

Part 1: Introduction and overview

1.1 Purpose of this report

This report presents the results of eight case studies of issues in the design and implementation of regional natural resource management (NRM) in Northern Australia. These case studies accompany other research results that designed and applied benchmarks and criteria for evaluating regional NRM plans and regional planning arrangements.

Regional NRM plans and planning processes are rapidly changing in the north and criteria were applied systematically to northern regions in a longitudinal study through 2004-5 and 2005-6. Case study research allowed more in-depth understanding of specific parts of NRM planning systems currently operating in regions and allowed involvement of a broader range of informants and stakeholders than the benchmarking process. A multi-case study rarely produces generalisations, providing instead insights into various parts which make up the whole, in this case, of regional arrangements. To understand and to appreciate the whole phenomenon, it is helpful to know its grand sweep and the complexity of its experience in a number of instances (Crabtree and Miller 1999). The case studies reveal how regional arrangements operate in the different situations framed by the focus of each case study.

In developing a conceptual framework for evaluating regional NRM planning arrangements, seven desired functional attributes of regional NRM planning arrangements were identified from a review of the theoretical and empirical literature: decision-making, collaboration, connectivity, participation, knowledge integration, adaptive management and return on investment (Bellamy *et al.* 2005a). The case studies presented here address these attributes.

1.2 Regional natural resource management and northern Australia

Australian governments at national and state level have widely adopted regional policy frameworks to guide sustainable development. In particular, regional approaches are expanding to address many NRM issues, such as sustainable land use, water supply, water quality and biodiversity, through strategic regional investment particularly through programs such as the National Action Plan for Salinity and Water Quality (NAP) and the Natural Heritage Trust (NHT). There are several reasons for this development, including:

- “There is increasing recognition that sustainably managing Australia’s natural resources requires regionally based approaches that address issues in an integrated way;
- There are strong interrelationships between the various resource and environmental degradation issues occurring in regions that call for integrated management responses;
- Regional planning is an effective way to engage all stakeholders and to build on activity at the property and local levels, while also complementing state and national activity;
- A regional approach offers a framework for planning and action that can be adapted to suit specific circumstances - it enables the social, economic and environmental dimensions of a region to be considered in an integrated way; and
- The regional scale is also an appropriate scale for negotiating trade-offs, resolving conflict and for determining priorities and shared investment arrangements where there is a need for coordinated action over a large area involving many people.

NAP is a partnership approach to NRM based on the development of regional plans by landholders and local communities, within a national accreditation framework to address salinity and water quality problems. NAP targets 21 regions across Australia most affected by salinity and poor water quality. Several of these are in northern Australia. NAP also aims to help communities, in partnership with governments, take responsibility for planning and implementing regional natural resource management strategies.

The second phase of the NHT focuses on investing in strategic projects at the regional level on a three-year rolling basis. Regional NRM bodies have developed and commenced implementing integrated NRM plans in consultation with a range of community interests. The plans are the basis for investment in priority areas by the Commonwealth, the States and Territories and industry and other community groups.

The NAP and NHT are now the main drivers for regional NRM and planning throughout Australia. The NAP/NHT focus on water quality, salinity and riparian zone management, sustainable agriculture, biodiversity and coastal management issues.

As well, states and territories are increasingly producing regional NRM plans that cover sectors such as rivers, forests, and economic development. These are highly relevant to the composite (if not integrated) planning activity addressed in this project. Local governments in consortia such as the Southern Gulf region of Queensland, or the Kimberley region of Western Australia also produce plans, mostly with a land use and infrastructure focus.

Regional NRM is thus a composite of a whole raft of plans at scales from national to local, varying from state to state, and even within states. Occasionally, there is a subsidiarity relationship between plans, such as those linking national or state conservation priorities into local planning and approval systems or regional cooperative local government plans into state resource management programs. More often, the set of plans is disjointed, uncoordinated and even contradictory. However, it is their aggregate as the planning framework for NRM in a region that needs to be evaluated.

National programs, such as NAP/NHT, and state wide programs in Western Australia and Queensland are consistently applied to temperate regions and northern regions alike. It may be that NRM in Australia can be applied equally to southern and northern regions but there are some significant contextual differences that suggest evaluating the northern experience is worthwhile. These include:

- Land and natural resources, local economies, communities and cultural values are closely intertwined because communities rely substantially on the use of environmental and natural resource values and for indigenous people land is central to their cultural survival.
- The north has underdeveloped or low intensity use of water and land resources with the potential for economic development.
- Natural resources are less degraded than in the south leading to priorities to protect and maintain rather than rehabilitate and restore. The north has the opportunity to adopt principles of sustainable resource use ahead of time.
- The populations and role of indigenous people in land ownership and regional development is substantial in the north. Programs dealing with natural resources or land have significant implications for indigenous social and cultural well-being.

- The limited economic base, low populations and particularly remoteness in regions of the north, militates against the effectiveness of many of the instruments of government, community engagement and community capacities.

1.3 The Healthy Planning Systems evaluation

The Tropical Savannas Management CRC (TS-CRC) has supported a three year project designed to track the progress of regional planning arrangements across northern Australia. The Healthy Savanna Planning Systems project is part of the TS-CRC's regional planning portfolio. It was initiated in late 2003 and will run until June 2007. The overall project goal is to contribute to effective regional NRM policy, planning and implementation processes in northern Australia. The project is tracking progress of regional NRM, identifying 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 (see McDonald et al 2004; McDonald et al 2005; Bellamy et al 2005);
- To collaborate with regional planners and relevant government agencies to apply the evaluation framework in savanna regions; and
- To support adaptive management of regional NRM policy, regional arrangements and planning practices through evaluation.

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, Mines and Water (DNRMW) has provided the resources to include Queensland's non-savanna regions in the evaluation (see Figure 1 below).

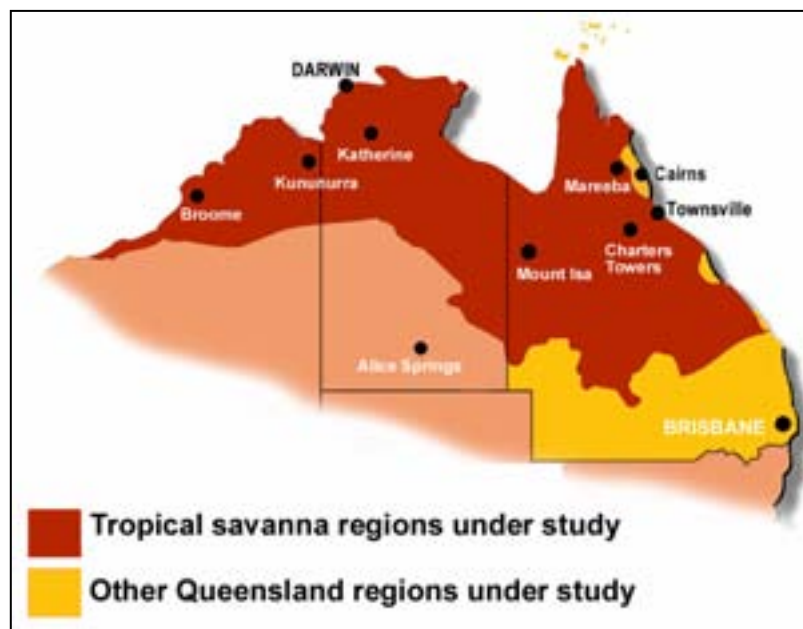


Figure 1. Study area of the project

The project has a number of discrete steps which constitute the 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 outlines the project's major implementation steps and associated timeframes. The first *Benchmark Report 2004-5*, has contributed to identifying the characteristics and dimensions of specific criteria of the evaluation framework for assessing the health of regional savanna planning arrangements (McDonald et al. 2005a). The second *Benchmark Report 2005-6* (Taylor et al 2005) is a second evaluative snapshot of regional planning arrangements using the criteria. The findings of the second Benchmarking process was undertaken parallel with the development and these case studies.

The purpose of the case studies is to provide more detailed work with particular stakeholder groups or specific NRM challenges in regions. Case studies were undertaken to contribute to a better understanding of the dynamics of specific elements of regional NRM planning systems as well as to the evaluation of their impacts and outcomes. Moreover, the case studies have been designed to involve a broader range of informants and stakeholders than the benchmarking process. Importantly, the case studies form a major component of the project's communication and adoption strategy. These case studies are stand-alone contributions to the Healthy Savanna Planning Systems project as discussed below but they also inform the case study themes and evaluation criteria as detailed in Table 1.

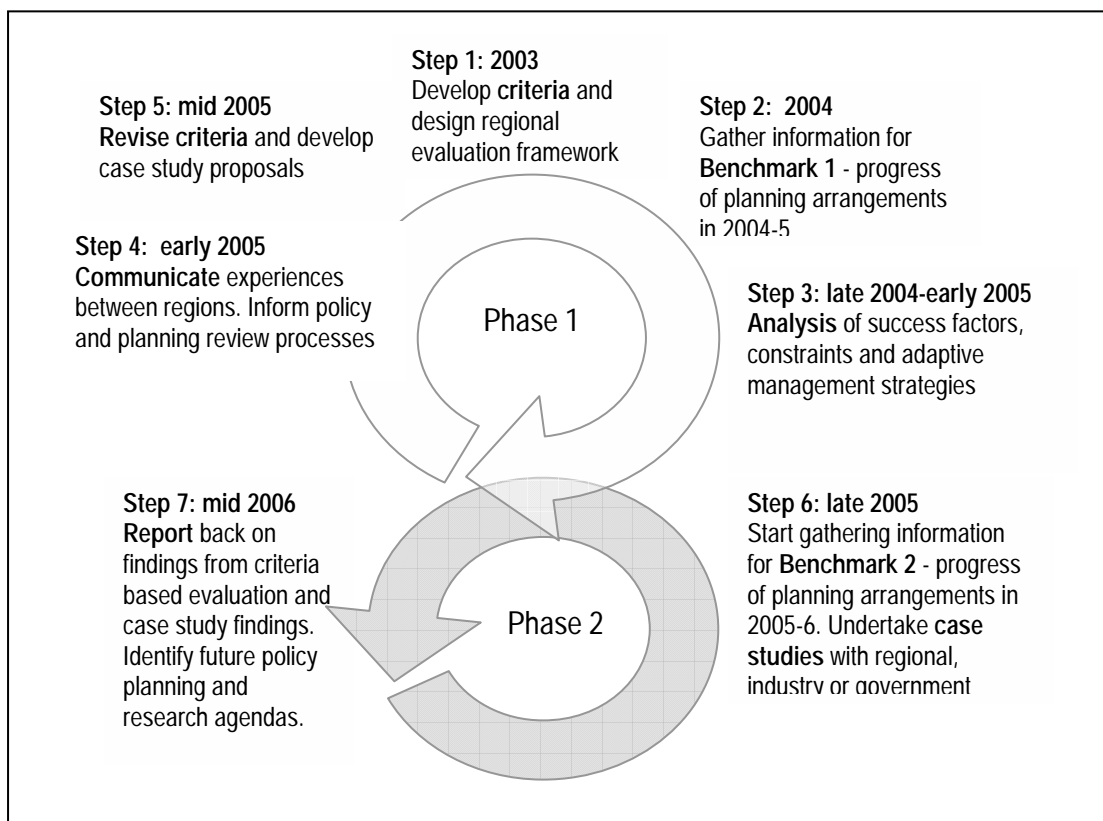


Figure 2. Major project implementation steps in the two evaluation phases 2003-6

1.4 Overview of the case studies

The eight case studies cover a range of topics in regional planning. Several of the case studies address enabling process in regional NRM including technical inputs, partnerships and stakeholder engagement and monitoring and evaluation. These include case studies on *Partnerships with pastoral stakeholders*; *Success factors for getting science on the ground*; *Community engagement in remote regions* and *Country-based management* approaches.

Another group of case studies focus on program content and substantive outcomes from the regional NRM process to date. Each reviews the character of the regional process and how the plans and actions seek to address major NRM issues in particular Managing diffuse-source water pollution in northern Australia, Biodiversity in action; and Evaluating weeds outcomes.

The final case study presented is focused on *Regional investment patterns and trends in NRM*. In this case study financial data has been assembled and analysed for all Queensland regions, the Northern Territory and the Ord to provide an overview of the magnitude of NRM investments in NAP/NHT, the distribution amongst regions and the purpose of investments among NRM priorities. This provides a financial resources context for other topical case studies.

1.5 A framework for synthesis

Several 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. A more detailed rationale, review of literature and discussion of the themes is presented in *Appendix A*. 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	Devolution	NRM partnerships	Aligning institutions	Engaging stakeholders	Integrating knowledge	Adaptiveness	Achieving outcomes
1. Pastoral stakeholders and regional NRM planning		✓✓		✓	✓		
2. Community engagement in remote regions		✓		✓✓	✓	✓	✓
3. Biodiversity in action	✓		✓		✓		✓✓
4. Success factors for getting science on the ground	✓	✓✓	✓	✓	✓✓		
5. Diffuse sources of water pollution in Northern Australia			✓		✓	✓✓	✓
6. Country-based management		✓	✓		✓✓	✓✓	✓
7. Evaluating outcomes in weeds management in the savannas	✓	✓	✓		✓		✓✓
8. Regional investment patterns and trends in NRM	✓						✓✓

- ✓✓ Dominant focus
- ✓ Secondary focus