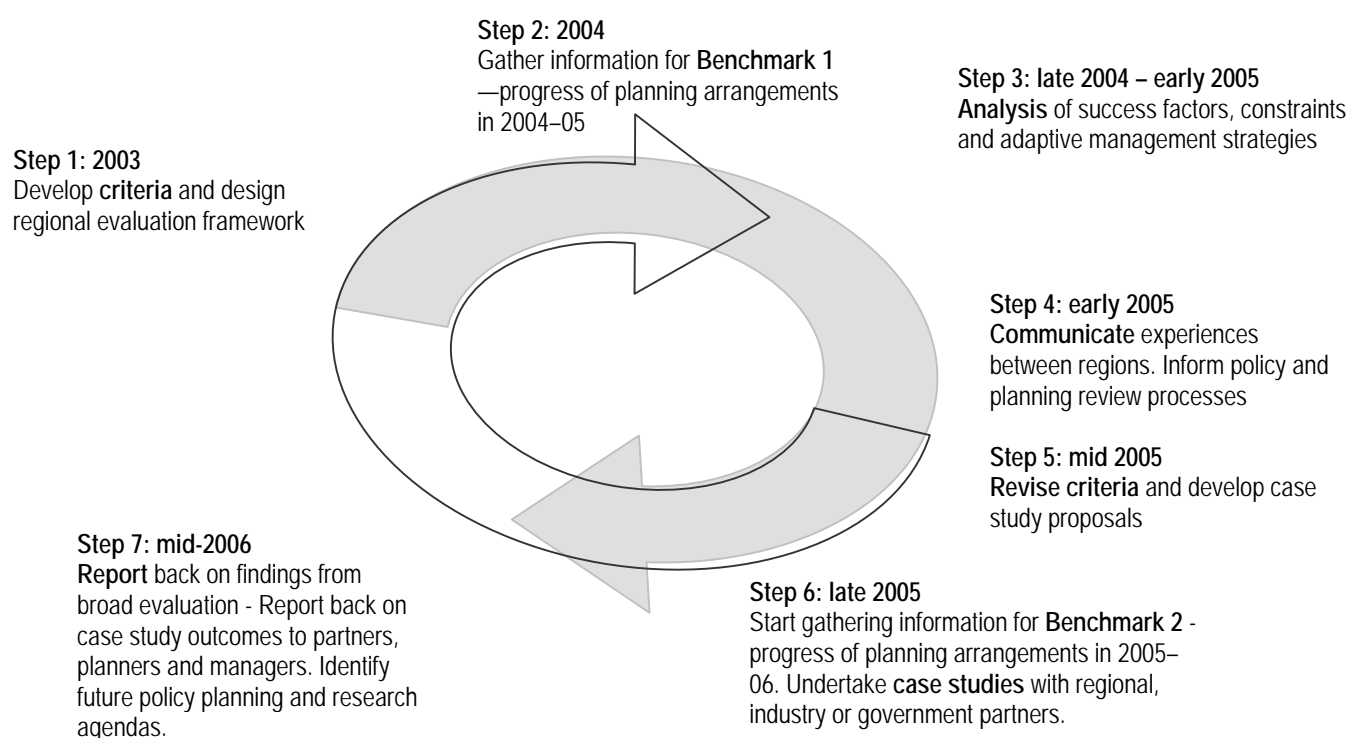
- **Regional context**—the regional ‘background’ or ‘setting’ in which planning and management occurs, including history, politics, and place and stakeholder culture.
- **Regional structures** — including organisations, governance structures, rules, policies and funding structures.
- **Processes**—including modes of operation, procedures, and interactions between managers, stakeholders and organisations.
- **Outcomes**—including enabling outcomes such as improved capacity of individuals and NRM institutions, establishing on-ground delivery mechanisms and resource condition outcomes.

Information gathered under this framework for the benchmarking process was collected through interviews with key staff of the regional NRM bodies and state government regional coordination groups (RCGs), participant-observation of regional forums and regional planning activities and undertaking a detailed analysis of regional NRM plans and investment strategies.

5. Approach and impact strategies

The project has a number of discrete steps. These steps make constitute two main cycles of a systematic and participatory evaluation process. The implementation of the project also provides for refinement of the approach between evaluation cycles. Figure 2 below outlines the project’s major implementation steps and associated timeframes.

Figure 2: Major project implementation steps 2000–06



The adoption strategy of the project relies on maintaining good working relationships with research partners and participants. These include regional NRM bodies, government agencies, and NRM stakeholder organisations. Some specific adoption and research impact strategies involve:

- Regular progress reports and in-progress findings to the **Qld Regional NRM Groups Collective** and to state government agency **Regional Coordination Groups**, particularly in Northern and Central regions of Queensland;
- Negotiate **involvement agreements** with participants including industry, government and regional body participants in NRM planning activity; promoting adaptive management processes through close liaison with them and timely feedback on results;
- The project team includes government agency staff engaged in monitoring and evaluation of NRM programs and supports **access to decision-makers**;
- Direct submissions: The project team was invited to provide a **submission to the Australian Governments Regional Implementation Working Group** in 2004 on findings to date. Key findings of the April 2005 benchmark report were presented to the **Qld/Australian Government Joint Steering Committee** and informed debate on the “green paper” on the future of regional planning arrangements in Qld, during May 2005.
- Promote the **sharing of lessons** and experiences between regions and jurisdictions through workshops with project partners and participants and documenting the outcomes of those **workshops** as good practice planning and policy design considerations (see outputs 2004-5)
- Communicating with professional institutions for planning and environment **through conferences, symposia and seminar forums**
- Contributing debate within the savannas CRC on improving policy impact of the CRCs research agenda.
- A major adoption strategy in the project’s final year involves conducting several discrete case studies during 2005–06 (see Section 7.2).

6. Outputs and contribution to date

6.1 Designing the evaluation framework

- Report on concepts and **methods for evaluating regional plans**—consisting of Criteria designed for plans in Australia’s savanna regions incorporating biodiversity, sustainable grazing, water quality and social and economic attributes and protocols for applying the methods and criteria to regional plans
- Report on concepts and **methods for evaluating regional planning arrangements** based on regional context, structures, processes and outcomes.

6.2 First Benchmark Report 2004–05

The first **Benchmark Report** (April 2005) provides a synthesis assessment of natural resource planning and implementation in the savanna regions during 2004–05. The key findings are reported against the criteria using data collected between late 2003 and early 2005 – the start up and planning phase of regional NRM. The 2004–05 Benchmark Report also outlines the critical constraints faced by planners and managers during this period in establishing regional arrangements. It also evaluates the effectiveness and adequacy of state and regional level responses to these challenges. A major contribution of information to the Benchmark Report was the analysis of data from **interviews** with regional planners and RCG members, **participant observation** of regional NRM fora and the review of regional NRM plans (see Section 6.3 below).

A workshop was conducted with the Regional Groups Collective in June 2005 to develop **practical strategies** to address unresolved challenges identified in the 2004–05 Benchmark Report including engaging local governments, working with traditional owners, industry groups and state governments.

6.3 NRM plan reviews and regional planners workshop

During January and February 2005, nine accredited regional NRM plans were reviewed. These included plans for Northern Gulf, Southern Gulf, Wet Tropics, Fitzroy, QMDC, Condamine, SEQ, SEQWC, and Desert Channels. An additional four *Regional Coastal Management Plans* were reviewed: Cardwell Hinchinbrook; Wet Tropical Coast; Draft South-east Queensland; and Curtis Coast. This work built on an earlier review of regional NRM plans, existing Water Resource Plans and Regional Plans developed under the Queensland Intergarted Planning Act 1997 ¹. This earlier review was conducted in 2002–03.

The extent to which plans addressed a range of regional assets such as coastal and marine, social and economic or biodiversity outcomes, was evaluated through a rational planning framework of major components, including 1) planning context 2) condition and trend information 3) targets and objectives 4) priorities and options 5) implementation and investment tools and 6) monitoring, reporting and evaluation frameworks. A final **NRM Plan review report** in which chapters cover social and economic; water quality; coasts and marine; biodiversity, soil and pasture health; carbon and energy themes is available.

A workshop was held in Brisbane on 9 March 2005, with 16 regional NRM planners and consultants engaged in NRM plan development from regions in Queensland, Northern Territory and Western Australia. The purpose of the workshop was to ground-truth plan review findings and to provide a forum for planners to share lessons and experiences. The **NRM planners’ workshop report** highlights planners’ experiences in setting targets and priorities for their regions. The report also includes recommendations for future design of regional NRM **planning guidelines**.

The project team members have also contributed to the development of the **Integrated NRM Plan for the Northern Territory**, in cooperation with the Landcare Council of the Northern Territory and the (then) Department of Infrastructure Planning and Environment planning team in late 2004. Building on

¹ McDonald, G. et al 2004 Evaluating Regional Resource Management Plans, Paper prepared for CSIRO/CIRM Symposium on Regional Natural Resource management Planning: the challenges of evaluation as seen through different lenses, Brisbane, 15 October 2004). McDonald et al, 2005 Internal Technical Report: Desktop review of regional NRM plans in Northern Australia; Maher et al 2005 (in progress) NRM Planners Workshop—Trigger Paper and Proceedings: Healthy Planning Systems Project, Tropical Savannas CRC, Wednesday 9 March.

the key findings from Northern Territory Planning Project (TS–CRC Project 3.1.1) a revised **summary report** of regional planning directions for the Northern Territory was produced in July 2004.

7. Looking ahead: Workplan and outputs for 2005–2006

7.1 Benchmark Report 2

The second **Benchmark Report** (Due mid-2006) will be a synthesis assessment of natural resource planning in savanna regions and will give particular consideration to investment and implementation outcomes from planning activities. This second benchmark process will have two major components 1) a survey of regional NRM planners and managers across the north, and 2) case studies supporting more detailed work with particular stakeholder groups or specific NRM challenges in regions. These are discussed in turn.

7.1.1 Survey of regional arrangements

The project team is currently completing a web-based survey of regional NRM arrangements. The purpose of the survey is to provide an update on how planning partnerships, institutional arrangements and implementation are progressing in 2005–06. The survey includes Queensland, Northern Territory and Western Australian natural resource planners and managers, the latter two of which were not included in the 2004 interviews. The survey will highlight how planning arrangements are working on the ground in different jurisdictions. It will also help identify the unique challenges and opportunities that exist in these diverse areas.

Another important purpose of the survey is to identify important and common issues limiting success of NRM arrangements that need to be addressed. The survey will also help to provide a ‘Northern Australia’ perspective on the delivery of programs such as the NAPSWQ and NHT. The findings of the survey will provide important input into the second Benchmark Report, which will focus on investment and implementation outcomes from planning activities in savanna regions.

Methods

The web-based survey format was chosen as the most effective and efficient means to gather data from across Queensland, the Northern Territory and Western Australia. The advantages of using a web-based survey as a data-gathering tool include ease of administration, low cost and speed, while also allowing for the streamlining of data analysis.

To ensure a high level of confidentiality and security, access to the survey has been restricted by password and the survey has been put on a page that can only be accessed directly (i.e. there are no links to it from pages other than the email invitation).

The survey questions have been developed in accordance with the plan evaluation criteria that were utilised in the first Benchmark Report. In total, the survey consists of 22 questions, including six short answer questions and 16 Likert Scale questions. Questions are mainly concerned with the strengths and weaknesses of current regional NRM arrangements, the level of stakeholder involvement and the degree to which data, information and experiences are shared between groups in the regions. See **Appendix 3** for a copy of the web-based survey.

Proposed Analysis

Some of the information from the survey will be analysed qualitatively. These themes will be based on responses to the open ended questions relating to:

1. Perceived changes to regional NRM arrangements over the last 12 months.
2. Strengths of the current regional NRM arrangements.
3. Weaknesses of the current regional NRM arrangements.
4. Factors needed to ensure the success of the regional arrangements over the next one to three years.
5. Major achievements to date and
6. Expected longer-term outcomes.

Once a thematic coding structure is defined, each open-ended response will be individually coded to that structure. Individual responses relevant to each theme will then be merged and analysed as a common group of responses to draw out the commonalities and variations on each theme.

Ordinal data collected from the Likert scale questions will be analysed using the following descriptive and inferential techniques to summarise commonalities and differences between responses and between regions.

Box 1 below shows an example of the proposed reporting structure for the second Benchmark Report. This example uses hypothetical responses to the statement 'roles and responsibilities in regional NRM arrangements are clearly understood by all parties'.

Box 1: Example of proposed reporting structure in Benchmark 2 report

Responses to the statement 'roles and responsibilities in regional NRM arrangements are clearly understood by all parties' are reported below.

State (n=92)

There was a strong perception amongst respondents that roles and responsibilities were well understood in their region with 62 per cent strongly agreed and further 18 per cent 'agreed' with the statement.

Trend (n=92)

Again there were consistent views (85%) that this understanding was improving over time (or had improved greatly) in the last 12 months in regions. This is consistent with views from 2004–05 that during that earlier period roles and responsibilities were in the process of 'clarifying' during the planning and investment negotiation phases in regions.

Significance (n=91)

Regional respondents however stated a greater range of views on the relative importance of this factor to successful regional arrangements. The overall (average) modest level of significance may reflect that this is becoming less important as new roles normalise in regions. This was also evident in the justifications and examples presented below.

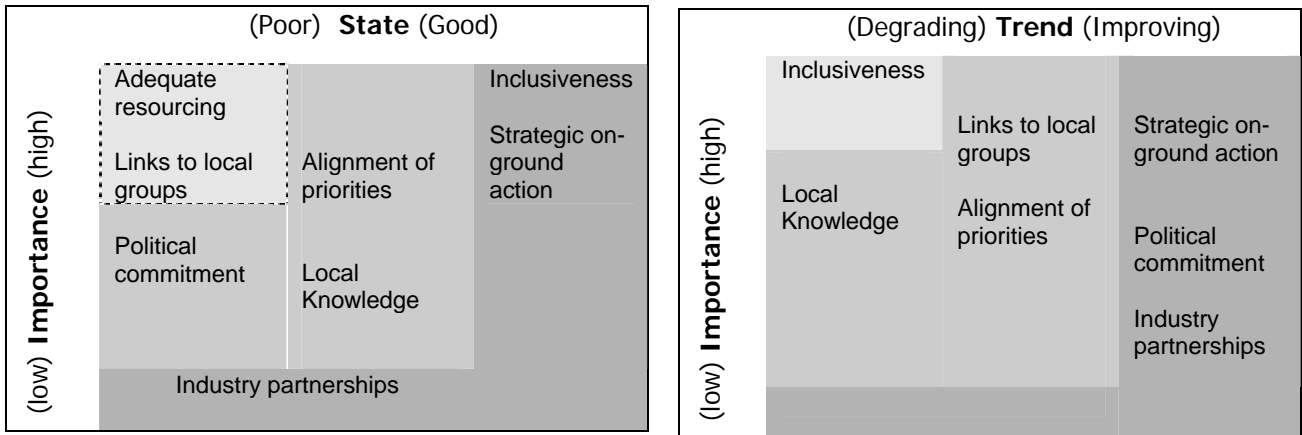
Justifications and examples provided

"...short series of quotes illustrating major trends or providing a perspective on the range of experiences in regions – as well as tangible examples of progress or issues" Respondent 3

7.1.2 Implications for management

To identify key issues for management, respondents' perspectives of the *state* of NRM planning arrangements can be charted against perceived *importance* to successful regional NRM. In the mock up example provided below *links to local groups* is a critical management concern given its reported high importance and poor current state. This synthesis could also be supported by analysis of open-ended questions from the survey.

Figure 3. Identifying critical management needs in regions using state and trend



Similarly, respondents' perspectives of the *trend* of factors affecting NRM planning arrangements can be charted against their perceived *importance* to successful regional NRM. In the below example factors such as inclusiveness and use of local knowledge is seen to be degrading despite high importance and current good condition (above). *Industry partnerships* and *political commitment* however can be seen to be improving.

7.2 Case studies

7.2.1 Rationale

The first benchmark report contributed to assessing the health of regional savanna planning arrangements. A number of case studies are being undertaken to build on the understanding of specific parts of NRM planning systems currently operating in regions, that is, key issues that either underpin evaluation criteria or have emerged as issues or gaps. Moreover the case studies are designed to involve a broader range of informants and stakeholders than the benchmarking process. Importantly, the case studies form a major component of the projects communication and adoption strategy.

7.2.2 Case study descriptions

Case studies are being co-developed with relevant savanna stakeholders with each study involving at least two regions across the savannas. They have a focus on lesson sharing and application of research outcomes through adaptive management processes. The mode of delivery of the findings will be negotiated with participating stakeholders. Findings from the case studies will also contribute to the second Benchmark Report in mid 2006. Full descriptions and updates on the case studies are available by clicking on one of the 10 case studies listed below:

1. Pastoral land use and incentives for regional planning
2. Linking economic development and NRM agendas in regions
3. Biodiversity information in rangelands
4. Relevant science in the rangelands
5. Regional engagement approaches in remote communities
6. Defending the environment
7. Water quality improvement—reducing diffuse source pollution through regional plans
8. Indigenous involvement in monitoring and evaluation
9. Regional investment patterns and trends in NRM
10. Regional investment in weeds outcomes

Case Study 1: Pastoral land use and incentives for regional planning

The ability of regional NRM activities to work cooperatively with the pastoral industry as a major land user, economic activity and resource manager in savanna regions, is critical.

Recent findings indicate that current partnerships between industry and regional NRM activities are strong in some savanna regions while poor in others. There are several issues that will influence future partnerships at the regional level:

- impacts and opportunities from changes in policy, legislation and planning for NRM and regional development,
- regional planners' place a high reliance on 'incentives' and property planning to deliver regional outcomes,
- the role of industry led property scale delivery programs,
- difficulties in addressing social and economic needs through regional NRM and,
- the recognition of diversity of pastoral land users, enterprise types and management aspirations in savanna regions.

Some key questions

What parts of the pastoral 'industry' are currently involved in regional planning and implementation activities? Do current 'incentives' for resource management provided through regional planning approaches match industry management needs and operating environments? What strategies are required for designing more effective incentives and strengthening industry partnerships (social, economic, landscape)?

Approach

The approach involves four main steps of defining aspirations of pastoral industry sectors in case study regions; determine current incentives being provided through regional scale or state level activities; Appraise the 'fit' of incentives with management needs; and, develop discussion paper on strategies to improve incentive design and industry partnerships.

Participants and regional areas involved

The case study is proposing to work with pastoral lands or grazing implementation officers from regional NRM bodies in the VRD, Sturt or Katherine-Daly in the NT, the Kimberley/Ord in Western Australia, and the Southern Gulf (or Rangelands NRM network) in Queensland. The case study also seeks to involve policy and technical officers from agencies such as AgWA, NRETA (NT), NR&M and DPI&F (Qld) and pastoral industry peak groups such as the PGA, Agforce and NTCA.

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Case Study 2: Linking NRM & economic development planning in regions

The emphasis on sustainable regional development in Northern Territory government policy has seen considerable effort in establishing local and regional governance and planning arrangements to support that agenda. More recently, the future of long term funding and engagement structures for natural resource management are also being re-considered. Currently however, government investments and community efforts in economic development and natural resource management in regions are fractured. An opportunity now presents itself to rethink the 'separateness' of these two agendas and explore approaches for more integrated and effective regional models of planning, management and investment for sustainable outcomes in regional communities.

Some key questions

The goal is to explore ways to embed natural resource management thinking, priorities and investment into well-resourced and inclusive regional development models. In order to do this the following questions will be explored:

- What are the current drivers for regionalism, and can existing activities and social infrastructure be built upon and **aligned** better in regions?
- What **benefits** may arise (e.g. improved government coordination of program delivery, strengthened community engagement networks, and, improved frameworks for sustainable economic and social development options linked to land and natural resource use).

- What is a **sustainable** options and alternative models for regions for devolving responsibility for governance, planning, regional engagement networks, funds management and coordination e.g. what role for regional development boards and regional authorities?

Approach

The case study will draw and expand upon recent research conducted by the Tropical Savannas CRC and relevant examples and lessons from recent regional planning experiences in the Territory, such as the Daly IRLUP, and other jurisdictions. A series of options could be explored through development of a short discussion paper to precede a policy impact workshop conducted by the CRC in February 2006.

Participants and regional areas involved

The case study intends to work closely with regional planning, policy and program delivery staff of NRETA, LGANT, DCDSCA.

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Case Study 3: Integrating biodiversity science into regional NRM action

Some key questions

This case study seeks to identify practical strategies for improving the use of biodiversity science in regional NRM implementation. In doing this it will develop broader recommendations for government, scientists and regional bodies for managing resource issues such as grazing pressure, fire, and native vegetation in rangeland regions. It will also explore possibilities for developing a multi-level approach to biodiversity conservation planning in rangeland NRM regions.

Method

Collaboratively work with regional NRM bodies in Queensland's rangelands and possibly NT and WA to plan and conduct workshop on integrating biodiversity science into regional NRM planning in rangelands. The aim of the workshop would be to bring together biodiversity researchers and regional NRM planners and technical staff to develop better approaches and lessons for integrating biodiversity conservation into regional NRM planning. The geographic focus would be on Queensland's rangelands but could be extended to include NT and WA. The workshop would be held in late 2005 and form a foundation point for an on-going conversation between biodiversity implementation officers and the science community.

Partners and participants

Regional NRM bodies, scientists working in rangelands and savanna regions including TS-CRC researchers on the Biodiversity Information project.

Dr Clive McAlpine, Tel: (07) 3365 6620 Email: <c.mcalpine@uq.edu.au>

Case Study 4: Relevant science delivery in the rangelands

Improved natural resource management depends on the ability to access and *effectively use* relevant information for active adaptive management. The Benchmark report identified the need for strong, healthy structures for integrating knowledge, particularly structures that support data and information sharing and which ensure that there are *effective* arrangements in place to access external expertise, science and science providers. Yet frustration exists over the difficulties in converting existing data into information that supports regional planning and implementation. Interviewees commented on the high transaction costs involved in 'managing' scientists and researchers and ensuring alignment of that research with local or regional priorities, including its appropriateness to community defined needs. According to state agency respondents, the converse was also true, with recent planning activity provoking a significant learning curve for the scientific community, in some areas precipitating a rethink of how science is done and delivered so that it can better support regional NRM delivery. The traditional transfer-of-technology (TOT) extension model provides little support to land managers who require more integrated information to support their management systems. Processes are required that support learning environments which collaboratively develop understanding and improve access to integrated knowledge. This is particularly true in the rangelands where natural resource information is limited and feasible management approaches must accommodate sparse populations, low intensity of land and natural resource use and limited available technical support. Some powerful examples of a more integrated collaborative learning approach between scientists, regional bodies and land managers have been developed in the State-level Investment Projects (SIPs) and other state-wide projects.

Some key questions

This case study will examine a number of these co-learning initiatives, with an emphasis on those considered to be 'successful', in order to analyse what has worked well and what hasn't. This includes identifying attributes of successful and unsuccessful collaborative learning approaches and how participants define success.

Methods

Content analysis of semi-directed taped interviews with selected SIP/state-wide coordinators, project managers, relevant regional body personnel and land managers.

Participants and regional areas involved

Selected SIP/state-wide coordinators, project managers and relevant regional body personnel and land managers, extending if possible to Western Australia and Northern Territory.

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Case Study 5: Regional engagement approaches in remote communities

A theme that emerged from the first Benchmark Report for the Healthy Regional Planning Systems Project was the importance of effective community engagement to underpin the NRM regional arrangements. In order to understand community engagement in more detail, show-case successes, and recommend improvements, a case study involving three jurisdictions (WA, NT and Qld) will focus on the unique challenges of community engagement in remote communities of Australia's tropical savanna regions.

Some key questions

The goal of the case study is to describe the various approaches to community engagement among a selection of regional bodies and critically analyse the implications of those approaches in terms of representativeness and disenfranchised stakeholders, and critical success factors and strategies. The specific questions the case study will address are:

1. Why do the regional bodies engage with communities?
2. Who is targeted? Who is engaged? Who has disengaged? Who hasn't been engaged?
3. How are communities engaged? What tools are used to do this?
4. What works and what does not work? How do the regional bodies know if the approach is working? How does the regional context affect this?
5. Examples of innovative approaches to engagement in Australia's tropical savannas

Approach

The data for the case study will be gathered through focus groups in three regions with Regional Body staff involved in community engagement.

Participants and regional areas involved

The case study will be conducted in three locations: (i) Northern Gulf – Queensland; (ii) Top End and savanna sub-regions of the Northern Territory; and (iii) Kimberly Region – Western Australia. The case study will focus on Regional Body staff involved in community engagement.

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Case Study 6: Defending the environment

The overall objective of this project is to examine the role of Defence as a stakeholder in regional natural resource management (NRM) planning arrangements in northern Australia. This case study forms part of a Masters research thesis work.

Key questions

The project has the following aims:

- To examine partnerships established between Defence and other stakeholders across that integrate Defence training and surveillance operations and objectives with regional NRM objectives.
- To examine Defence and other stakeholder perspectives on the role of Defence as a NRM stakeholder in Northern Australia

Approach

The role of ADF in NRM will be examined through the review of relevant plans and interviewing relevant stakeholders in various case studies across Australia's savanna regions. This analysis will focus on

- Examples of cross-tenure NRM partnerships that operate across the borders of Yampi (WA), Mt Bundy (NT) and Shoalwater (Qld) training activities and that meet ADF and other NRM and community stakeholder objectives
- Examples NRM partnerships that have been established with NorForce – e.g. NorForce partnerships with Indigenous groups; role in Northern Australia's Ghost Net project, etc.

Partners and participants

Australian Defence Force personnel, NT, Kimberly and Fitzroy Regional NRM Bodies, other relevant NRM stakeholders involved in Defence NRM partnerships

Capt. Lisa Bush, Tel: (02) 9600 4836 Email: <lisa.bush@defence.gov.au>

Case Study 7: Water quality improvement—reducing diffuse source pollution

Reducing the harmful downstream effects of diffuse source pollution from farming, grazing and urban areas is one of the most intractable problems for natural resource managers - globally. The central problem is that pollution sources are manifold, they are difficult to observe and technical understanding sufficient to define what to target and how remains obscure and contested. While most governments avoid statutory approaches, voluntary approaches are not very ineffective. Theoretical reviews and current good practice point to the need for SMART targets within an adaptive approach but the actual details and implementation of such approaches remain to be proven. Regional bodies and catchment groups have a major responsibility to address diffuse source pollution especially in rivers that drain into important receiving waters such as the Great Barrier Reef lagoon or Moreton Bay. The initial round of NAP and NHT2 regional plans were unable to set targets for water quality and struggled to define cost-effective priorities for on ground action.

Some key questions

- How is diffuse source pollution being addressed in regional plans in northern Australia?
- Can the theory for diffuse source pollution management be revised and applied in a northern Australia context?
- Can adaptive management work for diffuse source pollution management?

Approach

- Participatory methods in Moreton Bay Partnership Science Advisory Panel, Wet Tropics NRM plan through FNQ NRM Ltd
- Collaboration with scientists in both regions including CSIRO, Canegrowers, Queensland EPA and GBRMPA
- Review of regional activities through analysis of RIS's attendance at RGC meetings.

This case study will provide an improved understanding and further development of the core adaptive model for diffuse source pollution management. It will also support the implementation and evaluation

of SMART targets in a Wet Tropics catchment (Tully) as well as informing state and national policy discussions on water quality in Reef catchments and SE Queensland regions.

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Case Study 8: Indigenous involvement in monitoring and evaluation

The aim of this research is to draw on regional experiences and strategies to examine the key issues surrounding effective Indigenous engagement in the evaluation of NRM targets and actions. This will include regional initiatives to engage in cross-cultural monitoring and evaluation of the state of the environment and also the cross-cultural assessment of the effectiveness of management actions.

Approach

This research will start with a desktop review of regional NRM initiatives to engage Indigenous communities in the evaluation of NRM targets and actions. Three case-study areas will then be chosen to conduct more in-depth analysis. These case-study areas will be chosen on the basis of the following criteria:

- Regional body and Indigenous community support for this project
- Relationships established from previous research
- Time and resource constraints

Methods to conduct the in-depth analysis in chosen case-study areas will also draw on the above criteria but will aim to draw on a range of 'data' including information obtained from plan reviews and interviews.

The approach will also involve:

- Facilitation of an adaptive management workshop in Kakadu National Park to consider and test Indigenous participation in the assessment of feral damage evaluation of joint management decisions.
- Technical report produced from this workshop and other M&E lessons captured from initiatives being trailed in other regions (e.g. Wet Tropics, NAILSMA, Kimberly etc).

Partners and participants

Key partners and participants in the case study may include Kakadu Feral Animal Strategy Team and Kakadu NP, Peter Whitehead (CDU), Helen Ross (UQ), Dermot Smyth (JCU), Regional Bodies and NAILSMA.

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Case Study 9: Investing in regional outcomes—an analysis of trends

Having completed planning and investment design phases, regional NRM bodies are moving into the actual investment and implementation phase of activity. The investment planning is documented in *Regional Investment Strategies (RISs)*. These strategies outline, in most instances, the proposed investment programs and related activities for the period 2005–07. These strategies are predominantly NAPSWQ and NHT 2 funded. However, in several regions private sector or other funding sources have also been proposed and secured for regional action. Nationally agreed reporting protocols require regional NRM bodies to structure their investment to a series of notional *output categories*, namely planning, on-ground actions, capacity building, resource assessment or equivalent.

Some key questions

The goal of the case study is to gain a critical understanding of the income and expenditure patterns and trends of NRM investment in Queensland regions. The specific questions that the case study will address are:

- a. What do expenditure patterns say about a region's NRM priorities and needs?
- b. How do income and expenditure patterns change over time?
- c. How much of the investment is spent for on-ground activities?
- d. How much of the investment is used to cover core operational costs?

- e. What is the proportion of income from NHT/NAPSWQ versus private sector and other funding sources?

Analysing and tracking some of these broader trends and patterns will contribute to benchmarking progress against *outcomes criteria* in the broader project evaluation framework.

Approach

Investment patterns of Queensland's NRM regions will be analyzed by reviewing RISs, NAPSWQ and NHT Annual Reports, Regional Programs Reports and Regional Annual Performance Reports. At a later stage, case study regions will be chosen to conduct a more in-depth analysis of investments for specific resource targets (e.g. biodiversity, water quality). Interviews may also be used in the case study regions to gather more detailed information.

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Case Study 10: Evaluating regional investment in weeds outcomes

Invasive plant species (weeds) are recognised as one of the most serious threats to northern Australia's primary production, biodiversity conservation and cultural values. Weed management is an essential and integral part of sustainable resource use and management, but the challenges and opportunities are not uniform across northern Australia. Moreover new weed related problems are continually emerging that requires an adaptive response. Substantial public and private investments are being made through the NHT 2 regional framework to protect and improve the natural resource base and valued assets from a range of threats including weeds. The likely outcomes of this investment and its effectiveness in reducing the threats posed are yet to be assessed. This case study will provide an improved understanding of likely outcomes of regional investments in weed management in northern Australia documented in a technical report.

Some key questions

- How are weeds being addressed in regional NRM plans and investment strategies in northern Australia?
- What is the likely impact of the regional NRM investment approach on opportunities and challenges for achieving regional weeds outcomes?
- Are there some examples of innovative approaches to achieving weed outcomes through regional investment in savanna regions of interest to other regions?
- How to assess the multi-dimensional outcomes of investment in regional weed management that can support an adaptive approach in savanna regions?

Approach

This case study will draw on a recent national evaluation of weeds outcomes through regional NHT investments for DEH.

- Desktop review of regional investment through NHT2 in significant invasive species across the savanna region.
- An assessment in more detail of the effectiveness of these investments for selected case study NRM planning regions in northern Australia (e.g. Northern Gulf, Desert Channels and Northern Territory NHT regions).
- Research collaboration with Weeds CRC/CSIRO and Rainforest CRC, Cairns and regional NRM bodies in three case regions.

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7.2.3 Case study themes

In developing a framework for evaluating regional NRM planning arrangements, seven attributes of regional NRM planning arrangements were identified from a review of the literature: decision-making, collaboration, connectivity, participation, knowledge integration, adaptive management and return on investment. Based on these desired functional attributes, seven complementary *case study themes* have been developed to contribute to a more in-depth understanding of the issues and challenges emerging and to provide some insights into possible ways forward. The themes provide a framework for

integrating the findings from across the different case studies as well as for linking the case study findings to specific evaluation criteria. The case study themes are:

- **Devolution**—recognises that substantial devolution of technical capacity, planning resources and political authority is needed to progress towards integrated sustainable regional economic, natural resource and social decision-making.
- **NRM partnerships**—addresses collaboration as an ‘emergent’ process (i.e. it comes from the efforts of the participants) rather than a prescribed state of an organisation. It is in contrast to cooperation and coordination, which indicate static patterns of inter-organisational relations. Collaborative initiatives are a new adaptive approach to regional resource management problem solving.
- **Aligning institutions**—addresses a number of commonly recognised issues and problems relating to connectivity and alignment of purpose and priorities across an array of formal and informal institutions and between scales.
- **Engaging stakeholders**—inclusiveness is critical to ensuring planning and other policy processes are technically viable, practically workable and acceptable to stakeholders. Participative and inclusive approaches are important for sensitive responses to cultural and other social contexts by planners, building confidence in the fairness of the process and improving ownership over decisions and outcomes.
- **Integrating knowledge**—structures and processes recognise, value and integrate a broad range of knowledge sources are essential. There is a need to improve integrating basic knowledge of both natural and social systems and to support the broad sharing of existing information held by different stakeholders to address complex problems and promote understanding.
- **Adaptiveness**—recognises the need to create on-going cycles of learning and continuous improvement, expressed as ‘adaptive management’. Regional NRM planning processes need to demonstrate adaptive capacity: a capacity to make strategic and operational change as changing circumstance, knowledge or experiences present themselves. Adaptiveness is critical in complex regional planning systems where our knowledge and understanding is continually improving, and where implementation can lead to unexpected consequences. Adaptiveness needs to be structurally and culturally built into institutional arrangements which support regional NRM planning and related activities.
- **Achieving outcomes**—recognises that in regional NRM planning arrangements, there is a need to track progress towards substantive improvements in the way that natural resources are used and managed in the region. How this is done meaningfully in the context of long timeframes for responses and great variability is a key focus here. Factors such as cost-effectiveness and demonstrating multiple benefits arising from investment are considered.

The following table shows the dominant and secondary focus of the case studies in light of the above themes. In this way findings from individual case studies can be synthesised to provide directions for adaptive management, integrating knowledge or other themes to support the evaluation.

Table 1. Case studies informing themes

Case Study	1. Pastoral land use and regional planning	2. Linking regional development and NRM planning	3. Integrating biodiversity in regional NRM action	4. Relevant science creation in the rangelands	5. Regional engagement approaches in remote communities	6. Defending the environment	7. Water quality targets and actions	8. Indigenous participation in monitoring and evaluation	9. Regional investment patterns and trends in NRM	10. Regional investment in weeds outcomes
Devolution		✓							✓	✓
NRM partnerships	✓✓				✓	✓✓		✓		
Aligning institutions		✓✓					✓			✓
Engaging stakeholders	✓				✓✓	✓	✓	✓		
Integrating knowledge			✓✓	✓✓	✓		✓	✓✓		✓
Adaptiveness				✓	✓		✓✓			✓
Achieving outcomes			✓		✓	✓	✓✓		✓✓	✓✓

✓✓ Dominant focus
 ✓ Secondary focus

Appendix 1: Project publications

Papers

- Bellamy J (Ed) 2005. Regional natural resource management planning: the challenges of evaluation as seen through different lenses. The State of Queensland (Department of Natural Resources and Mines) QNRM05163, ISBN 1 921062 95 9
- Bellamy, J. and McDonald, G. 2005. Through multi-scaled lenses: A systems approach to evaluating natural resource management planning, in Bellamy J (Ed) 2005. *Regional natural resource management planning: the challenges of evaluation as seen through different lenses*. The State of Queensland (Department of Natural Resources and Mines) QNRM05163, ISBN 1 921062 95 9
- Bellamy, J., Smith, T., Taylor, B. and Walker, M. 2005. Regional natural resource management planning arrangements: Evaluating through the regional lens, in Bellamy J (Ed) 2005. *Regional natural resource management planning: the challenges of evaluation as seen through different lenses*. The State of Queensland (Department of Natural Resources and Mines) QNRM05163, ISBN 1 921062 95 9
- Hoverman, S. 2005 The value of evaluation through the local implementation lens, in Bellamy J (Ed) 2005. *Regional natural resource management planning: the challenges of evaluation as seen through different lenses*. The State of Queensland (Department of Natural Resources and Mines) QNRM05163, ISBN 1 921062 95 9
- Lane, M.B. and McDonald, G.T. 2005: The Limits to Community-based Environmental Planning: Operational Dilemmas and Practical Remedies. *Journal of Environmental Planning and Management*, 48(5), in press.
- Lane, M.B., McDonald, G.T. and Morrison, T. 2004: An Agnostic View on Regionalism, Decentralisation and other Silver Bullets: A Response to Thom. *Australian Geographical Studies*, 42(3): 398-403.
- Lane, M.B., McDonald, G.T. and Morrison, T. 2004 Decentralisation and Environmental Management in Australia: A Comment on the Prescriptions of the Wentworth Group. *Australian Geographical Studies*, 42(1): 102-114.
- McDonald, G T, 2005: "Adaptive management of diffuse-source pollution in Great Barrier Reef Catchments". Unpublished conference paper at *American Collegiate Schools of Planning Conference*, Kansas City, October, 2005
- McDonald, G., Taylor, B. and Robinson C. eds, 2005: *Desktop review of regional NRM plans: findings and lessons* Healthy Savanna Planning Systems Tropical Savannas Management CRC Project 3.3.5.
- McDonald, G T and S. Heyenga, 2005: "Diffuse source pollution management in Europe, US and Australia." Draft
- McDonald, G. and Roberts, B. in press: "SMART Targets for Great Barrier Reef Catchments." Paper submitted for publication in the *Australian Journal of Environmental Management*.
- McDonald, G., Taylor, B., McAlpine C., and Vagg, A.. 2005. Evaluating regional resource management plans, in Bellamy J (Ed) 2005. *Regional natural resource management planning: the challenges of evaluation as seen through different lenses*. The State of Queensland (Department of Natural Resources and Mines) QNRM05163, ISBN 1 921062 95 9
- Paton, Sandy, McDonald, Geoff, Curtis, Alan, Woods Mary, 2004: "Regional NRM – Is It Sustainable?" *Australian Journal of Environmental Management*. 11, 4, 254-259.
- Ross, H., Robinson, C.J. and Hockings M. 2005. Evaluation of indigenous co-management of natural resources, in Bellamy J (Ed) 2005. *Regional natural resource management planning: the*

challenges of evaluation as seen through different lenses. The State of Queensland (Department of Natural Resources and Mines) QNRM05163, ISBN 1 921062 95 9

Consultancies or Research Contracts

- Bellamy, J., CSIRO Sustainable Ecosystems, *Evaluation of Regional Investments in Significant Invasive Species (Weeds)*. For Australian Department of Environment and Heritage, Canberra \$82,000. 1/5/2005-31/7/2005.
- McDonald G, Robinson, C., Walker, M. & Taylor, B., CSIRO Sustainable Ecosystems, Healthy Savanna Planning Systems project (3.3.5), *Northern Territory Integrated Natural Resource Plan*, TS-CRC / Landcare Council of the Northern Territory, \$30,000, 29/10/2004-06/12/2004
- McDonald, G. and Dawson, S. 2004: *Northern Gulf Region Natural Resource Management Plan*. Georgetown. Northern Gulf Resource Management Group. \$113,000.
- McDonald G. and Taylor B. 2005, *Developing an agreed protocol for Management Action Targets and Resource Condition Targets*, Department of Natural Resources and Mines (Qld). \$10,000. October-November, 2005.

Conferences papers and presentations

- Bellamy, J and McDonald, G. 2004. Sustainable regional development: "Walking the talk" through enhancing regional governance capacity. Paper presented at ANZRSAI Conference, Wollongong, 28 September - 1 October, 2004
- Bellamy, J. 2005 Regional NRM planning: learning from the Australian experience. Presentation to the Macaulay Land use Research Institute, Aberdeen, Scotland. 13th June 2005.
- Bellamy, J. 2005 Linking science, policy and local governance for sustainable regional resource use planning. Presentation to *ISSRM2005*, 16th-19th June, Ostersund, Sweden.
- Taylor, B. 2005 Regional natural resource planning in Northern Australia: Progress, challenges & prospects'. Presentation to the Planning Institute of Australia's National Congress, April 18th 2005, Melbourne, Healthy Planning Systems project, TS-CRC
- Walker, M., Fisk, G., Taylor, B. and Smith, T. 'Planning for Queensland regions: getting coasts on the map', Proceedings of Coast to Coast conference 2004, 20-23 April 2004, Hobart.
- Walker, M. and Hoverman, S. 2004 'Healthy Savannas Planning project: Supporting better regional NRM through evaluation'. *Regional NRM Planning Conference – Sharing lessons from NSW, Victoria and Queensland*, 23-24 November 2004, University of New England, Armidale, NSW.
- Walker, M. et al, 2004 'Community engagement in natural resource management planning in Northern Australia'. *Participate 2004 – International Association for Public Participation*, Queensland State Conference, September 2004, Brisbane

Workshops / symposium hosted

- CIRM Occasional Symposium: Regional Natural Resource Management Planning: The challenges of evaluation as seen through different lenses*. CSIRO Sustainable Ecosystems and Consortium for Integrated Resource Management's Social Dimensions Working Group, Friday 15 October 2004, Queensland Bioscience Precinct
- Prioritising management action targets in the Northern Territory INRM Plan*, Landcare Council of the Northern Territory, Darwin, 30th November - 1st December 2004.
- NRM Planners Workshop*, CSIRO St Lucia, Brisbane, March 9 2005 - 18 regional planners from NT, WA and QLD to share experiences in developing and improving regional NRM planning practice. Workshop Report produced "Experiences and Lessons: regional NRM planners workshop".

QLD Regional NRM Groups Collective - Presentation of key findings from benchmark report, 1 June 2005, followed by a facilitated workshop with regional NRM groups June 2, 2005 exploring strategies for improving regional planning arrangements.

QLD State Government Agency Regional Coordination Group Forum, 21 June, Brisbane, Presentation of key findings and directions from the project Benchmark report.

QLD / Australian Government Joint Steering Committee meeting, 16 June 2005, Karumba, Presentation of key findings and directions from the project Benchmark report.

Appendix 2: Project team and contributors

Name	Position Classification	Organisation
Geoff McDonald	Project leader	CSIRO
Bruce Taylor	Project manager	CSIRO
Jenny Bellamy	Research Scientist	CSIRO
Clive McAlpine	Research Scientist	UQ
Tim Smith	Institutional Analyst	CSIRO
Sonja Heyenga	Research Officer	CSIRO
Evelyn Meier	General manager QDNR&M	QDNR&M
Suzanne Hoverman	Research, Govt liaison	QDNR&M
Cathy Robinson	Monitoring and evaluation unit QDNR&M	QDNR&M
Regional Coordination Group (QLD) members		QDNR&M
Regional NRM bodies		QLD, NT &WA
Brent Williams	Director, NRM & Community engagement Principal policy advisor	NRETA (NT)
Peter Whitehead	Senior Research Fellow	CDU (NT)
Paul Novelty	Manager, Rangeland Research	Dept. Agriculture WA
Susan Worley		Waters & Rivers Commission

Appendix 3: Web-based survey of regional NRM



Survey on regional NRM arrangements

Thank you for agreeing to participate in this survey on regional natural resource management (NRM) arrangements. The survey should take approximately 15 to 20 minutes, depending on the level of detail you wish to provide.

We would like to reassure you that your identity will not be disclosed when reporting the information and your responses will remain strictly confidential.

Your password:

Figure 1: Screen capture showing examples of open-ended questions

The screenshot shows a web browser window with a survey. At the top, there is a navigation bar with icons for home, back, forward, search, and print. Below the navigation bar, a red note reads: "Note that you can save your responses at any time by clicking on the 'Save responses' button at the end of the page, and return to complete it at a later time. If you have completed the survey, please check the box near the button." The survey consists of six numbered questions, each followed by a large text input area with a vertical scrollbar on the right side.

Note that you can save your responses at any time by clicking on the "Save responses" button at the end of the page, and return to complete it at a later time. If you have completed the survey, please check the box near the button.

1. Compared to 12 months ago what is different about doing NRM business in your region?
2. What are the key strengths of the current regional NRM arrangements in your region?
3. What aspects of the current regional NRM arrangements are not working?
4. In the next 1-3 years what needs to happen for the regional NRM arrangements to be successful?
5. In your region, what do you see as the major achievements from the new regional NRM arrangements so far?
6. What outcomes do you expect to see from regional NRM in the longer term?

Figure 3: Final page of survey including sign-off

provide an example if possible):

21. New partnerships between industries, government and communities are emerging to address NRM challenges in the region

Current: strongly disagree neutral strongly agree don't know

Over the last 12 months: has got much worse has stayed the same has greatly improved don't know

Importance to regional NRM is: not important critically important don't know

Please justify your answer (and provide an example if possible):

22. Taking a regional approach to NRM has made existing on-ground activities in this region more strategic

Current: strongly disagree neutral strongly agree don't know

Over the last 12 months: has got much worse has stayed the same has greatly improved don't know

Importance to regional NRM is: not important critically important don't know

Please justify your answer (and provide an example if possible):

I have completed the survey: