

## 2. Methods

This report measures progress of regional arrangements against the same criteria used for the first *Benchmark Report* (McDonald *et al.* 2005a) allowing comparison between the first and second benchmark report findings. Bellamy *et al.* (2005) discuss in detail the major concepts supporting the development and application of the evaluation framework and criteria used here. This section of the report presents an overview of the approach adopted; evaluation framework and specific benchmarking criteria; the key methods for data collection; and, caveats associated with those.

### 2.1 Approach

The overall approach of this project is to develop and apply a longitudinal and participatory evaluation framework for regional NRM planning arrangements in the tropical savannas. To realise the longitudinal function the evaluation was conducted in two discrete phases. At each phase the same evaluation concepts and criteria were applied. The results of each of these two phases represent a benchmarking of planning arrangements against those criteria. This has allowed an appraisal of progress, constraints and lessons from each of the two phases, in effect, providing successive, evaluative waypoints in implementation of regional NRM. The two phases of the evaluation are defined by the primary function or set of functions regional bodies were conducting during that period of time. The connection between these two phases, the major steps and timeframes in project delivery are shown below in Figure 6.

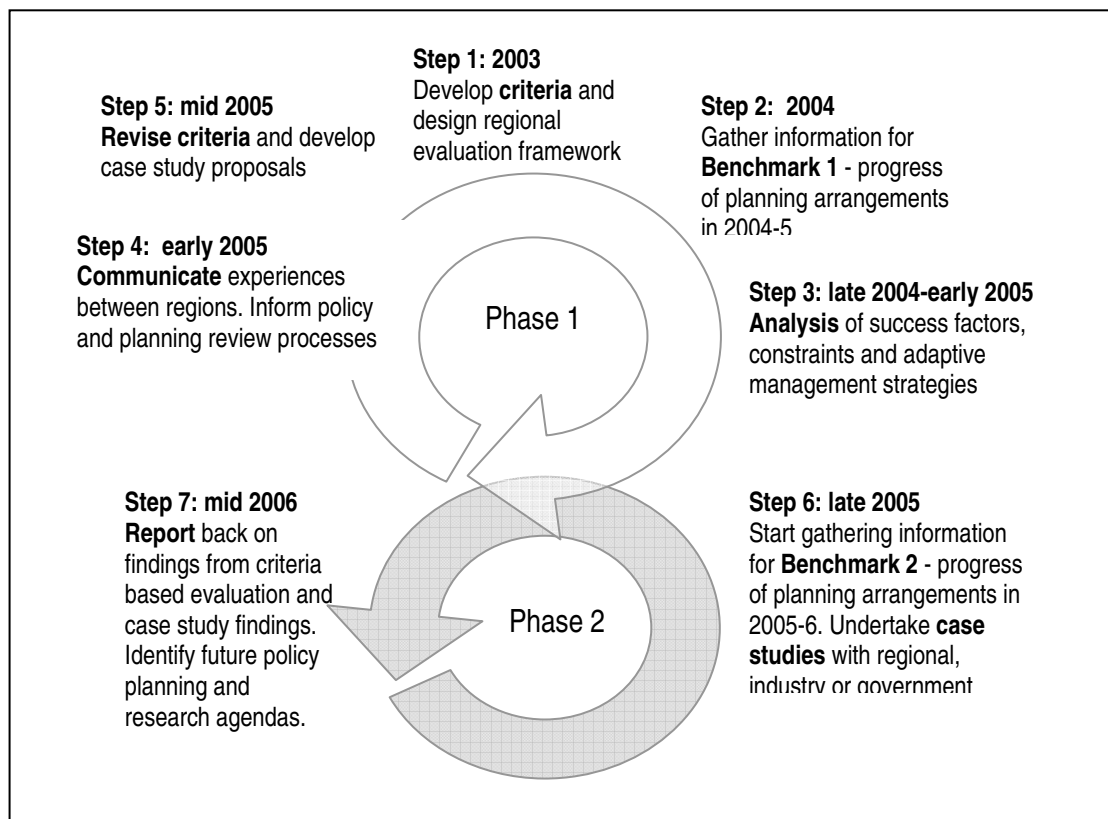


Figure 6. Major project implementation steps in the two evaluation phases 2003-6

The first phase of the evaluation captured insights from the establishment (or start-up), early engagement and plan development phase of regional NRM, using data collected between late 2003 and early 2005 with results presented in the first *Benchmark Report*. The timing of this second phase of the evaluation sees more emphasis in the transitional period (June 2005 until May 2006) involving finalisation of regional NRM plans and regional bodies in early stages of implementation.

## 2.2 Evaluation framework and criteria

The evaluation framework consists of four major components representing four ways of looking at the planning and management system for natural resources in regions. These four components are regional context, structures, processes and outcomes (see Bellamy *et al* 2005).

- *Context* is concerned with the nature of the *place* in which regional planning occurs i.e. a region's physical and social setting. It is also concerned with how previous events and different stakeholders' experiences or culture influences current NRM arrangements and success.
- *Structures* are the more tangible institutional arrangements in place that support or influence regional NRM activity. These may include a range of organisations such as government agencies, regional bodies and their governance arrangements. It also includes regulatory or policy instruments in operation, funding programs and rules, or data management, sharing or monitoring infrastructure.
- *Processes* are closely linked to *structures* and are often difficult to differentiate. However these are more concerned with *how* different players and organisations interact and undertake their management and planning roles. This may include processes that influence stakeholder capacity, knowledge integration and sharing or that link activity between local and regional levels.
- *Outcomes* are the intentional and unintentional products of regional NRM activity. These include *enabling* outcomes such as improved capacity of individuals and institutions. It includes the development of tools or approaches to improve on-ground works or substantive changes in the condition of the natural resource base. Outcomes may be direct or indirect. They can also be negative or beneficial in nature. Given the significant lag periods in realising some types of resource condition change, stakeholder perceptions or expectations of likely outcomes are included here.

Each component is linked to, and informed by, several evaluation criteria. These criteria are presented in Table 1. The main body of the report presents the results of the evaluation under these criteria headings. The methods for collecting data against these criteria are discussed in the following section.

**Table 1. Criteria for evaluation of regional NRM planning arrangements**

<b>Criteria</b>	<b>Explanation</b>
<b>Context criteria</b>	<b>Recognises that implementation of regional NRM is affected by a wide range of environmental, economic, social, policy/institutional and technological factors</b>
1. Thinking 'regionally'	Regional stakeholders have a clear identification with the NRM region, an acceptance of its NRM issues and are generally thinking 'regionally'.
2. Stakeholder culture and commitment	Regional stakeholders recognise, practice, and support participation and collaboration that generates willingness for learning and change. Political commitment is present among key regional stakeholders.
3. Understanding NRM	Recognition by regional stakeholders of the 'multi-dimensional nature' of NRM, i.e. social, economic, environmental and institutional/political dimensions.
4. Recognising regional diversity & complexity	Diversity and complexity of the social, economic, ecological and institutional characteristics of the region are recognised and widely understood.
<b>Structure criteria</b>	<b>Addresses the rules and institutional arrangements relating to regional NRM</b>
5. Coherent policy and governance structures	The degree to which policy, program, governance (and legislative) structures agree in intent, are consistent and logically connected.
6. Aligned institutions	Institutions have a high degree of integration and adaptiveness to support regional priorities.
7. Roles and responsibilities	Roles and responsibilities in regional NRM arrangements are clearly defined and understood.
8. Participation and engagement structures	Integrity and inclusiveness of participation and engagement structures is apparent.
9. Adequate regional resourcing	Resources are adequate to support regional NRM planning and long-term certainty exists regarding future funding.
10. Monitoring return on investment	Mechanisms are in place to monitor and assess returns on investment.
11. Structures for integrating knowledge	Structures that support data and information sharing and integration in planning. Effective information and knowledge management arrangements including access to external expertise, science and science providers.
<b>Process criteria</b>	<b>Addresses the activities, operations and relationships that define and influence regional NRM</b>
12. Processes for integrating knowledge and values	Regional process and tools that support the integration of different types of information, knowledge and values including target setting, priority setting, and engagement processes.
13. Capacity to participate	Capacity exists for all players to participate in regional planning, management or implementation processes.
14. Procedural fairness	Processes that support regional NRM are widely perceived as fair.
15. Responsive and adaptive regions	Processes are adaptable and responsive to changes in understanding, values, priorities and external pressures. Strategies and approaches used to facilitate change.
16. Linking scales and activities	Processes support and exhibit connectivity within and between scales
<b>Outcomes criteria</b>	<b>Reflects outputs produced and impacts from regional NRM to date</b>
17. Improved social capital of planners, managers and participants	Outcomes associated with enhanced individual capabilities, credibility, on-going learning, networks for management and planning and ownership.
18. Effective and connected institutions	Connectivity between state, regional, sub-regional and local activities; and effective and connected processes and structures at the regional scale.
19. Improved resource condition	Condition of priority natural, social, cultural and economic resources in regions.

### 2.2.1. Adapting the evaluation framework

A major contribution of information to the first *Benchmark Report* was the analysis of data from interviews with regional planners and state government officers, participant observation of regional NRM fora and the review of regional NRM plans (see McDonald *et al* 2005a; 2005b). The implementation of the project also provides for refinement of the approach between the two evaluation phases. Consistent with this, some modifications to both the criteria and the data collection methods have been made for this second report based on experiences from the first benchmarking process. In part these changes were driven by an expanded scope of the evaluation to include Northern Territory and Western Australian regions in a more formal sense. These changes were also driven however by an improved understanding of the relative values and applicability of criteria and information gathering methods. A summary of the methods used in the two phases of the evaluation is presented in Table 2 below. Specific aspects of the approach are then expanded on.

**Table 2. Summary of evaluation phases and methods**

	<b>PHASE 1</b> <b>Benchmark 1 report – 2004-5</b>	<b>PHASE 2</b> <b>Benchmark 2 report - 2005-6</b>
<b>Focus</b>	Establishment and planning phase	Transition to early implementation
<b>Primary methods</b>	<ol style="list-style-type: none"> <li>1. In-depth key-informant interviews</li> <li>2. Regional Plan reviews</li> <li>3. Participant observation of regional fora and planning activity</li> </ol>	<ol style="list-style-type: none"> <li>1. Web-based survey (closed and open ended questions)</li> <li>2. 'Issue' focused multi-regional case studies (8)</li> <li>3. Regional Investment Strategy analysis</li> </ol>
<b>Secondary methods</b>	<ol style="list-style-type: none"> <li>4. Policy analysis</li> </ol>	<ol style="list-style-type: none"> <li>4. Policy analysis</li> </ol>
<b>Jurisdictions</b>	Queensland	Queensland, Northern Territory and Western Australia
<b>Time frame</b>	Late 2003-early 2005	Mid 2005-mid 2006
<b>Benefits</b>	Allowed detailed understanding, personal contact and trust to develop between project team and participants; facilitated testing of criteria	Refine and apply criteria more consistently and efficiently Greater focus on 'relevant' / tangible issues and regions More targeted contact
<b>Costs</b>	Labour intensive, slow turn around time of findings; impacts on currency of findings	Less direct contact with large number of participants (Visibility of team and evaluation)

### 2.3. Key informant survey

One of the primary information gathering methods of this second evaluation phase was a web delivered key informant social survey. The survey was adapted from the key informant interviews applied in the first phase of the evaluation following a formal review by the project team of criteria and method efficacy. 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 Australian regions.

In keeping with the evaluation logic of the first phase, the key informant approach saw a respondent database compiled from the population of regional body chairs, executive officers, planners or operations managers. Similarly, State/Territory government agency staff were selected who had direct involvement with regional body activity – through technical, program, policy support and advisory roles, representative roles on regional bodies directly, or through forums for negotiating partnership arrangements. To improve response rates and help explain the context of the survey, respondents were contacted directly via telephone by project team members. If individuals agreed to participate, an email containing a web link to the survey and instructions was forwarded to participants. To ensure a high level of confidentiality and security of survey responses, access to the survey website was by invitation and protected by a unique identifier and password supplied to the respondent through the survey administrator. In total, 89 key informants were identified, of these 86 were able to be contacted, from which 66% successfully completed the survey (Table 3). Two of these surveys were conducted by telephone and the data entered manually for analysis. Textual and Likert scale responses from other respondents were captured directly within a Microsoft Excel database supported by the web format to minimise data handling prior to analysis.

**Table 3. Respondent profile by jurisdiction, respondent type and investment region type**  
(n = number of respondents)

	n	%	Regional body	Government	NAP region	NHT only region
Western Australia	9	16	3	6	1	8
Northern Territory <sup>1</sup>	3	5	2	1	0 <sup>2</sup>	3
Queensland	45	79	25	20	9 <sup>3</sup>	16 <sup>3</sup>
Total respondents	57	100	30	27	10	27

<sup>1</sup> Respondents from the Northern Territory were all members of the Landcare Council of the NT, which was replaced by the Natural Resource Management Board in December 2005

<sup>2</sup> The Northern Territory also receives NAP funding for projects in the Daly, Mary and Ord River catchments

<sup>3</sup> This only includes regional body respondents, not government respondents

In total, the survey consisted of 22 questions, including 6 open-ended questions - to which respondents could provide answers of considerable length - and 16 structured, Likert scale questions. See Appendix 1 for a copy of the web-based survey.

Each of the sixteen Likert scale questions consisted of four parts, namely:

- i. Respondent's perception of *current condition* of an attribute of regional NRM e.g. clear roles and responsibilities;
- ii. Respondent's perception of the *trend in the condition* of that attribute over the last 12 month period i.e. improving, not improving;
- iii. Respondent's perception of the *importance* of that attribute to successful regional NRM; and,
- iv. Respondents were asked to *justify* their responses or provide *examples* in an open text box provided.

The remaining six open-ended questions sought respondent perceptions on:

- i. Changes to regional NRM arrangements over the last 12 months;
- ii. Strengths of the current regional approach;
- iii. Aspects of the current regional NRM approach that were “not working”;
- iv. Short term actions needed to ensure success in the next 1-3 years;
- v. Major achievements to date; and
- vi. Expected longer-term outcomes from the regional NRM approach.

Ordinal and textual data collected from the Likert scale questions were analysed using descriptive and inferential techniques to summarise commonalities and differences between responses and between regions. Text responses to the open-ended questions were coded using a thematic structure, with each response individually coded to that structure. Individual responses relevant to each theme were then merged and analysed as a common group of responses to draw out the commonalities and variations on each theme.

## **2.4. Case studies in regional planning**

This second phase of the evaluation has also involved undertaking several discrete case studies in regional planning. These case studies complement the results generated through the key informant survey discussed above. Case studies have been undertaken to provide an issue-based, planning tool or stakeholder specific focus in what is otherwise a largely synoptic evaluation framework. Moreover, the case studies have been designed to involve a broader range of participants than the key informant survey, which has focussed primarily on regional body staff and state government agency staff engaged in regional NRM. Case studies also help build on an understanding of key issues that either underpin evaluation criteria or have emerged as issues or gaps through the first benchmarking report. Part of the rationale for the case study approach was to provide a vehicle for lesson sharing and application of research outcomes

A summary of each of the case studies is presented in the companion milestone report, *Case studies in Regional Natural Resource Management in Northern Australia* (McDonald *et al* 2006). The eight case studies are:

1. Pastoral stakeholders and regional NRM planning: better partnerships in savanna regions
2. Community engagement in remote regions
3. Biodiversity in action
4. Success factors for getting science on-the-ground
5. Managing diffuse-source water pollution in northern Australia
6. Country-based management
7. Regional investment patterns and trends in NRM
8. Evaluating weeds outcomes

Case studies 3, 6 and 8 were developed through collaboration of project team members with other researchers or through adapting and translating findings from recent or existing research to the content of regional planning in savanna regions. Most case studies were co-developed with relevant savanna stakeholders and each study includes at least two regions within the tropical savannas.

## **2.5. Caveats and considerations**

There are some caveats or considerations for readers in relation to interpretation of the results from the analysis in the following section, 3.0. These relate to the timing of the data gathering activities, and, a note on respondent perspectives in the analysis.

### *Timing of the evaluation and 'stage' of planning in regions*

Amongst other factors, the timing of the enabling political agreements signed between State/Territory and Australian governments differs between Queensland, Northern Territory and Western Australia. Again, even within Queensland each of the fourteen NRM regions have progressed at different rates. As such, the evaluation captures regional experiences at different stages of maturity. During the current evaluation period, and between this one and the last, organisational arrangements within regions have also been fluid and changing. For example, the regional body of the Northern Territory had been in transition to a new organisational arrangement during the period the survey was conducted (see section 1.5.1 above). As such the results should be read in the context of a fluid institutional environment for regional NRM, not a static point in time assessment.

### *Whose perspective?*

The target population identified for the key informant survey consisted of regional planners, executive officers and chairs of regional bodies and their boards, and, State and Territory government agency officers working with regional bodies at the 'regional' level. As such, the responses reflect an 'insiders' position on issues affecting the delivery of regional NRM, and are often focused on organisational, administrative and political aspects of regional body activity.

There are considerably more NRM regions, and hence regional NRM bodies, in Queensland than in Western Australia and Northern Territory (see Table 3). Because of this the survey responses are largely from Queensland NRM regions. To ensure a picture from each of the jurisdictions still emerges, distinctions are made between or examples given from each jurisdiction in the reporting of the results. There is another spatial bias in the survey with a larger number of extensive rangelands regions being surveyed than intensive or urbanised coastal regions.