

Appendix A - Development of case study synthesis framework

Jenny Bellamy

Introduction

In section 1 of the report several themes are presented to assist with the synthesis of case study findings. This appendix presents in more detail the rationale and description of those themes drawn from:

- A review of literature contributing to the development of themes to support the synthesis of case study findings
- Links between the resultant case study *themes* to *evaluation criteria* developed for the broader evaluation of regional NRM arrangements (see Bellamy et al 2005 and McDonald et al 2006)

Devolution

There is a growing recognition that government alone does not determine the future direction of sectors in society; these are shaped through the interaction of many actors (Bressers and Kuks 2003). The term 'governance' signifies 'a transformation in patterns and processes of governing' (Goodwin 1998) and it is about governmental and non-governmental organisations working together. Its concern is how the challenges of collective action are met and the issues and tensions associated with this shift in the pattern of governing.

New policy approaches to natural resource management and planning based on the devolution of decision-making to more collaborative and communicative governance approaches and learning through adaptive management have emerged as important tools for resolving conflict in multi-stakeholder contexts and for managing complex, evolving systems (e.g. Lee 1993; Cortner and Moote 1999; SCARM 1999; Wondolleck and Yaffee 2000; Dovers and Wild River 2003). These approaches are promoted and legitimatised through a rhetoric of decentralisation and public involvement within an integrated policy framework. Subsidiarity is the policy principle that recognises that, from conception to implementation, policy and planning action should be taken at the level within the nested hierarchy of governance institutions at which it is most effective (Commission of the European Communities 2001). In addition, the principle of proportionality recognises that the selection of instruments used must be in proportion to the objectives pursued and the resources available.

While Australia does not have formalised structures of government at the regional scale, it has become clear that many of our tasks of governance need to occur at this scale. This theme of 'Devolution' focuses on the considerable tensions and challenges that all Australian states/territories are experiencing in devolving decision-making on NRM to regional communities (e.g. Dore and Woodhill 1999; Parliament of the Commonwealth of Australia 2000; Productivity Commission 1999; Bellamy *et al.* 2002; 2003). The rhetoric underpinning current concepts of devolution emphasise:

- the coupling of the re-organisation of roles and responsibilities at various levels of decision-making;
- greater flexibility in implementation; and
- the fostering of legitimacy and acceptability of decision-making processes.

In particular, this theme 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.

Key Criteria addressed under the 'Devolution' theme:

- C3. The multi-dimensional nature of NRM in the region (i.e. social, economic, environmental and institutional dimensions) is recognised and widely understood among stakeholders
- S1. Policy and legislation intent and implementation tools and mechanisms are clearly defined and coherent
- S3. Roles and responsibilities of groups within regional NRM arrangements are clearly defined and understood
- S5. Resources are adequate to support regional NRM planning and long-term certainty exists regarding future funding

NRM partnerships

Collaboration is increasingly being looked at as a tool for developing policy, planning and management processes that function better than traditional practices particularly to solve cross-jurisdictional and inter-organisational problems (e.g. Gray 1989; Gray and Wood 1991). Collaboration is a process through which parties who see a situation very differently can constructively explore those differences and seek solutions that go beyond their own limited vision of what is possible (Gray 1989).

In natural resource management and planning domains, collaboration has emerged as an important tool for resolving conflict in multi-stakeholder arenas (contexts) and managing complex, evolving systems (e.g. Lee 1993; Gunderson et al. 1995; Wondolleck and Yaffee 2000). New collaborative approaches to natural resource management draw on two core works on social theory: Habermas's (1981) theory of communicative rationality and Giddens (1984) recognition of the importance of forums, arenas and courts in societal decision-making. Moreover recent shifts in planning theory recognise that the policy and planning environment (or arena) can be more accurately described as 'nested' planning activities linked through a complex web of integration, bargaining and negotiation among plural interests (including community, industry and Government) within and beyond the region (e.g. Dorcey 1986; McDonald 1989; Healey 1997; Bellamy and Dale 2000).

This theme addresses collaboration as an 'emergent' process (i.e. it comes from the efforts of the participants) rather than a prescribed state of an organisation (Petheram et al. 2003). 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. The new relationships and institutionalised practices, norms and behaviours that emerge in a collaborative process are critical outcomes that are often not appropriately valued (eg. Innes and Booher 1999; Bellamy et al. 2001; 2002) but may be fundamental to achieving adaptive capacity.

Key Criteria addressed under 'NRM partnerships' theme:

- C1. Regional stakeholders have a clear identification with the region and acceptance of its NRM issues
- C2. A culture exists within regional stakeholders that is supportive of NRM and is committed in practice to participation, collaboration and change.
- S4. Integrity and inclusivity of the participation and engagement processes are institutionalised within regional NRM arrangements

Aligning institutions

Connectivity or interactiveness of the regional planning system, including the quality of functional relationships between the different components of that system, is a fundamental principle for:

- Building broad understanding of the nature of inter-jurisdictional and multi-actor natural resource management problems;
- Building broadly based support to deal with those problems, and
- Facilitating the learning to resolve them.

This theme on ‘Aligning institutions’ addresses a number of commonly recognised issues and problems in the natural resource management and regional planning literature relating to connectivity and alignment of purpose and priorities across an array of formal and informal institutions. These issues include:

- The fragmentation of policy and planning implementation including lack of vertical and horizontal integration or harmony in regional planning systems, which obstruct better natural resource management (e.g. Bellamy et al 2000, 2002; Innes and Booher 2003; Dovers and Wild River 2004); and
- The interconnectedness of individual interests and the existence of some fundamental interdependencies that create a need for collective action (eg. Gray 1989; Orstom 1990; Wondolleck and Yaffee 2000).

Importantly this theme focuses on the need for structures and processes that ensure a consistent approach to a regional planning system increasing in complexity and diversity and that also build a shared recognition of interconnectedness among people and allows them to address shared problems and work toward sustainable futures.

Key Criteria addressed under ‘Aligning institutions’ theme:

- | | |
|-----|--|
| S2. | Institutional arrangements at a range of scales have a high degree of alignment |
| P5 | Processes recognise, support and exhibit connectivity and coherence within and across scales |

Engaging stakeholders

Stakeholder involvement in decision-making through the use of deliberative processes is promoted as a means of enhancing institutional legitimacy, citizen influence, and social responsibility and learning (eg. Pretty 1995; Renn *et al.* 1995; Petts 2001). Broad community involvement and ownership is crucial for identifying acceptable tradeoffs, negotiating distribution of costs and benefits and reaching consensus about decisions and actions. Community involvement aims to replace one power with many and create a situation where decisions made are informed and owned by all participants.

Wide participation of those involved and affected throughout the planning process from conception to implementation is a fundamental principle for healthy regional planning systems. The challenge of deliberative approaches however is to deal with the vast heterogeneity of interests and social values in our society. The theme of engaging stakeholders addresses the need to create more confidence and perceptions of fairness of the planning process as well as to foster policy, institutional and management learning and improvement at all decision-making levels. In particular, inclusiveness is critical to ensuring

planning and other policy processes are technically viable, practically workable and acceptable to stakeholders. Moreover it may enhance the potential for regional NRM planning systems to be sensitive to cultural and other social contexts.

Key Criteria addressed under ‘Engaging stakeholders’ theme:

- | | |
|----|---|
| P2 | Regional processes enable all players to participate in NRM |
| P3 | Regional NRM processes are widely perceived to be fair |

Integrating knowledge

This theme addresses increasing public expectations that policies, planning and other decision-making processes affecting the use and management of our natural resources will be based on sound knowledge (such as the Australian Government’s current investment in NAP and NHT extension). For example, Dorcey (1986) claims that if bargaining and negotiation in regional resource management and planning are to be productive, then stakeholders or participants must be well informed. Importantly, with a wide range of human interests and values in regional natural resource management and planning, there is a need for structures and processes that recognise, value and integrate a broad range of knowledge sources (e.g. scientific knowledge and technical expertise with local and other cultural knowledge and expertise) and that also acknowledge complexity, uncertainty and long time scales (e.g. Functowicz and Ravetz 1990; Functowicz et al 2000; Gallopin et al. 2001).

This theme on integrating knowledge therefore recognises that moving towards more sustainable regional resource use and management requires:

- Better basic knowledge of both natural and social systems, improved understanding of complex interactions between and within those systems, and an improved decision-making framework (e.g. Lee 1993; Gunderson et al. 1995; Berkes et al. 2003).
- Broad sharing of existing information as well as expanding understanding by generating new information and dealing with uncertainty through collaborative approaches, so that information is relevant to common goals, is socialised and provides the basis for collective action (e.g. Wondolleck and Yaffee 2000; Ashby 2003).

Key Criteria addressed under ‘Integrating knowledge’ theme:

- | | |
|-----|--|
| S6. | Knowledge and information is integrated and value-adding. |
| P1 | Regional processes support the synthesis and integration of knowledge and values |

Adaptiveness

This theme addresses the issue that ecological uncertainty exists (e.g. Gunderson et al. 1995) but science is subjective and needs to be undertaken in a way that is not disconnected from end-users. This recognition justifies the need to create on-going cycles of learning and continuous improvement, expressed as ‘adaptive management’. Moreover, the recognition of diverse values, both within problem understanding and solution analysis, creates the need for greater mechanisms for participatory practice in both management and research, and at all

stages of the adaptive management cycle. While many conceptualisations of adaptive management have been developed most of the conceptualisations have similar key components. These components include: (i) planning; (ii) acting; (iii) assessing and (iv) reflecting.

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.

This theme focuses on periodic revisiting the achievements of policy and planning processes, reconsidering the principles, frameworks, objectives and mechanisms developed, and seeking reaffirmation of these from current institutions and the broader community.

Key Criteria addressed under 'Adaptiveness' theme:

S7.	Institutional arrangements at a range of scales support adaptiveness to change.
P4	Processes are adaptable and responsive to understanding, values, priorities and external pressures

Achieving outcomes

This theme recognises that in regional NRM planning arrangements, there is a need to keep a constant view on the process resulting in efficient, effective and meaningful outcomes and not just outputs such as planning documents (Dale and Bellamy 1998). Most decisions about the planning process need to be made with the intent that they will result in substantive improvements in the way that natural resources are used and managed in the region in order to lead to observable natural resource management outcomes.

There are particular challenges of measuring the effectiveness of natural resource outcomes in the Australian context of long timeframes for responses and great variability (e.g. Lee and Wood 2004). Moreover, outcomes of regional NRM initiatives are potentially multi-dimensional (e.g. social, economic, environmental, institutional and technological) and may encompass, for example (Bellamy et al. 2001):

- Individual and organisational learning effects (e.g. new collaborations, partnerships or strategic alliances, networking);
- Behavioural changes (e.g. new skills, sharing of information, new management practices);
- Impacts on norms/standards (e.g. new ways of technical assessment, accessibility of information, new planning processes);
- Social effects (e.g. system and networking externalities);
- Contributions to knowledge bases, scientific progress, and human and social development;
- Institutional change (e.g. alignment of purpose and priorities; adaptiveness and coherence of the governance system); and

- Improvements in natural resource condition (e.g. in biodiversity conservation, water quality, etc.).

The effectiveness of outcomes from regional NRM planning however should not be considered in isolation from their costs. Efficiency relates primarily to receiving value for the return on investment in terms of the inputs used during regional planning; including both plan development and planning implementation phases. Efficiency considerations provide an understanding of the relationship between inputs and outputs in regional NRM planning. There are frequent examples of regional planners reducing measures for public participation on the presumption that it “costs too much” without adequate consideration of how much this may reduce the value of the outcomes achieved (see Howlett 1996). Susskind (1987) considers that swift outcomes often result in false hope as, if disputes are not fully resolved, they merely shift to another arena. On the other hand, public participation programs in regional planning may be applied in a non-strategic way, creating additional costs for limited outcomes (Dale and Bellamy 1998).

This theme addresses the issue that achieving outcomes inevitably involves difficult choices in terms of the multi-dimensional prioritisation of investments and decisions on trade-offs that have significant implications for the nature of outcomes and return on investment achieved.

Key Criteria addressed under ‘Achieving outcomes’ theme:

- | | |
|----|--|
| O1 | Improved social capital of NRM managers, participants and planners |
| O2 | Effective and connected institutions for regional sustainability |
| O3 | Effective on-ground actions and improved delivery mechanisms |
| O4 | Condition of regional natural resources improves over time |

References

- Ashby, J. 2003, Introduction: Uniting science and participation in the process of innovation - Research for development. In B. Pound, S. Snapp, C. McDougall & A. Braun (eds.), *Managing natural resources for sustainable livelihoods: Uniting science and participation*. Earthscan Publications and International Development Research Centre, London, pp.1-19.
- Bellamy, J.A. and Dale, A.P. 2000, *Evaluation of the Central Highlands Regional Resource Use Planning Project: A synthesis of findings*. Final Report to LWRRDC, Project CTC13. CSIRO Sustainable Ecosystems, Brisbane, November 2000.
- Bellamy, J.A., Walker, D.H., McDonald, G.T. and Syme, G.J. 2001, A systems approach to the evaluation of natural resource management initiatives. *Journal of Environmental Management* 63(4), 407-423.
- Bellamy, J., Ross, H., Ewing, S. and Meppem, T. 2002, *Integrated Catchment Management: Learning from the Australian Experience for the Murray-Darling Basin*. A Report for the Murray Darling Basin Commission. CSIRO Sustainable Ecosystems, Brisbane. http://www.mdbc.gov.au/naturalresources/icm/icm_au_x_overview.html
- Bellamy, J., Meppem, T., Gorddard, R and Dawson, S. 2003, The changing face of regional governance for economic development: Implications for Local Government. *Sustaining Regions*, 2(3), 7-17.
- Bellamy, J., Smith, T., Taylor, B., Walker, M., McDonald, G., Jones J. and Pero L. 2005a, *Criteria and Methods for Monitoring and Evaluating Healthy Regional Planning*

- Arrangements*. Project Report for Savanna CRC Project 3.3.5: Healthy Savanna Planning Systems project, Tropical Savannas Management CRC.
- Berkes, F., Colding, J. and Folke, C. 2003, Introduction. In F. Berkes, J. Colding and C. Folke (eds), *Navigating Social-Ecological Systems. Building resilience for complexity and change*. Cambridge University Press, Cambridge, pp.1-29.
- Bressers, H.T. and Kuks, S.M.M. 2003, What does “governance” mean? From conception to elaboration. In H A. Bressers and W.A. Rosenbaum (eds), *Achieving Sustainable Development*, Praeger, Westport, Connecticut, pp. 65-88.
- Commission of the European Communities 2001, *European Governance. A White Paper*. Commission of the European Communities, Brussels.
- Cortner, H.J. and Moote, M.A. 1999, *The politics of ecosystem management*, Island Press, Washington, DC.
- Crabtree, B.F. & Miller, W.L. 1999, Researching practice settings: A case study approach. In B.F. Crabtree and W.L. Miller (eds.), *Doing qualitative research* (2nd ed., Vol.2, pp.293-312). Sage, Thousand Oaks, California.
- Dale, A. and Bellamy, J. (eds) 1998, *Regional resource use planning in rangelands: an Australian review*, Occasional Paper 06/98, Land and Water Resources Research and Development Corporation, Canberra.
- Department of Agriculture, Fisheries and Forestry (DAFF) 2005, *\$146.6 million for Queensland’s natural resources*, Joint Queensland and Commonwealth Government media release, [Cited 20 April 2006], Available from URL: <http://www.maff.gov.au/releases/05/05030wtj.html>
- Dorcey, A. 1986, *Bargaining in the governance of Pacific coastal resources: Research and reform*, Westwater Research Centre, University of British Columbia, Vancouver.
- Dore, J. and Woodhill, J. 1999, *Sustainable regional development: final report. An Australian wide study of regionalism highlighting efforts to improve the community, economy and environment*, Greening Australia Limited.
- Dovers, S. and Wild River, S. (eds) 2003, *Managing Australia’s Environment*. The Federation Press, Sydney.
- Funtowicz, S.O. and Ravetz, J.R. 1990, *Uncertainty and Quality in Science for Policy*, Kluwer Academic Publishers, The Netherlands.
- Funtowicz, S. Shepherd, I., Wilkinson, D. and Ravetz, J. 2000, Science and governance in the European union: a contribution to the debate, *Science and Public Policy* 27(5), 327-336.
- Gallopín, G.C., Funtowicz, S., O’Connor, M., and Ravetz, J. 2001, Science for the 21st century: from social contract to the scientific core, *International Journal of Social Science*, 168, 220-229.
- Giddens, A. 1984, *The constitution of society: Outline of the theory of structuration*, University of California Press, Berkeley.
- Goodwin, M. 1998, The governance of rural areas: Some emerging research issues and agendas, *Journal of Rural Studies* 14(1), 5-12.
- Gray, B. 1989, *Collaborating*, Jossey-Bass: San Francisco.
- Gray, B. and Wood, D.J. 1991, Collaborative alliances: moving from practice to theory, *Journal of Applied Behavioural Science*, 27(1), 3-22.
- Gunderson, L.H., Holling, C.S. and Light, S.S. (1995), *Barriers and Bridges to the Renewal of Ecosystems and Institution*, Columbia University Press, New York.
- Habermas, J. 1981, *The theory of communicative action: Reason and the rationalisation of society*, Beacon: Boston.
- Healey, P. 1997, *Collaborative Planning: Shaping Places in Fragmented Societies*. Macmillan Press, Hampshire.

- Howlett, C. 1996, *The importance of organisational context in landuse planning: A casr study of the Cape York Peninsula Land Use Strategy*, Honours Dissertation, Faculty of Environmental Sciences, Griffith University, Brisbane.
- Innes, J.E. and Booher, D.E. 1999, Consensus building and complex adaptive systems. A framework for evaluating collaborative planning, *Journal of the American Planning Association*, 65(4), 412-423.
- Innes, J.E. and Booher, D.E. 2003, *The impact of collaborative planning on governance capacity. Working Paper 2003-03*, Institute of Urban and Regional Development, University of California, Berkeley.
- Lee, K.N. 1993, *Compass and Gyroscope: Integrating Science and Politics for the Environment*, Island Press, Washington, DC.
- McDonald, G.T. 1989, Rural resource land use planning decisions by bargaining, *Journal of Rural Studies*, 5(4), 325-335.
- McDonald, G., Taylor, B., Bellamy, J., Robinson, C., Walker, M., Smith, T., Hoverman, S., McAlpine, C. and Dawson, S. 2005a, *Benchmarking Regional Planning Arrangements for Natural Resource Management 2004/5. Progress, constraints and future directions for regions*. Milestone Report 3, Healthy Savanna Planning Systems Project, Tropical Savanna Management CRC.
- McDonald, G., Taylor, B. and Robinson, C. (eds) 2005b, *Desktop review of regional NRM plans: findings and lesson*, Healthy Savanna Planning Systems Project 3.3.5., Tropical Savannas Management CRC.
- Ostrom, E. 1990, *Governing the Commons: The evolution of institutions for collective action*, Cambridge University Press, Cambridge.
- Parliament of the Commonwealth of Australia 2000, *Time Running Out: Shaping Regional Australia's Future. Report of the Inquiry into infrastructure and the development of Australia's regional areas*, House of Representatives Standing Committee on Primary Industries and Regional Services, Canberra.
- Petheram, J., Stephen, P. and Maidment, F. 2003, From engaging the public – to supporting citizens in collaborative partnerships, Insights for extension from community forestry. In *Extending extension: Beyond traditional boundaries, methods and ways of thinking*. Proceedings of the 2003 APEN National Forum, 26-28 November 2003, Hobart.
- Petts, J. 2001, Evaluating the effectiveness of deliberative processes: Waste management case studies, *Journal of Environmental Planning and Management*, 44(2), 207-226.
- Pretty, J. 1995, Participatory learning for sustainable agriculture, *World Development*, 23(8), 1247-63.
- Productivity Commission 1999, *Impact of Competition Policy Reforms on Rural and Regional Australia*, Report No. 8, AusInfo, Canberra.
- Renn, O., Webler, T. and Wiedmann, P. 1995, *Fairness and Competence in Citizen Participation. Evaluating Models for Environmental Discourse*, Kluwer Academic Publishers, The Netherlands.
- Standing Committee on Agriculture and Resource Management (SCARM) 1999, *Managing Natural Resources in Australia for a Sustainable Future. A discussion paper for developing a national policy*, Department of Agriculture, Fisheries and Forestry – Australia (DAFF), Canberra.
- Susskind, L.E. 1987, *Breaking the impasse: consensual approaches to resolving public disputes*, Basic Books, New York.
- Wondolleck, J.M. and Yaffee, S.L. 2000, *Making Collaboration Work: Lessons from Innovation in Natural Resource Management*, Island Press, Washington, D.C.

