Literature review: regional natural resource governance, collaboration and partnerships

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October 2003

Griffith UNIVERSITY

CRC for Coastal Zone
Estuary & Waterway Management

Technical Report 45

Literature Review: Regional Natural Resource Governance, Collaboration and Partnerships

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October 2003

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1.0 Literature Review (Part One)

1.1 Introduction

This chapter provides part one of a literature review, the two parts of which provide the theoretical background to this study. It has two foci. It first focuses on natural resource management (NRM), endeavours by humans to manage the land, water and biodiversity of the ecosystems in which we live in a sustainable way. This part of the literature review begins by discussing and defining key terms such as 'ecosystem', 'ecoplex', 'NRM', 'sustainability' and 'sustainable development' and situating them in relevant ethical frameworks. The global and Australian contexts for NRM are also discussed. The second focus is on citizen participation in NRM. The call for citizen participation to address NRM problems is being now being made at all levels, from the global to the local. These calls are part of the discourse of ecological modernisation, a way of thinking that has the need for collective action as its cornerstone, and is steadily colonising the contemporary NRM paradigm (Dryzek, 1997; Poncelet, 1998). This underscores the significance of this study. Terms such as 'network', 'cooperation', 'collaboration', and 'partnership', are discussed, defined and situated within the field of citizen participation. The term 'partnership' is examined, as a citizen participation process and as a philosophy underpinning cultural transformation theory (Eisler, 1987; 2002). In terms of citizen participation, the sharing or redistribution of power in social relationships is central to the definition of a partnership. Therefore, theories on power are briefly examined, especially as they relate to citizen participation in NRM. The empirical evidence presented later in this study highlights that participants in effective NRM collaborations and partnerships work and learn well together. Therefore, theories on social capital and social learning are discussed and their relationships to each other and NRM collaborations and partnerships are summarised. Dialogue, a communication act in which participants achieve mutual understanding, is an important part of any process that builds social capital and facilitates social learning. A brief overview of strategies that may facilitate dialogue and ways to evaluate its effectiveness is also presented.

Chapter 2 contains the second part of the literature review. It focuses on, and describes, NRM groups. It discusses theory on social groups, NRM groups and how such groups may work as collaborations or partnerships, and act as incubators for new, smaller NRM collaborations and partnerships. The roles and attributes of NRM group coordinators and participants in terms of the development of these relationships are discussed. As well as providing an overview of literature in these areas, Chapter 2 also uses the literature to develop three tools that find use in analysis in this study. The first tool is a new citizen participation framework – a 'pendulum of citizen participation'. The second tool is an NRM partnership typology. The third tool is a 'decision tree'. It helps to identify context-appropriate citizen participation processes.

Together, these two chapters provide the theoretical and conceptual foundation and the tools for analysis in this study.[1] These two chapters provide 'good theory', one of the ingredients necessary to encourage positive change in such settings (Woolcock, 2002).

1.2 Ecosystems, NRM, and sustainability

1.2.1 Ecosystems

The term ecosystem was first defined by Tansley (1935) and is subject to continuing debate and redefinition.[2] Indeed, Coder (1996, p.1) states, "In many ways the term "ecosystem" has become jargon in our society, as wholesale use and misuse of the term blurs accurate and precise definition," while the

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[1] These concepts, theories and tools are combined and used as an NRM collaboration and partnership diagnostic checklist.

[2] In popular circles, the term 'environment' is often used interchangeably with 'ecosystem' or 'ecology.' As outlined in this section, for the purposes of this study, I have defined an ecosystem as the collection of the biotic and abiotic things present in a particular place and the interactions between them. Ecology is the study of such ecosystems. When one observes the ecosystem in which an organism lives, one is observing the 'environment' of that organism- "the collective term for the conditions in which an organism lives e.g. temperature, light, water, other organisms" (Abercrombie, Hickman and Johnson, 1980, p.103).

meaning of the term is contested in the scientific community. Cox (2002) cites an early definition of an ecosystem:

> The fundamental concept appropriate to the biome considered together with all the effective inorganic factors of its environment is the ecosystem, which is a particular category among the physical systems that make up the universe. In an ecosystem the organisms and the inorganic factors alike are components which are in relatively stable dynamic equilibrium. Succession and development are instances of the universal processes tending towards the creation of such equilibrated systems.
>
> (Tansley, 1935, p. 306)

This definition contains key elements that link it to other definitions – typically, an ecosystem being a geographic area in which all the living (biotic) and non-living (abiotic) things present interact with and depend on each other (e.g. Abercrombie, Hickman and Johnson, 1980, p.96; Stephenson and Woodward, 1986, p.124). Tansley highlights the dynamic or changing nature of ecosystems, asserting that they inevitably reach a state of "relatively stable dynamic equilibrium" and that they undergo a process of succession as they move towards that state of equilibrium. This idea has been challenged. Fiedler, White and Leidy (1997, pp.83-92) summarise the more recent arguments against ecosystems ever reaching a stable state, identifying a paradigm shift towards a "non-equilibrium ecology". Coder (1996, p.1) also steers away from this thinking, proclaiming, "The standard definition of an ecosystem is an infinitely nested, overlapping, interacting set of processes without a defined boundary." While such a definition may be accurate and inclusive of all situations, it is a difficult one practically to apply in community-based NRM. Coder continues:

> For community natural resource management use, a more effective definition of an ecosystem is required, especially for mapping and determining management units. A working definition of a managed ecosystem (called an ecoplex) is developed here. This working definition departs from classical definitions in two important ways:
> 1.   The term 'ecoplex' represents an ecosystem with a distinct physiographic and biological boundary; and
> 2.   The term 'ecoplex' involves components that are at a scale where they significantly and directly impact a multiple or single community level (community being defined along social identity lines not political boundaries).
>
> (Coder, 1996, p.1)

The concept of an ecoplex suits the purpose of this study as NRM involves managing ecosystems to maximise their utility for human purposes whilst minimising undesirable consequences. Therefore, for the purposes of this study, an ecosystem is defined as the collection of the biotic and abiotic things present in a particular place and the interactions between them.[3] The boundaries of the particular place and the scale at which observations on the ecosystem are made, are defined by the pragmatic needs of the observer.

1.2.2   NRM

NRM is concerned with ecoplexes – the management of ecosystems for human purposes. In Australia, the management of natural resources, the components of ecosystems that are directly used by humans, from a national perspective, has been documented as having three, broad, long-term goals:

- healthy ecosystems and catchments in which the integrity of soils, water, flora and fauna is maintained or enhanced wherever possible;
- innovative and competitive industries that that make use of natural resources, within their capability, to generate wealth for social and economic well-being; and
- self-sustaining, proactive communities that are committed to the ecologically sustainable management of natural resources in their region.
    (National Natural Resource Management Taskforce (NNRMT), 1999, p.9). [4]

Two of these goals relate to people, the communities in which they live and the economic and social systems that nurture them. Thus, NRM involves understanding, maintaining and, where necessary, improving the interactions that people have with the biotic and abiotic components of ecosystems. The third

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[3] Including humans.
[4] From a human perspective, the biotic and abiotic components of ecosystems may be viewed as natural resources or environmental assets such as air, water, land, plants, animals and micro-organisms (Tasmanian Department of Primary Industries, Water and Environment (TDPIWE), 2002, p.11).

goal indicates that NRM also involves understanding, maintaining and, where necessary, improving the ways in which people relate to each other as part of communities that interact in these ecosystems. NRM decisions that may lead to the achievement of these three goals will need to be informed by appropriate knowledge and ethics. Carolyn Merchant (1992, pp.61-82) has identified three ethical frameworks for explaining the relationship between people and their non-human surroundings – egocentric, homocentric, and ecocentric. A person exercising an egocentric ethic would seek to maximise individual self-interest when making decisions concerned with environmental matters, seeing him or herself as separate from their surroundings. A person using ecocentric ethics would consider their duty to the ecosystem, and view her or himself an integral as part of that ecosystem (Merchant, 1992, p.64-65). Homocentric ethics emphasise the social component and focus on duty to other humans, ensuring the greatest good for the greatest number of people, while recognising that interactions with the non-human components of the ecosystems on which we depend for survival are also critical to these human-centred concerns. The long-term outcomes of NRM, as described above, are decidedly homocentric, constituting a blend of egocentric and ecocentric perspectives.

NRM practices need to be informed by adequate knowledge of ecosystems if such practices are to be sustained in the long-term. When humans manipulate natural ecosystems to improve the production of a particular biotic component (e.g. clearing trees to encourage the growth of pasture grasses for grazing animals), then management of other, perhaps unintended, outcomes of that manipulation will be required, if the production of that particular component is to be sustained. Human use or extraction of abiotic components of an ecosystem may also not continue indefinitely unless guided by adequate knowledge of that ecosystem. For example, if enough water is taken from an aquatic ecosystem, such as a stream, a limit may be reached at which the stream ceases to function as an aquatic ecosystem – the stream dries up. Sustainable extraction of water from this aquatic ecosystem requires knowledge of the quantity of water present in the ecosystem, the rate at which it is being replenished by rainfall and/or groundwater, and the quantity of water that can be extracted before the ecosystem ceases to function effectively as an aquatic ecosystem. Sustainable NRM must be informed by adequate knowledge of the ecosystems under consideration.

1.2.3   NRM, Australian ecosystems and people

The relationship between Australian people and ecosystems has been moulded by culture, the nature of the Australian environment and western civilization. At the eve of European settlement, in the late 18th century, Australia was a different place.

> The soil had a mulch of thousands of years. The surface was so loose you could rake it through the fingers. No wheel had marked it, no leather heel, no cloven hoof. Digging sticks had prodded it, but no steel shovel had ever turned a full sod. Our big animals did not make trails. … Every grass-eating animal had two sets of sharp teeth to make a clean bite. No other land had been treated so gently. Much of the soil was deficient in phosphorus and some in trace elements like cobalt and copper, but plants and animals were accustomed to that, even appreciative. Nearly all soils, even the phosphorus-rich black soils were short of nitrogen. Scattered legumes were so important most of them protected themselves with various poisons.
>
> What did Australia look like when European settlers arrived? It looked superb.
>
> (Rolls, 1994, p.22)

The cultures of Aboriginal Australians have evolved as the result of 40 000 years co-evolution with the Australian landscape (Flannery, 1994, p.271). There is some debate in the literature as to the impact that their cultures, including use of fire and methods of hunting, have had on the ecosystems that sustained them over that time (e.g. Mackness, 1987, p.177-178; White, 1993, p.47). The exact nature of this impact is uncertain, due to the incomplete nature of the Australian archaeological record (Flannery, 1994, p.272). However, what is certain is that their long period of co-evolution meant that they were culturally very much better adapted to the Australian landscape than were European colonisers (Flannery, 1994, p.271). For example, in terms of use of fire, White (1993) notes that before Aboriginal settlement, fires affecting Australian vegetation were caused by lightning and other natural phenomena, and that while Aboriginal use of fire affected vegetation, the impact of European use of fire on vegetation has been devastating (p.47).

When European people came to Australia, they arrived in a land that was very different ecologically to their northern hemisphere homelands. The seasons and climate were different. There were fundamental differences in soil, vegetation and fauna. In geological and evolutionary terms, the physical isolation of the Australian landmass from the other continents had ensured that Australia was a land of rich biological diversity:

> For over 40 million years Australia has been physically isolated from the rest of the world's landmasses. This long period of isolation has given rise to a unique flora and fauna. … Australia supports at least 25 000 species of plants. Europe – if one includes Turkey, the eastern part of the former Soviet Union and the Mediterranean islands – supports only 17 500 species. But the flora of the core of Europe is very much poorer. Great Britain, for example, supports 1 600 species of vascular plants compared with the 2 000 or more found in the Sydney region *of Australia alone.*[5]
>
> (Flannery, 1994, p. 75)

The fauna of Australia is largely unique to the continent. 90% of mammals, 70% of birds, 88% of reptiles and 92% of frogs are endemic (Burke, 1996, p.16). European Australians arrived in a unique land – one that really was "more like a new planet than a new continent" (Rolls, 1994, p.22).

European land, water and vegetation management activities were not well adapted to the Australian environment. The present relationships that Australians share with the ecosystems that support them cannot be sustained. Dovers argues, "We must accept that we are *still settling Australia.*[6] He continues, we are "still working out our relationship with Australia and each other" (Dovers, 2000, p.2). The history of the past two hundred years in Australia bears testimony to our inability to form a workable relationship with the ecosystems of the Australian landscape that support us (Fry, 1994, pp.99-118; Burke, 1996, pp.8-20). Gammage (1994, p.258) claims our relationship with the Australian landscape has been so disastrous that rather than talking about 'sustainable development', we really should be talking about 'sustainable damage' – how much further damage Australian ecosystems can sustain. This suggests that we have yet to begin to develop a partnership with our surroundings that can be sustained. Part of the problem may be cultural.

Indeed Flannery states that, "The problem of cultural mal-adaptation seems to be particularly acute in Australia, for it has the highest number of new settlers of any of the 'new' lands, and an extremely difficult and unusual ecology" (1994, pp. 389-390). Australia is really a challenging place in which to establish long-term human habitation. Droughts, bushfires and floods punctuate our history. Between 1860 and 1975, for example, Australia experienced eight droughts, a total of 47 years of deficient rainfall (Bassett, 1987, p.81). In Australia, days of the week are often accorded the adjective 'black' to denote the occurrence of particularly severe bushfires.[7] This ideal of 'mateship', particularly in times of drought, bushfires, floods and other adversity, is persistent in Australian culture. Flannery describes that after the 1994 bushfires in Sydney that:

> In contrast to the aftermath of the Los Angeles earthquake of 19 January 1994 – there was no tent city, indeed not a single tent in Sydney following the fires. For the people of places like Jannali, the prospect of a tent city housing their neighbours would have been an insult to their sense of mateship. They would have done anything in order to avoid it.
>
> (Flannery, 1994, p.391 – 392)

Recognition and understanding of the significance of this sense of mateship in NRM group contexts may prove an important factor in the research to be undertaken. Culturally, we may be developing a predisposition to form groups to work on shared NRM problems. Subconsciously, it may be that, as Australians, we are prepared to work as mates, or even allies, to overcome the challenges thrown at us by what we perceive as our common enemy – the ecosystems that support us.

The need to manage these natural resources has been recognised at a national level, if their condition is to be sustained and enhanced in the long-term. The National Land and Water Resources Audit (NLWRA) (2002, p.v) reports that the matter is made more complicated by the fact that natural resources, in Australia, are not in uniform decline. Some "have undergone irreversible degradation and loss" (e.g. extinction of certain native plants and animals); some resource management issues "are amenable and require immediate consideration" (e.g. soil acidity); "some may require more adaptive management" (e.g. living with salinity); others may be cumulative problems in the longer term (eg nutrient enrichment of estuaries); whilst others "would benefit from protective management (eg managed fire regimes in the rangelands)" (NLWRA, 2002, p.v).

While the rate of decline or condition of our natural resources may vary, there is no doubt that sustainable NRM is critical to our future.

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[5] Author's addition in italics

[6] Dovers' emphasis

[7] For example, the Black Thursday bushfires in 1851 that occurred in the colony of Victoria and the Black Friday bushfires in Victoria in 1939 in which 71 people died (Bassett, 1987, pp. 28-29).

Managing Australia's natural resources to maintain healthy ecosystems and healthy rivers is fundamental to the wellbeing of our society and of future generations of Australians. Natural resources are the basis for production of the food we eat and the clothes we wear; they also earn us about $AUD 25 billion a year in exports. The rural environment is the source for water for our cities and towns and the lifeblood of rural industries and our regional communities. It is the habitat for our unique plants and animals and the landscapes that helps to define our image of Australia. [8]

(NNRMT, 1999, p.3)

NRM problems persist, despite our efforts and growing community awareness. Dryland salinity and soil acidity are major problems. They will become even more serious. Indeed, a third of our rivers are in extremely poor condition and around 40 percent "show clear signs of degradation" (NNRMT, 1999, p.4). The high economic value of natural resources (e.g. $AUD 25 billion a year in exports for Australia, as outlined above) has both positive and negative effects on their management. The prospect of large economic profits being derived in the short-term as a result of misuse of our natural resources means that the NRM goals of the corporate sector, private landholders and different levels of government are not always in agreement. The way natural resources are managed can become hotly contested issues. Decisions to build dams, to log forests or to allocate water to high demand – high economic return crops, such as cotton, in arid inland Australia, can divide communities and the Nation. Thus, national resource bureaucracies that determine government policy become "not only powerful shapers of the environment themselves; they are also perhaps the most important sites of struggle over environmental classification and regulation, … – sites of negotiation and debate as to what will count as 'nature,' 'resources' and 'environment'" (Tsing, 1999, p.2).

At an international level, the situation is little different. For many years, authors have detailed our inability to interact with natural ecosystems in a way that may be sustained for the long-term (e.g. Carson, 1962; Ehrlich 1962; Goldsmith, 1972; Day, 1989; Ponting, 1991; Merchant, 1992; Chittleborough, 1992; Saul, 1992 & 1995; Wackernagel & Rees, 1996; AtKisson, 1999; 2001). This was reinforced at the recent World Summit on Sustainable Development at Johannesburg. The Summit Declaration states:

The global environment continues to suffer. Loss of biodiversity continues, fish stocks continue to be depleted, desertification claims more fertile land, the adverse effects of climate change are already evident, natural disasters are more frequent and more devastating and developing countries more vulnerable, and air, water and marine pollution continue to rob millions of a decent life.

(Anon, 2002(a), p.2)

Our failure at effective long-term management of the natural resources of Australian ecosystems mirrors the lack of success of others elsewhere on the planet engaged in similar activities. In essence, sustainable NRM could be thought of as occurring when we work in partnership with the ecosystems on which we rely for our survival.

1.2.4   Sustainable NRM

The terms 'sustainability' and 'sustainable development' are central to the above discussion. They achieved this level of prominence as a result of the Bruntland Report (World Commission on Environment and Development (WCED) 1987). This report tied the notion of sustainability to development, saying that sustainable development was a process that "meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987, p.43). This view of sustainability has utilitarian, homocentric connotations (e.g. Beder, 1993 & 1997; Gammage, 1994; Korten, 1995). Taking a more ecocentric view, AtKisson (2001) argues sustainability means " long-term survival and well-being in general, both for human civilization and the rest of nature" (p.7). Homocentric or ecocentric interpretations aside – the critical thing about the Bruntland definition of sustainable development is that it ties the present to the future. It speaks of making sure the needs of future generations are not left unfulfilled because the needs of present generations have taken precedence. Lee (1993, p.200) asserts, "Sustainable development is not a goal, not a condition likely to be attained on Earth as we know it." Instead, he sees it as a road "along which we search for a life good enough to warrant our comforts."

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[8] At a State level the gross value of commodities produced by Queensland primary industries in 2001-2002 was estimated at $AUD 9.3 billion dollars, which accounts for approximately one third of the total value of Queensland's overseas exports (Queensland Department of Primary Industries, 2002). These figures account only for primary agricultural production and do not take into account the economic value of mining or the 'ecosystem services' (e.g. the value of clean air, clean water and healthy wetlands provided by our surroundings).

Australian governments have taken three approaches towards sustainability:

- a green planning (rational policy) approach;
- an institutional reform approach; and
- a social mobilization approach.

<div align="right">(Buhrs and Aplin, 1999, p.317)</div>

The green planning approach relies on the formulation and implementation of longer- term policies, strategies, and plans (e.g. Ecologically Sustainable Development (ESD) Strategy (Intergovernmental Committee for Ecologically Sustainable Development (ICESD), 1996)). The institutional reform approach looks at developing and enforcing legislation and regulations (e.g. Environmental Protection Act of Queensland, 1994) or redesigning organizations (e.g. Murray-Darling Basin Commission) cause changes in practices and behaviour. These two approaches focus on the role of government. The social mobilization approach focuses on action by the community. In this approach initiatives that combine community ownership with local knowledge and experience, are seen as critical in turning the discourse of sustainability into action (Buhrs and Aplin, 1999, p.319).[9]

Reflecting the importance of this third approach, the role of all parties is increasingly being emphasised in NRM planning documents and strategies. In Australia, for example, at a State level, the 2001-2006 Corporate Plan for the Queensland Department of Natural Resources and Mines (QDNR&M) is based on a vision of "enhanced community benefit through sustainable natural resource management." It states "this vision applies to both *current and future Queenslanders and implies a strong stewardship responsibility for everyone involved in natural resource management* " (QDNR&M, 2001, p.2).[10]

This vision links the present to the future. It also shares responsibility amongst parties involved in NRM. Queensland is not alone in recognising the need to share this responsibility. For example, in Tasmania, the Department of Primary Industries, Water and Environment (TDPIWE) state "NRM is fundamentally about people", commenting that what "really determines the success of NRM is the level of community involvement and the adoption of ecologically sustainable practices across the community" (2002, p.11). A 1999 discussion paper for development of a national policy on the matter states "NRM requires a partnership between all parties – government, communities, industry, landholders and individuals – with clear and agreed roles and responsibilities" (NNRMTF, 1999, p.11). It notes that:

> Such a partnership needs to be based on a clear understanding of the roles, responsibilities and interests of each party. This is particularly important for establishing appropriate institutional arrangements for implementing strategies and projects and for negotiating shared investments that deliver the best public and private outcomes for natural resource management. (p.27)

This idea that different parties should work in partnership and share responsibility for decisions and actions in NRM is becoming more common at all levels. Indeed, 12 of the 37 statements that comprise the 2002 Johannesburg Declaration on Sustainable Development reflect this view. These highlight that the sustainable development of natural resources will depend on partnerships between all parties (i.e. all levels of government, industry, community groups), to "assume a collective responsibility" for these matters, to build effective, accountable democratic, multilateral institutions, and to develop and use inclusive processes to establish constructive dialogue and cooperation between all parties on matters of mutual concern (Anon, 2002(a), pp.1-5).[11]

This notion of the development of partnerships in NRM is even further reinforced when one looks at NRM documentation relating to this more local level. For example:

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[9] A discourse is "an interrelated set of concepts, beliefs, assumptions and values that allow events and situations to be interpreted in ways that are appropriate to their respective concerns" (Carr and Kemmis, 1986, p.114).

[10] Author's emphasis added

[11] This review specifically examines the matter of partnership development and implementation, particularly on the notion of "Type I and Type II partnerships" prevalent in Johannesburg discussions, in Chapter 2.3.1.

The NRM Guide for South East Queensland recognises the importance of partnerships among those involved in natural resource management. Through these partnerships, sustainable approaches to land and water management are to be developed.

(South East Queensland Regional Strategy Group (SEQRSG), 2000, p.1)

The NRM Guide for South East Queensland is one of the regional strategies requested by the federal government as a requirement for the administration of the Natural Heritage Trust (SEQRSG, 2000, pp.ix-xii). Its central focus is the formation of partnerships between different parties to undertake NRM. In terms of understanding and participation of parties potentially or actively involved in NRM, the Strategy identifies that one of the key strategies for achieving a "well-informed and motivated South East Queensland community, actively participating in, promoting and practising sustainable NRM" is to "facilitate and resource effective partnerships and encourage networking to address identified natural resource management priorities" (p.17 & p.71). It highlights the need to "foster partnerships between networks and groups with compatible NRM issues, concerns and opportunities" and that these partnerships may be used "to address physical and financial resource support and information-sharing deficiencies," as well as responding to cross-cultural NRM projects and activities between Indigenous and non-Indigenous Australians (p.71).

These documents show that from the global to the local level, the need to develop partnerships between parties involved in sustainable NRM is being increasingly recognised. Often, these partnerships are being formed on contested ground as to what actually counts as NRM, who should make decisions, who should be in control and whose knowledge and ethical frameworks should guide decisions.

1.3   Partnerships

1.3.1   Introduction

The next section further examines the notion of partnerships in NRM, using the conceptual frameworks found in citizen participation literature to inform this discussion. Definitions of relevant terms are presented and arguments concerning limitations and appropriateness of partnerships and citizen participation in NRM are outlined.

1.3.2   NRM, citizen participation and partnerships

The concept of 'partnership' is central to citizen participation and theories of democracy and community development that underpin it (e.g. Fischer, 2000; Cooke and Kothari, 2001). The terms 'public participation', 'community participation', 'community involvement', 'community engagement', 'citizen involvement' and 'citizen participation' are often used to describe similar processes (e.g. Arnstein, 1969; Pretty, 1994; Connor, 1997; Fischer, 2000; Queensland Government, 2001).[12] Fischer (2000, p.32) defines it as "deliberation on pressing issues of concern to those affected by the decisions at issue" and says that it is "the normative core of democracy." However, there are unresolved tensions in western representative democracies between citizens, experts and decision-makers and the way decisions about the management of natural resources and our environment are made (Fischer, 2000). NRM problems are complex, like many other problems that face decision-makers in western democracies. They are an amalgam of economic, social, ecological and, sometimes, also spiritual issues. Their resolution relies on the ability of decision-makers to integrate and reconcile information from different disciplines and sources, as well, as different ethical viewpoints.

In terms of NRM problems, resource managers have tended to think of two main groups of people being involved, the experts and the 'non-experts' or lay citizens. The editor of *Nature* makes the point:

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[12] A full discussion of these terms, their origins, similarities and differences is beyond the scope of this literature review. Authors in this area tend to use different terms to describe largely similar processes. This may be due to the differing backgrounds of the authors and the settings in which they are working. Planners and social scientists such as Arnstein (1969) and Connor (1994) may be more likely to talk of citizens, due to given their involvement in town planning processes in democratic settings. Given the wide variety of roles undertaken by local government, and recognising that terms like 'community', 'citizen' and 'public' have different connotations for different audiences, the South Lanarkshire Council (1998) has omitted any adjective when describing the participation typology it has developed, talking only of a *Wheel of Participation*. The Queensland government favours the term community engagement. The *engagement* component, from one perspective may sub-consciously convey militaristic overtones (e.g. armies *engage* each other in combat). From another it may seem almost sexual (eg bodies *engage* in congress as described in sex manuals such as the *Karma Sutra*)! It is therefore avoided in this report.

It would be absurd to suggest that science can be conducted democratically. It would be no less ridiculous to suggest that consideration of the impact of science and the regulation of its applications be left to the discretion of scientists and those who fund or employ them.

(Anon, 2000(c), p.59)

Fischer (2000) analyses the roles of expert scientists and lay citizenry in the resolution of natural resource and environmental problems. He notes that experts and scientists throughout the 20th century have tended to set themselves apart from the general citizenry and worked with elected representatives and the bureaucracies to practise an increasingly technocratic form of decision-making (p.259). This has not resolved the NRM and environmental problems that face us. He contends that full citizen participation in every circumstance is not the answer, but that there should be available an "analytical toolbox for cases that benefit from increased citizen participation and that there is an urgent need for the professions to rethink their approach and to adopt more "cooperative, facilitative interactions with the citizen-client.[13]"

Various efforts have been made to describe the different processes that make up citizen participation.[14] The seminal work in this area is undoubtedly that of Arnstein (1969) who developed a typology of citizen participation. This is outlined in Figure 1.1.

8 Citizen Control	*Degrees*
7 Delegated Power	*of*
6 Partnership	*Citizen Power*
5 Placation	*Degrees*
4 Consultation	*of*
3 Informing	*Tokenism*
2 Therapy	*Non-*
1 Manipulation	*Participation*

Figure 1.1 Eight Rungs on a Ladder of Citizen Participation
(Arnstein, 1969, p.217)

This typology provides an eight-rung ladder of citizen participation in decision-making. In general, one would expect a move from purely instrumental to more transformative citizen participation programs as one moves further up the ladder. Whilst not advocating a preference for particular forms of citizen participation, 'Arnstein's Ladder' is a useful tool for analysis in citizen participation settings. It locates manipulation of citizens on the lowest rung, with citizen control on the top rung. Partnership is located on the sixth rung, with the last three rungs (six-eight) being labelled as having various degrees of citizen power. Arnstein explains:

At this rung of the ladder, power is in fact redistributed through negotiation between citizens and powerholders. They agree to share planning and decision-making responsibilities through such structures as joint policy boards, planning committees and mechanisms for resolving impasses. After the groundrules have been established through some form of give-and-take, they are not subject to unilateral change.

(Arnstein, 1969, p.221)

Pretty (1994) has developed a seven-category typology of participation in which people working together may distribute the power they bring to their joint venture in varying ways – from being functional participants in category five of his typology where they participate after major decisions have been made, through to category seven, self-mobilisation, where people participate by taking initiatives independent of external institutions. The typologies of both Arnstein and Pretty show a redistribution of power as we move to the higher, more transformative levels of their respective typologies. The concept of partnership in citizen participation is linked to this redistribution of responsibility and power amongst participants.

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[13] This project responds to this request by developing an 'analytical toolbox' to help to determine:
- which NRM problems or opportunities may be more appropriately addressed through citizen participation,
- what types of citizen participation processes may be most suitable in a given context, and
- how collaboration and partnership citizen participation processes may be better evaluated and continuously improved.

[14] Several examples are described in this Chapter.

There have been other attempts to typify citizen participation (e.g. Connor, 1994, pp.I17-I19; South Lanarkshire Council, 1998). These typologies have been developed by professionals trying to match appropriate citizen participation processes to the circumstances in which they work. Connor (1994) is a sociologist consulting with planners involved in citizen participation. His "new ladder of citizen participation" is divided into two sections. One section focuses on interactions between government agencies or industry groups involved in a planning process involving the general public in education, information and consultation activities. The other section highlights the role leaders of government, industry and/or community in joint planning, mediation, litigation or resolving and preventing disagreement about a planning decision.

RESOLUTION/PREVENTION	LEADERS
LITIGATION	
MEDIATION	
JOINT PLANNING	
CONSULTATION	GENERAL PUBLIC
INFORMATION FEEDBACK	
EDUCATION	

Figure 1.2 A New Ladder of Citizen Participation (Connor, 1994, p.I18)

As a practitioner who has been involved in citizen participation work relating to planning issues where participants are involved in litigation, where legal proceedings are not uncommon, Connor views litigation as a valid form of citizen participation. Working from a local government perspective, the South Lanarkshire Council (1998), has developed a *Wheel of Participation*. The 'wheel concept' appears as an attempt to get away from any notion that there is a hierarchy of participation and that one form of participation is better, or more worthy, than another. The categories represented on 'the Wheel' show that the Lanarkshire Council realise that there are different types of citizen participation and imply that, when choosing a type, one should select a citizen participation process appropriate for the intended purpose and situation. This is important, given the diversity of roles undertaken by local government.[15] 'The Wheel' is divided into four categories: Information, Consultation, Participation and Empowerment.

Interestingly, partnership is viewed in this typology as a type of problem solving activity rather than as an act of responsibility and power sharing. According to this typology, people are not empowered when they enter into a partnership with a local government. They are simply helping to solve a problem. This use of the term is inconsistent with Arnstein's definition. While the *Wheel of Participation*, does allow for power sharing, it denies that this act occurs when people work in partnership.

Differences in use of the term 'partnership' in these citizen participation typologies, particularly in relation to power sharing, highlight the need for such terms to be clearly defined. The following section focuses on discussion and definition of the term 'partnership' and other associated terms commonly used in citizen participation including 'alliance', 'network', 'cooperation' and 'collaboration'.

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[15] In western democracies local government is responsible for a wide range of functions: from construction and maintenance of local roads, water and sewerage systems to town planning, through to environmental management and community and cultural development.

1.3.3 Alliance, network, collaboration, cooperation, partnership

1.3.3.1 Alliance

Alliance literally means "any joining of efforts or interests by persons, families, states or organisations" (Anon, 1991, p.45). Although it has military overtones, it is finding increasingly common usage in NRM circles. For example, the QDNR&M *Corporate Plan 2001* (p.3) talks about the need for the Department to "build vibrant community alliances" (p.2) and to "build strategic alliances with relevant parties to enhance natural resource management and mining development outcomes" (p.4). Gunningham (2002) defines environmental partnerships as 'green alliances'. De Bruin, (2002) refers to 'building alliances for a sustainable future' in title of his recently published book on partnerships and leadership. In an NRM context people who feel that they are in control or hold power in a given situation, may wish to avoid use of the term 'partnership' because of these connotations of power sharing. Eisler and Montuori (2001, p.16) argue that it is a myth that partnership involves just working together; that it simply means alliance or collaboration. They cite the partnership model proposed in Eisler's cultural transformation theory, noting that outcomes of partnership activity should accrue a mutual benefit to all who may be affected by the goal achieved, not just those directly involved in the alliance (Eisler, 1987, 2002).[16]

1.3.3.2 Network

Stoker and Young (1993) identify the characteristics of effectively functioning networks as: a recognition of dependency; pooling of resources; exchange of information; development of trust; a mutual orientation; and a commitment over the long haul. These characteristics have been applied to the study of partnerships by other researchers (e.g. Darlow and Newby, 1997; Roberts, 2000). However, these characteristics do not highlight the effect of the relationships that make up networks, or the way in which these relationships may be used as a collective tool to achieve mutually beneficial and desired, or otherwise unachievable goals.

1.3.3.3 Collaboration and cooperation

People may collaborate and cooperate to achieve mutually beneficial and desired goals that would be otherwise unachievable. Collaboration is defined as:

> (1) the polling of appreciations and/or tangible resources, e.g., information, money, labor etc., (2) by two or more stakeholders, (3) to solve a set of **problems** which neither can solve individually.[17]
>
> (Gray, 1985, p.912)

Collaboration may have positive and negative purposes. For example, terrorists may collaborate to achieve goals that they mutually desire, but that are very destructive to the community at large. Eisler's cultural transformation theory and her development of dominator and partnership models, help to articulate this point.

> Collaboration occurs in both partnership and dominator systems, but patterned differently in each. Partnership collaboration stresses mutual benefit – and not just for the collaborators, but to those affected by the collaboration. (The Nazis collaborated very well, but not for the benefit of all.)
>
> (Eisler and Montuori, 2001, p.16)

In Eisler's partnership model, partners work together to achieve goals that will be of benefit to and desired by all – not just the partners. This is particularly important in NRM settings, as the management of land water and vegetation can affect a broad range of people – not just those directly involved in making decisions and taking action to manage those resources. The notion that the achievement of the goal should be of mutual benefit to and desired by all affected by that goal should be central to any definition of an NRM partnership.

People may also cooperate to solve an NRM problem. Wondolleck and Yaffee (2000, p.xiii) see cooperation as involving "individuals or groups moving in concert in a situation in which no party has the power to command behaviour of others." For example, an agricultural extension officer working for a government

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[16] The work of Riane Eisler, on partnerships and cultural transformation theory, is discussed in detail later in this Chapter.

[17] Author's emphasis – often NRM projects are very 'problem focused'. This study will also focus on *opportunities* that partners have realised and capitalised on through working in partnership.

department may cooperate with an NGO aid agency by taking on a work experience person from an overseas country. No one forced her to do this. The overseas country may have a goal to improve sustainability of its agricultural practices. Her desire and decision to cooperate in this way are largely based on ethical grounds. The Australian will derive little direct outward benefit from the relationship. The overseas trainee will derive much greater benefit. The skills and knowledge the overseas trainee acquires will help her to achieve her country's goal of improved agricultural sustainability. The Australian is cooperating because she desires achievement of the goal. Cooperation and collaboration are different. _Cooperation is about working together to achieve mutually desired goals. Collaboration is about working together to achieve mutually beneficial goals._ Cooperation cannot be forced. Cooperation implies choice based on values held by the participant. If this is forced, for example, if it occurs at the point of a gun, it is coercion, not cooperation.

1.3.3.4 NRM partnership

This study is based on the following definition of an NRM partnership.

> _An NRM partnership is a relationship between two or more individuals or groups where the participants share the power present in their relationship to achieve goals that are desired by, or beneficial to, all who may be affected. Typically, participants, working alone, will not achieve these goals._

The two discriminating features that set NRM partnerships apart from collaborations, alliances or networks are that:

- The power in the relationship is shared and used for achievement of the mutually beneficial and desired goals of the relationship; and
- The goals of the relationship are beneficial to, and desired by, all who may be affected by achievement of those goals, not just the partners directly involved.

Participants may collaborate and cooperate when they work together in an NRM partnership. However, they also share the power present in the relationship. This definition accords with the views of Long and Arnold (1995, p.6) who define environmental partnerships as "voluntary collaborations between two or more organisations with a jointly-defined agenda focused on a discrete, attainable and potentially measurable goal." Specifically, these "partnerships are voluntary, jointly defined decision-making processes among corporate, non-profit, and agency organisations that aim to improve environmental quality or natural resource utilisation" (Long and Arnold, 1995, p.6). Environmental partnerships sound almost synonymous with NRM partnerships, given that both are concerned with "improvement of environmental quality or natural resource utilisation." Therefore, this study uses the two terms inter-changeably. Long and Arnold (1995, pp.7-8) caution that they do not regard "dialogues among organisations aimed at solely exchanging information, … lobbying or association activities, ... or financial contributions such as grants or charitable donations" as constituting partnerships. These activities may be well intentioned. However, they do not necessarily involve the sharing of power present in the relationship to achieve a goal that is mutually desired by, or beneficial to, all. Tennyson and Wilde (2000, p.16) underscore this sentiment explaining that only when participants make a "tangible commitment … does the relationship move from a dialogue to an actual partnership."

1.4   Limitations of NRM partnerships

Some NRM commentators see talk of cooperation, collaboration or partnerships in NRM as inflammatory. As Coggins (1998, p.33) notes:

> The flaws in the current legal system will not and cannot be cured by the New Age wishful thinking that believes all problems can be solved by just sitting down and talking. The lamb may lie down with the lion, but it will not get much sleep. Some form of coercion is absolutely necessary, and it can come only from the law. Ours, after all, is supposed to be a government of laws, not men _(sic)._

Coggins would rather the legal system was used to resolve NRM problems. In part, he is correct. Not all NRM problems will be solved if parties involved simply sit together and talk about the difficulties they are having. However, neither may all NRM problems be solved in Court! Choosing 'the right tool for the right job' presents a challenge. If a decision is taken that citizen participation is desirable, indeed necessary for a given situation, we (community, government and business) must be prepared to pay for this participation, in terms of our time, money and other resources. The on-ground outcomes of citizen participation in NRM

group participant partnerships are often long-term and not immediately apparent to politicians and decision-makers. There may be temptations to curtail this type of expenditure as a cost-saving measure.

There are other issues apart from costs and timeframes. Sometimes participants may simply be too far apart, philosophically and pragmatically, to come together to work in any effective and meaningful way on a shared NRM problem. Wondolleck and Yaffee ask:

> Is the situation amenable to a collaborative solution? Is it characterised by such fundamental value differences that collaboration is likely to provide little room for agreement? Do the different groups who should be involved have the incentive to engage in an effective way, or can incentives be structured to encourage their participation?
>
> (Wondolleck and Yaffee, 2000, p.250)

Citizen participation is not an 'NRM magic wand.' Sometimes it may be preferable to try other approaches (e.g. legislation and regulation, economic incentives and disincentives, education and awareness programs). Of course, a combination of these approaches may also prove most effective. Cosgrove, Evans and Yencken, (1994, pp.5-6) advocate a need for this eclectic approach to sustainability.

There are also other concerns relating to citizen participation in NRM. They include:

- the need for agencies to embrace their statutory responsibility under Acts of Parliament and not to abrogate these by attempting to devolve NRM responsibility to collaborative, partnership-based NRM groups;
- the argument that groups who have not participated in this process may be alienated from any advice given to government, decisions made, or resources that are made available to participating groups; and
- the proposition that citizens participating in these processes may lack the scientific and technical expertise necessary to provide sound NRM advice, make good decisions, or undertake practical works that lead to better NRM (Wondolleck and Yaffee, 2000, p.230).

Wondolleck and Yaffee (2000, p.231) answer these criticisms by proposing a three-way test. They advocate that any NRM advice, decision or project undertaken that involves citizen participation should be subject to the following scrutiny:

- **"Is it legitimate?"** Does it provide for normal public review and opportunities for comment?
- **"Is it fair?"** Have all parties who may be affected by the matter been invited to be involved in the citizen participation process? Are the processes they are using in their deliberations open and transparent? Are the requests that are being placed on citizens in terms of their participation reasonable and in proportion to the significance of the NRM problem under scrutiny?
- **"Is it wise?"** Have adequate sources of knowledge been identified and brought to bear on the matter at hand? Do the participants understand areas of uncertainty in this regard?

All NRM advice, decisions and project proposals, regardless of their origin, could also be subject to this three-way test (Wondolleck and Yaffee, 2000, p.231). NRM citizen participation processes have their limitations. They are difficult things to develop and maintain. The experience is similar in other areas. For example, in urban planning, Roberts (2000, p.13) cites Darlow and Newby (1997) who, when speaking specifically of partnerships between planning authorities and the communities they serve, comment that:

> It has become clear that partnerships do not achieve results as a matter of course. Commitment, resources and the right set of people and circumstances are all needed if they are to work. Equally, there is a realization that partnerships have limitations as well as benefits. Without doubt partnerships can oil the wheels of change and it would be a grave mistake to abandon them. But at the same time, partnership is not the yellow brick road to a sustainable city that it is sometimes made out to be.
>
> (Cited in Roberts 2000, p.13)

NRM agencies involved in citizen participation must recognise these limits. The statements echo the concerns of Tsing (1999) who says that NRM bureaucracies are sites of "negotiation and debate in this area." It is within this milieu of contestation, as to what counts as natural resources; who counts when it comes to making decisions about them; how, where, when and, indeed, if these parties should be involved; that the calls for collaborations and partnerships to resolve NRM problems at international, national and local levels are increasingly being made. There is a need for agencies and professionals to think clearly about the purpose of citizen participation in their particular NRM setting. For example, participation may be

'instrumental', used as a tool for a specific end or it may be 'transformative' and used as a means for social change (Buchy and Race (2001, p.294 citing Nelson and Wright (1995))). If citizen participation is to be transformative then the processes used and the degree of sharing of decision-making and responsibility between participants may be markedly different from that found in instrumental citizen participation programs. Levels of resourcing will also be commensurately greater. There is, indeed, a need to match the 'right tool with the right job.'

It is possible that parties involved in NRM may wish to capture the discourse of NRM citizen participation, particularly when it comes to the partnership level and therefore involves sharing power and responsibility for decisions and actions between those involved. Parties with vested interests, perhaps those with something to lose or gain economically, or those who previously held ability to influence decisions, may wish to portray that citizens and the public at large are participating in a meaningful way, when, in fact, these participation activities count for little. It is also important to remember that there is not necessarily a positive causal link between increased citizen participation and more sustainable NRM. As well as the possibility of manipulation of the citizen participation process, other factors such as deregulation of an industry, drought or changes in global market prices may come into play and render inert the positive effects of citizen participation (Buchy and Race, 2001, p.295).

1.5   Examples of NRM partnerships

1.5.1   Global level

At the 2002 Johannesburg World Summit on Sustainable Development (WSSD), part of the debate focused on the development of partnerships and the need for citizen participation for sustainable development. There is evidence that citizen participation in NRM is increasing. In the decade to 2001 in global terms, the numbers of NRM groups have swelled by approximately 408,000 to 478,000. This represents an increase from 8.2 to 14.3 million in the total numbers of members of catchment, micro-finance, irrigation, forestry, agriculture and integrated pest management groups throughout the world (Pretty and Ward, 2001, p.209). It was indeed timely that the WSSD should make this an important agenda item. The Summit heralded partnerships as the new tool for sustainable development. However, it also saw criticism regarding the use partnerships to allow governments to shirk their responsibility for sustainable development and for unsustainable business corporations to use partnerships as a type of 'greenwash' to show themselves in a favourable 'green light' (Anon(a), 2002, pp.1-5; Anon(b), 2002, p.1; Kanno, 2002, p.1-3; Krishnakumar, 2002, p.2). For these critics, the Summit provided an example of governments and businesses with vested interests 'hijacking' partnerships as a citizen participation process to continue to profit at the expense of the environment.

The Summit brought together 104 heads of government, with a total of 191 countries participating. 21 340 accreditation passes were issued with around 22,000 delegates also attending a parallel Civil Society Forum for non-government organisations (NGOs) (Anon(b), 2002, p.1). Those organising the Summit invented two new terms: "Type I partnerships" and "Type II partnerships." Type I partnerships describe the bilateral or multilateral country relationships where two or more nations work together to address sustainable development issues. The Summit also recognised the development and implementation of Type II partnerships where various other stakeholders may be involved, including business corporations, industry groups, governments, civil society groups and NGOs (Lanzona, 2002, p.2).

Groups developing and implementing such partnerships were invited to submit their partnership initiative to the United Nations Commission on Sustainable Development for posting on the Johannesburg Summit website. At the time of writing, 251 partnerships that adhere to the guiding principles have been posted. As mentioned above, the criticisms of Type II partnership initiatives and the absence of more solid and binding Type I partnership outcomes from the Summit was considerable, particularly from NGOs. However, there were comments in the lead-up to the Summit that "multi-stakeholder partnerships *(had a)* role to play in delivering credible outcomes at WSSD" (Calder, 2002, p.2). Reasons put forward to justify this statement included – the complexity of the sustainable development process needing a wide range of actors if it were to be adequately addressed; the need for strong linkages between these actors and requirements for new financial and non-financial resources to be brought to the table (Calder, 2002, p.2). At the Summit itself, UN Secretary-General, Kofi Annan, reinforced this view, stating:

> Actions start with governments. The richest countries must lead the way. They have the wealth.
> They have the technology. And they contribute disproportionately to global environmental problems.
> But governments cannot do it alone. Civil society has a critical role, as partners, advocates and
> watchdogs. So do commercial enterprises. Without the private sector, sustainable development will

remain only a distant dream. We are not asking corporations to do something different from their normal business; we are asking them to do their normal business differently.

(Anon(a), 2002, pp.4-5).

The comments of the Secretary-General appear reasonable, as do the fears of the critics of Type II partnerships. The challenge would appear to lie in developing processes to enable parties to work in partnership when managing their natural resources, with all parties accepting their fair share of responsibility for joint decisions and actions.

1.5.2   Queensland level

1.5.2.1   Final authority on decisions and policy

The Queensland State Government uses the term community engagement rather than citizen participation, stating that community engagement refers to "arrangements for citizens and communities to participate in the processes used to make good policy and to deliver on programs and services" (Queensland Department of Premier and Cabinet (QDPC), 2001, p.5). Where Arnstein (1969) divides her 'ladder' into three levels involving "non-participation; degrees of tokenism and degrees of citizen empowerment", the QDPC (2001, p.5) has three levels called 'information', which it says is a one way process; 'communication', which is explained as being a two way process; and 'active participation.'[18] 'Active participation', according to the Queensland Government documentation means that:

> Citizens and communities actively engage in the policy-making process. It acknowledges a role for citizens in proposing policy and shaping the policy dialogue – although the responsibility for the final decision or policy formulation rests with the elected government. [19]

(QDPC, 2001, p.5)

This QDPC definition of community engagement mentioned above is meant to be applicable to all governments departments, including Queensland Department of Natural Resources and Mines (QDNR&M), the lead State agency for NRM. This definition may be problematical for NRM, as citizens who own land may have certain legal rights over vegetation, soil and water on their properties. Contrary then to the notion of 'active participation' mentioned above, final authority over management of these resources might *not* always rest with the State. Decision-making and policy development on such matters, may be better negotiated in partnership, as outlined by Arnstein (1969, p.221). This may be challenging for State Government.

1.5.2.2   Need for dialogue on sustainable practice

NRM is not only a matter of government developing good NRM policy. It is also about community and industry understanding, developing and implementing more sustainable practice, and being able to develop good relationships with government so that dialogue may take place on matters relating to sustainable NRM policy and practice. QDNR&M has realised a need to develop institutional arrangements that may help to meet this need.

1.5.2.3   Improving institutional arrangements

In 2000, the QDNR&M undertook a project entitled, *Strengthening Community Based Natural Resource Management.* This project involved QDNR&M staff engaging in dialogue with people involved in NRM groups throughout Queensland.[20] Early documentation on the project stated that its purpose was to develop a policy framework and arrangements to:

- Strengthen local stewardship of natural resources; and
- Provide institutional arrangements for government-community partnerships.

(QDNR&M, 2000, p.1)

In March 2001, a final report on this dialogue process suggested the following actions:

- Clarify roles and responsibilities of all involved (NRM groups, government agencies at all levels);
- Improve regional coordination, partnerships and planning;

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[18] See Figure 1.1

[19] "Community generally means a collection of citizens, groups or organisations with a common interest. … Some have local and regional interests and others have interests in specific issues" (QDPC, 2001, p.11).

[20] For example – members of Landcare, Integrated Catchment Management (ICM) and other NRM groups.

- Improve funding arrangements (seeking long-term commitment for funding to be administered at a Regional level)
- Build community awareness; and
- Provide incentives for sustainable NRM practice.

(QDNR&M, 2001, pp.5-6)

Four alternative models of regional coordination were suggested for this to occur: the formation of alliances of groups by region; formation of formal non-statutory regional NRM bodies; formation of formal statutory NRM authorities; and government-led regional coordination (QDNR&M, 2001, p.8).[21] The term 'partnership' appears in the second dot point of recommendations summarised above. Formal non-statutory regional NRM bodies have been formed throughout the State, this process being facilitated by QDNR&M, the lead agency for NRM in Queensland. At present, it is difficult to determine whether these regional bodies will operate on a partnership basis.[22] QDNR&M documents written in 2000 emphasise forming partnerships to resolve NRM problems that face us.[23] The QDNR&M Corporate Plan (2001-2006), a more recent document, instead states that the Department will build "vibrant community alliances" (p.2).[24].

It appears that at both whole-of–government and QDNR&M levels, there are three unresolved issues as to the development of NRM partnerships with community and industry:

(i)   Who has final authority for NRM decisions and policy development;
(ii)   The need for government – community – industry dialogue on sustainable NRM policy development and practice; and
(iii) The need to improve institutional arrangements to allow dialogue on NRM decisions and policy development to occur.

These three issues underline the relevance of the research undertaken for this study.

For some, partnerships are more than just citizen participation tools to be used in context-appropriate circumstances. The concept of partnership is a philosophy guiding and changing their way of life at all levels, influencing their relationship with themselves, family, community, nation, international community and natural surroundings. It is to this way of thinking that this review now turns in this discussion on NRM partnerships.

1.6   Partnership as a philosophy

Eisler (1987, 2002) has developed a cultural transformation theory, which proposes that two basic models of society, the dominator and partnership models, may help to explain the great diversity of human culture. Table 1.1 compares and contrasts these two models. Eisler maintains that the history of western civilization can be broadly explained as a struggle between cultural groups that adhered, in general terms, to either the dominator or partnership models. In terms of national examples, Iran presents as a dominator-oriented country whereas Scandinavian countries such as Sweden, Norway and Finland are more partnership-oriented (Eisler and Koegel, 1996, p.7; Eisler, 2002, pp.151-152). The two models are concerned with the central principles of social organization found within a culture-sharing group. They may be applied as analytical tools to help in understanding and social relationships such as NRM partnerships.

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[21]   One might reasonably assume that individuals and nations who have allies, also have enemies. In terms of NRM and the activities and programs government undertakes, it is unclear who these enemies are!
[22] As defined by Arnstein (1969, p.221)
[23] e.g. The *Strengthening Community Based Natural Resource Management* document mentioned in this Chapter.
[24] Use of such a military term may fit with notions of community engagement, as noted previously, but it is in contrast to language that is being used at international and national levels relating to the development of partnerships in NRM, as outlined in this Chapter

Table 1.1 A comparison of dominator and partnership models

BLUEPRINTS FOR THE DOMINATOR/ CONTROL AND THE PARTNERSHIP/RESPECT MODELS		
COMPONENT	DOMINATOR MODEL	PARTNERSHIP MODEL
One: Social Structure	Authoritarian structure of rigid rankings and hierarchies of domination.[25]	Egalitarian social structures of linking and hierarchies of actualisation[27].
Two: Gender Relations	Ranking male half of humanity over female half. High valuing of traits and activities such as control and conquest of people and nature associated with so-called "masculinity.[26]"	Equal valuing of female and male halves of humanity. High valuing of traits and activities such as empathy, non-violence, and care giving in women, men and social policy.
Three: Violence and Fear	High degree of fear and socially accepted violence and abuse – from wife and child beating, rape, and warfare, to emotional abuse by "superiors."	Mutual trust and low degree of fear and social violence, since these are not required to maintain rigid rankings and domination.
Four: Belief System	Relations of control/ domination presented as normal, desirable, moral.	Relations of partnership/ respect presented as normal, desirable, moral.

(Eisler, 2002, p.212)

The partnership model proposed by Eisler does not just concern itself with female/male relations. Rather, it focuses on developing "a more trusting, reciprocal, and egalitarian linking, not a fear-based hierarchic ranking" within a social group (Eisler and Koegel, 1996, p.6). It may be tempting to think of social groups or societies as being constituted entirely along either partnership or dominator lines. However, it may be more useful to think of social groups or societies as existing somewhere on a dominator-partnership continuum and, with each group or society containing elements of both models. Eisler and Koegel explain:

> No society, regardless of how rigid its rankings of domination, can survive without at least some *partnership* elements. Indeed, like a plant that refuses to be killed, no matter how often it is crushed or cut back, partnership has again and again sought to re-establish its place in the sun.
>
> (Eisler and Koegel, 1996, p.9)

Dominator societies still exhibit acts of collaboration and cooperation found in partnership-oriented societies. For example, conquerors could not win wars if they did not cooperate with their allies. Nazi Germany would not have been able to occupy most of Europe without the help of collaborators from the countries they occupied (Eisler and Koegel, 1996, p.7). Conversely, unpleasant aspects of human life such as violence, pain and cruelty appear as part of the human condition, and would, therefore, one assumes, be present in partnership-oriented societies. Eisler and Koegel make the point that "violence, cruelty and domination are neither idealised nor institutionalised in partnership societies," whereas they are in dominator-oriented societies which need them to ensure their survival (1996, p.7). Eisler interprets that the last 300 years of history show a resurgence of the partnership model, noting that this resurgence is being resisted by those by sections of society who benefit from and, consciously or unconsciously, adhere to dominator thinking (Eisler and Koegel, 1996, p.10). The struggles, disagreements and criticisms of the

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[25] A *domination hierarchy* "is the type of hierarchy based on fear of pain and or force" (Eisler, 2002, p.212).
[26] Eisler explains that "'masculinity' and 'femininity' in this context correspond to gender stereotypes appropriate for a dominator society and *not* to any innate female or male traits." (Eisler, 2002, p.212).
[27] A *hierarchy of actualisation* is "where leadership and management are empowering rather than disempowering, and the goal is higher levels of functioning." (Eisler, 2002, p.212).

WSSD, as outlined previously, could easily be seen as an example of this phenomenon – as could the uncertainty of government departments involved in collaborative NRM work with industry and community groups.[28]

Organisations, such as government departments, may find it hard to act as 'good partners' if they do not mirror partnership thinking within their own organisation. Eisler and Montouri (2001, pp.11-17) have characterised "partnership organizations." They exhibit:

- Flatter, less rigid, hierarchical structures;
- Managers working more as facilitators and supporters rather than enforcers and police officers;
- A reconceptualisation of power (from power to control others and the environment to power to work with others to achieve common goals);
- An emphasis on teamwork and the creation of successful teams;
- Diversity of membership;
- Gender balance; and
- An emphasis on creativity and entrepreneurship as everyday, collaborative, continuous processes.

(Eisler and Montuori, 2001, pp.11-17)

This factor may prove significant in the analysis of the case studies investigated in this research. In her latest work, Eisler has extended the use of partnership model in the analysis of other relationships: including partnerships with: self (mind, body and spirit); family and life partners; the local, national and global community; and with Nature (Eisler, 2002).

There are distinct parallels between the dominator and partnership models in Table 1.1, the description of a partnership-based organisation, described above, and the conceptual framework developed by Robert Chambers (1997) to critique thinking and practice of overseas aid agencies involved in community development. Chambers explains that there is a need to truly empower individuals in communities if the ecoplexes on which they rely for their survival are to be sustained in the long-term. The following dot points summarise how Chambers (1997, pp.15-199) characterises the 'traditional community development bureaucracy' and how such institutions must change if they are to empower people to interact sustainably with the ecoplexes on which they rely for their survival.

- *Concerns* – Traditionally overseas aid agencies have been concerned with 'things'. They must become more concerned with 'people than things'.
- *Working environment* – The bureaucratic working environment must move from being controlled, standardised and simplified to being uncontrolled, diverse and complex.
- *Errors* – Errors that have been deeply 'embedded' within the bureaucracy, and not acknowledged by all involved, must be 'embraced'.
- *Power* – Centralised, urban-based structures that concentrate power must be replaced by rural-based structures that disperse power to the periphery.
- *Professionalism* – There must be a move towards according respect to professionals who are concerned with 'people' and 'place' away from those concerned with 'things' or 'people as if they were things'.
- *Decision-making* – Decisions that have previously been based on measurement, reductionism, and precision must be based more on judgement, holism, and fitness.

The 'new way of working' that Chambers describes may be just as relevant to NRM practitioners working in Australian settings. It would appear that Chambers is describing a more partnership-oriented approach to community development and NRM.

Yet, a partnership-oriented approach to NRM may not be without its pitfalls. Cultural transformation theory and dominator and partnership models are useful tools in the analysis of arguments for and against NRM partnerships. For example, Poncelet (1998, p.7) studied multilateral NRM partnerships.[29] He suggests that there was "a dominant, taken-for-granted model by the vast majority of participants for how multi-stakeholder partnerships are supposed to work." He says that participants saw the partnership process as non-confrontational in nature. Conflict with and opposition to other members and their views were not allowed. On face value, this may appear to concur with the partnership model proposed by Eisler (2002). However, Eisler and Montuori (2001, p.16) would refute this assertion, saying that it is a myth that there are no conflicts or differences in true, effective partnerships. They explain that in the dominator model the

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[28] See 1.3.1
[29] Multilateral partnerships are made up of participants from three or more different backgrounds.

outcome of conflicts is that "one of the two parties is eliminated." Conflict in partnerships, according to Eisler's model, is a potential source for creativity, where, by using partnership principles, partners can develop a relationship that is useful for them. The current rise in talk of partnerships may also be viewed as being caused by a gain in popularity of the discourse of ecological modernisation.

Dryzek (1997) outlines the nature of environmental discourses and how they influence approaches to environmental management.[30] Poncelet (1998, pp.11-12) summarises the work of Hajer (1995), Harvey (1996) and Mol (1996) to describe three such discourses that he observes as prevalent in relation to management of NRM and environmental problems – the survival discourse, the standard discourse of environmental management, and the discourse of ecological modernisation. Environmental groups often use the survival discourse. They describe the problems at hand and demand that they be solved. Government departments and businesses often use the 'standard discourse'. This favours focusing on problems only when they are no longer able to be ignored and then advocating that technology exists to clean up or fix the problem. In summary, there are four characteristics of the discourse of ecological modernisation:

- Existing political, economic and social institutions are viewed as the most suitable vehicles for natural resource and environmental management.
- Collective action is the most appropriate to for the solutions of current dilemmas.
- Ecological problems should always be viewed with scientific rationality and their monetary value calculated. The economic perspective is dominant.
- It is possible to reconcile economic growth and ecological problems. Ecology and economy are not opposed. 'Wins for the environment can also be wins for the economy.' Environmental protection and NRM are positive-sum rather than zero sum games (Poncelet, 1998).[31]

NRM and NRM collaborations and partnerships may be viewed as part of the discourse of ecological modernisation, as described above. This discourse is not without its critics. For example, the attachment to scientific rationality – the notion that science will always have all the answers, permeates both the discourse of ecological modernisation and NRM policy.[32] In terms of 'scientific rationality' Saul (1992, 1995) describes what he regards, at a societal level, as our obsessive attachment to scientific rationality and expertise.

> Among the illusions which have invested our civilization is an absolute belief that the solutions to our problems must be a more determined application of rationally organised expertise. The reality is that our problems are largely the product of that application.
>
> (Saul, 1992. p.8)

Saul (1992) advocates that modernist science has little understanding of whole systems, as it tends via reductionism to focus more and more effort to understand increasingly smaller parts of systems. This results in the risk of making and acting on decisions that, viewed holistically, are without sense or morality. He says that appropriate use of "common sense, ethics, intuition, memory and reason" can help us overcome this problem, noting "these can be exploited individually as a justification for ideology; or imprisoned in the limbo of abstract concepts. Or they can be applied together, in some sort of equilibrium, as the filters of public action" (Saul, 1995, p.189).

Thoughtful application of cultural transformation theory may help practitioners, intent on developing NRM partnerships to respond to, and to learn, from the observations of Poncelet and Saul, outlined above. Eisler's partnership model provides principles on which NRM partnerships may be based. The challenge may lie in working out how we might move NRM and current NRM institutional thinking from its dominator influenced conceptual home, as enunciated through the discourse of ecological modernisation, to a more partnership-based model. The recommendations for action Eisler provides throughout her 2002 work (pp.215-254) on how to implement partnerships have a slightly utopian air. She has already sought to rebut this criticism in her 1987 work, *The Chalice and The Blade,* saying that she is not out to create a utopia (a word which she says literally means "no place"), but to create a "*pragmatopia* – a realisable scenario for a

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[30] As mentioned in a previous footnote, the term environment has an individual organism or individual species focus – describing the conditions under which an organism or species lives. Environmental management, then may have a very 'non-human' or ecocentric focus. NRM looks at manipulating components of an ecosystem for human benefit, treating the ecosystem as an ecoplex. It has a more homocentric focus.

[31] The terms 'sustainability' and 'sustainable development', discussed earlier in this chapter rely upon this idea.

[32] For example, the actions taken by NRM partnerships should be guided by the best available science, experience and information (NNRMTF, 1999, p.10)

partnership future" (Eisler, 1987, p.198). The difficulty may be in moving to this pragmatopia. The challenge may be in putting cultural transformation theory into practice. In terms of NRM partnerships, Eisler has provided a potentially useful philosophy, if it is accepted by all parties involved, and Arnstein has provided a description of the partnership process, as a form of citizen participation without linking it to context, that is, without describing the characteristics of the places and situations in which NRM partnerships may be most the most appropriate form of citizen participation.

The concept of power in partnerships links the work of Arnstein and Eisler. In terms of citizen participation, Arnstein sees that power sharing as an integral part of working in partnership. Eisler has conceptualised power as creative and enabling rather than as negative and dominating. For example, she talks about managers having the power to work 'with' others rather than power 'over' them in partnership-based organisations (Eisler and Montuori, 2001, p.13). In her view, power can be creative and positive as well as negative. The discussion that follows explores the concept of power, how it links the work of Arnstein and Eisler and how this understanding may help in the development of effective partnerships in NRM.

1.7   Partnerships and power

Power is a complex and important concept in social science. It is many faceted and therefore does not easily lend itself to concise definition. Max Weber, one of the founders of social science, says that power is:

> the probability that one actor within a social relationship will be in a position to carry out … *their …* own will despite resistance, regardless of the basis upon which this probability rests.
>
> (Weber, 1947, p.47)

This view sees power as existing in all social relationships. It also gives us options. We may look at power as either being possessed by the actor in the relationship who manages "to carry out *their* own will despite resistance," or that it exists within the social relationship and the actor manages to use it successfully. It also tells us that this is "regardless of the basis upon which the probability rests," meaning that the actor has power regardless of the likelihood that they will act on the other party in some way to exert their will. For example, if a person has a loaded gun they may be able to exert their will and exercise power over others even though there may only be a very small probability that they would actually fire the gun. The gun may not even be loaded. As long as those asked to do something against their will, have a perception that it is loaded, the person with the gun may be able to exert power over them.

It is important to note that power is not just about getting someone to perform an action against their will. It is possible to think of four faces of power (Ledyaev, 1997, p.7-21). This chapter has already addressed the first face of power – the ability to get a person to make a decision to do something that is against their will. It may also be desirable in some instances for a person exercising power to be get someone **not** to make a decision. Bachrach and Baratz (1970, p. 42-44) call these "decisionless decisions." In terms of action we could call them 'actionless actions'. This is the second face of power. The third face of power is concerned with the way people think. "Power should not be reduced to behavioural events (actions or inactions) but broadly defined enough to include the shaping of the subject's preferences" (Ledyaev, 1998, p.21). For example, in terms of NRM, members of farmer-based Landcare groups may feel that governments are making a 'grab for power' and trying to tell them how to manage their land by employing facilitators to 'control' Landcare groups when other much more powerful forces such as deregulation and globalisation of markets may have much more significant effects (Martin, 1997, p.48).

The fourth face of power is concerned with meaning. Control of what counts as meaningful, is a form of exercise of power. The French philosopher, Foucault reasoned that in modern society there were very few people going about directly exerting power over others, but that people were still acting in ways that were contrary to their will – that power was being exerted over them. He reasoned that these patterns of power evident in contemporary society were due to "new ways of administration and surveillance and tightly connected with knowledge, specialised skills and techniques" (Ledyaev, 1997, p.19). He asserted that those who controlled the professions and academic disciplines controlled the discourses used in those areas. He noted that the discourses included not just words and the ways that they were given meaning and meaningfully arranged, but the act of speaking or refusing to speak, write or articulate those words. Other symbols, apart from words, may also be imbued with meaning and then become part of a discourse. He argued, that in modern society, discourses were controlled by the groups of people who created them – notably the professions or academic disciplines. The discourse was in turn made meaningful by an underlying system of knowledge or episteme which governed what counted as knowledge (Jose, 1998, p.77-78; Ledyaev, 1997, p.19). Thus, individuals who control dominant discourses and therefore approve certain knowledge to be legitimate and 'true', also exercise power. Those controlling the discourse may also

use this influence to obscure power relations and extend the influence of elites in particular settings. The ideas of Foucault constitute the fourth face of power – the significance of the discourse – disciplinary power. For example, Taylor (2001, pp.122-138) has analysed how participatory discourse and practices in human resource management have been used to obscure power relations in work settings, allowing those 'in power' to further enhance their control and authority.

Foucault (1980, p.98) realised that relationships between individuals, for the most part, exist in broader social settings or networks and that power should be viewed as something that flows within these networks. If we think of social networks as being made of social relationships between individuals that are also enmeshed in other social relationships, then it becomes easier to imagine 'power' flowing through the many interacting social relationships that make up these networks.

Being able to get someone to do something that he or she do not want to do, to not make a decision, to think in a certain way, or to be controlled by others who have access to privileged knowledge and are therefore able to discount alternative views are very negative ideas of power. There appear to be four key elements that are necessary if we define power as a negative phenomenon: an actor, an action, intention and an outcome (Debnam, 1984, p.ix). Given these four key elements, conceptually then, a contemporary view of power, is embodied in four main points:

> (1) Power is not the property of individuals, but a relationship between them. (2) Any statement of outcome of its exercise must be couched in terms of probability. (3) Almost anything can serve as a basis for power. (4) Power is 'despite others,' it is about conflict and resolution of conflict.
>
> (Ledyaev, 1997, p.4)

Power and force are different. If the actor actually fired the gun, then they would be using force. If they simply threaten to use the gun, then the act is one of exercising power (Bachrach & Baratz, 1970, p.27). Some of the earlier thinkers on power viewed it as something that was held by an individual. It was seen as a commodity that could be bestowed on others (e.g. a knight receiving his powers from the Crown or government of the day). A more contemporary view is that power is found in social relations, existing only when there is a conflict of interest between parties, when one bows to the wishes of the other, and only because the first party can threaten to invoke a sanction (Bachrach & Baratz, 1970, p.21).

This view of power is what drives Eisler's dominator model of society. Such a society has hierarchies based on "fear of pain and/or force" – having "power over" others (Eisler, 2002, p.212). Power can also be positive. For example, one can have the "capacity to work to achieve goals with others, but not at the expense of others" (Eisler and Montuori, 2001, p.13). This follows Eisler's partnership model, mentioned previously, which is based more on teams of people working in partnership to achieve mutually agreed goals.

Arnstein's notion of power in partnerships has some similarities to Eisler's partner model, but also differences. When Arnstein talks of partnership in her ladder of citizen participation, we can learn much about the way she was thinking about power by examining the phrase "At this rung of the ladder, power is in fact redistributed through negotiation between citizens and powerholders" (1969, p.221) I have analysed that phrase to compare and contrast the thinking of these two women. This is summarised in the table below.

Table 1.2 Power in partnerships – comparing views of Arnstein and Eisler

Power in Partnerships		
Element	Arnstein's View	Eisler's View
Negative/Positive Aspects of Power	Depending on circumstances, power can be both positive or negative.	Power is positive
Power as a commodity	There are power holders and citizens. Power is a commodity that individuals can hold.	Power resides in social relationships and networks and the ways that people within those networks share common understandings.
Dominator/Partnership models	Dominator thinking is prevalent in society. We can only form a partnership if power holders are prepared to give up power and share it with citizens.	Dominator thinking is prevalent in society, but there are signs, at many levels, of a cultural transformation towards the partnership model.
Role of managers	Managers are power holders. They make decisions and take responsibility for them.	Managers are facilitators. They work in partnership with others to achieve mutually desired outcomes. We call this outcomes–based management.

(After Arnstein, 1969; Eisler and Koegel, 1996; Eisler and Montuori, 2001; and Eisler, 2002)

In terms of analysing NRM partnerships, it will be important then to understand how those in them understand power. For example, let's think of a government – community partnership on a particular NRM problem that affects them both. NRM managers (i.e. people from the government) may see power as a commodity that government has accumulated by virtue of citizens voting for their political masters, in effect giving them their power. The NRM managers from government may control the discourse, e.g. the scientific research, which gives meaning to the NRM problem. Partnerships then, would be viewed as relationships with citizens where accumulated power (e.g. legislative authority and power to control a discourse) has to be 'given away' by NRM managers in government if they are work in partnership with citizens. Government NRM managers may not see this as wise. Conversely, landholders, involved in a particular NRM problem, may view power that they have under law to manage their land, as a commodity. They may be loath to 'give it away' and allow someone else from government to make decisions that affect them and their land. There may be problems with understanding and trust. Landholders may not understand and believe what the scientific research tells them should be done about the problem. Government and scientists may not understand and believe the discourse of the landholders on this particular problem. The authors contend that many involved in NRM partnerships (government and non-government) have a fairly negative view of power. They see it as a commodity. The 'Arnsteinian' notion of a power-holder deciding to share power in a partnership is one that is immediately comprehensible for them. Eisler's concept of power as relational and positive, with managers as facilitators rather than power-holders, is less commonly represented in NRM partnerships. It may, however, represent another level of evolution in the life of an NRM partnership as the relationship develops. Participants in NRM partnerships may, over time, realise that neither party holds all the power and that they therefore need to make the most positive use of the power that exists in their relationship. These two views of power in partnerships may be seen as points a continuum along which NRM partnerships may journey. For this to occur participants will have to be honest with each other and not simply seek to capture the discourse of partnership and carry on with 'business as usual', as critics of the WSSD Type II partnerships have claimed. If partners are going to recognise the nature of the power relationship that exists between them and to use that understanding creatively to solve their shared NRM problems, then they face certain tasks. They will have to learn from each other, to come to understand each others values, to embrace the conflict that Poncelet saw avoided in his partnership case studies and use it to define common ground on which they may achieve their mutually desired goal(s).

Finally, Eisler's notion of power 'with' and 'for' seems to coincide more with Foucault's idea of power as something quite 'fluid' that flows through social networks. If one accepts this notion, then power may be held by groups of people, as well as individuals. If one wishes to enter into an effective NRM partnership with a group of people, then the members of that group must also be working in partnership with other people in the organisations that they represent in the NRM partnership. For example, a government department working in an NRM partnership with a non-government organisation (NGO) may have

difficulties in power sharing and decision-making if processes used within the NGO are not based on partnership principles. Of course, the reverse may also apply in terms of NGOs being reticent to share power. Government agencies wishing to enter into successful NRM partnerships with others will also have to mirror partnership principles within their organisation. What happens within groups, in terms of power sharing, may be just as important as what happens between the groups when it comes to developing effective NRM partnerships (Digby and Race, 2001, p.295).

An understanding of two other concepts is central to the discussion of the development of effective NRM collaborations and partnerships: social learning and social capital. People involved in an NRM collaboration or partnership who take the time to learn about each other and their interactions with their surroundings, are involved in social learning. This concept is discussed in greater detail later in this chapter. When people form social relationships and networks they generate social capital. The following section discusses the concept of social capital and its relevance to NRM partnerships.

1.7.1   Partnerships and social capital

Although the term social capital was first used in scientific literature around a century ago, it was not until 1990 that James Coleman developed a comprehensive theory of social capital with the publication of *Foundations of Social Theory* (1990) (Gabbay and Leenders, 1999, p.2). Social capital research is a dynamic and expanding area, with studies using social capital theory now being undertaken in economics, social sciences and political sciences. Given the diverse nature of these research fields, it is understandable that a concise definition of the term is elusive. "Some authors equate social capital with social structure, whereas others refer to it as resources an actor can mobilise through the social structure" (Gabbay and Leenders, 1999, p.2). It may be more appropriate to say that social structures can help to build social capital by placing actors (people) in situations where they can develop relationships with each other. Like any other form of capital, social capital allows actors to do things. "Whereas economic capital is in people's bank accounts and human capital is inside their heads, social capital inheres in the structure of their relationships" (Portes, 1998, p.7). Social capital may be viewed as being possessed by an organisation or social network or by an individual within that organisation or network (Coleman, 1988, p.98). In summary, social capital encompasses:

- The extent of networks between individuals and groups;
- The density of relationships; the knowledge of relationships;
- The existence of obligation and expectations (promotion of reciprocity);
- Other forms of local knowledge;
- The level of trust;
- Norms of routine behaviour; and
- The existence and use of sanctions to punish 'free-riding.'

(Rydin and Pennington, 2000)

An actor may not necessarily be conscious of the social capital that they have at their disposal, even when they use it. It may be so deeply embedded in the social structure that its existence is taken for granted (Gabbay and Leenders, 1999, p.3). The presence of social capital may not be observable to those outside a social network or organisation until it is used. While a social network may have been built for a particular purpose, the social capital accumulated, may be used for other purposes. For example, a person who becomes friendly with colleagues in a work place may enjoy 'non-work place benefits' when those colleagues help him build a new pergola at home. Social capital may be accumulated. It may also be depleted. A person may recognise a situation in which they are 'on their last favour' and do not have a 'bank' of social capital within a relationship on which they may further rely.

Putnam (1993) describes social capital as the horizontal associations between people which foster mutual cooperation within a group. He investigated the outcomes of local government reforms in Northern Italy in 1976-77, concluding that it succeeded well and was accompanied by increased economic prosperity and a rise in the activity of the civic community. Putnam (1993) attempted to draw broad causal relationships between these three factors. He conceptualised social capital as being built of moral obligations and norms, social values (especially trust) and social networks (especially voluntary associations). Coleman (1988, 1990) has included vertical relationships that may be found in hierarchical structures where power is distributed unequally as also contributing to the social capital of a group. Vertical associations are just as important in associations composed of volunteers as they are in other organisations. Aspects of power and domination come into play. For example, voluntary organisations generally have a leader, or President and a management committee, as well as rank and file members. A voluntary organisation may also try to exert power over outsiders (eg lobby groups, protest groups, groups who are exclusive in nature) (Siisiäinen, 2000, p.6).

NRM groups, as voluntary organisations, also have these vertical relationships. The following chapter explores how, in some instances, NRM groups may be thought of as NRM partnerships. The nature of the relationship between these voluntary NRM groups and government is also important to their functioning, especially as, in many instances the Groups have been government initiated. Identifying these vertical relationships both within and outside NRM groups, e.g. their relationships with different levels of government, industry groups environmental groups, and gaining an understanding of aspects of domination, partnership and power that inhabit them will be important in the research undertaken for this study. Putnam's work is generally silent in this regard. His analysis of social capital in society is predominantly Euro-American based, focusing on the integrative functions of voluntary associations as a basis for civic society. Aspects of power, conflict and domination arising from vertical relationships inherent in voluntary associations are not focused on in his work (Siisiäinen, 2000, p.6).

Coleman (1988, pp.101-108) characterises social capital as the obligations, expectations and trustworthiness of structures within a group, the effectiveness of information channels, norms and effective sanctions and the closure of social networks (i.e. social networks where all participants have the capacity to interact with each other to re-enforce behaviour acceptable to the group) as being significant to the level of group social capital. Social capital has value. Whereas physical capital, for example, exists in tools and machines and other equipment that can be used to produce goods, and human capital can be thought of as the skills and abilities that an individual possesses that make them able to "act in new ways", social capital exists within groups of people (Coleman, 1988, p.100). Physical capital and human capital are generally private goods. People can benefit from investing in them and the benefits they produce (Coleman, 1988, p. 116). Social capital is different in that it is a collective good, something that gives benefit to the individuals that are part of a group, but that resides at the group level rather than being owned by the individual (Coleman, 1988, p.116). It can be thought of as existing within any social group, regardless of size, from a family group, through to a nation. The fact that it is a collective good or 'public good' differentiates social capital from other forms of capital (Coleman, 1988, p.116). Individuals may under-invest in social capital, because it is highly unlikely that they will gain a return on all their investment, unlike physical or economic capital over which they can exercise exclusive property rights. For the purposes of this study, social capital is described as the oil that lubricates the functions and processes of a group of people.

Bourdieu (1985, 1986) distinguishes between economic, cultural and social capital to analyse conflict from a class perspective. Bourdieu's use of the term 'economic capital' is mainly Marxian in definition. Cultural capital is comprised of *habitus* or the way that we see as acceptable to live, mainly derived from everyday learning (predominantly in early childhood) and cultural articles that are seen as having value and certifications provided by institutions, e.g. exams, degrees. Social capital, according to Bourdieu, depends on the extent of the network connections that a person can mobilise. When social capital is used, it is first 'converted' into symbolic capital that the actor and others recognise as self-evident and that the actor then uses to advance their place in society, and to resolve conflict (Bourdieu, 1985, p.204). While trust figures prominently in Putnam's ideas on social capital, Bourdieu does not mention the term. He does speak, however, of a 'capital of recognition' where one actor may respond positively to the interest of another because of some universalised value contained within a symbol used in that particular context (Siisiäinen, 2000, p.12). However, Putnam (1993, pp.163-165) emphasises trust as an important component of social capital, as trust creates reciprocity or voluntary association. You will do something for somebody because you would expect her or him to do that for you. In return, this increases trust and the likelihood of reciprocity and voluntary association occurring. Such a process may be viewed as a "virtuous" rather than "vicious" cycle of social capital building in that the learning that occurs is positive and helps to build social capital (Cavaye, 1999, pp.28-30). In a well-functioning society such learning can stimulate this virtuous cycle and lead to 'generalised trust' where people will act in trusting ways to persons unknown to them (Siisiäinen, 2000, p.3).

Throughout his work, *Trust: The Social Values and the Creation of Prosperity,* Fukuyama (1995) relates social capital to trust within a group, saying that groups who share common values and ethical frameworks generally have much higher stores of social capital than those that do not. Of course, groups may share negative common values and ethical frameworks, giving rise, for example, to organised crime syndicates such as the mafia. As Collier (1998, p.21) says, social capital may "spread criminality as well as new agricultural technologies." The social interactions that people have may build both 'good' and 'bad' social capital – social capital that may be useful or detrimental to the actors (Falk and Kilpatrick, 1999, p.6).

Fukuyama comments that nations with a higher degree of social capital have less need to spend money on police, goals and lawyers to sue one another (1995, p.11). He claims that nations (like all groups) have stores of social capital. For example:

In addition to its physical capital, the United States has been living off a fund of social capital. Just as its savings rate has been too low to replace physical plant and infrastructure adequately, so its replacement of social capital has lagged in recent decades.

(Fukuyama, 1995, p.11)

From an Australian perspective, Cox (1995) comments on the need for trust as an important element of social capital. She sees social capital as being related to the role of the State, which, she feels is currently declining. As she says:

If we lose the social capital which the expanded role of the State has provided, with its implicit and explicit concepts of citizen rights and mutual obligations, there will be serious consequences.

(Cox, 1995, p.52)

So how do we reverse this trend? Cox comments, "we need to increase the functions and visibility of governments. We need specific cultures of civic concern – of mutual responsibility – and resources for social capital formation" (1995, p.53). Fukuyama (1995, p.11) is a little more circumspect on this point, saying: "while governments can enact policies that have the effect of depleting social capital, they have very great difficulties understanding how to build it up again." There are some studies to show that Fukuyama's cynicism about the role of government in building social capital may be not entirely justified. For example, "comparative studies on trust show that the citizens of Nordic countries are among the most 'trusting' in the world in the Putnamian sense of the word" (Siisiäinen, 2000, p.7 citing the work of Inglehart, 1997, 1999). Siisiäinen argues that the high level of development of the Nordic welfare State has guaranteed citizens a minimum level of living and a certain confidence in the future. In these countries no general decline in social capital has taken place, as evidenced in the United States (Putnam, 1995; Siisiäinen, 1994, 1999). This may relate back to an earlier observation made in this Chapter that these Nordic or Scandinavian societies are ones that Eisler describes as being more partnership oriented (Eisler and Koegel, 1996, p.7; Eisler, 2002, pp.151-152). There appears to be a positive association between effective collaborations and partnerships and healthy levels of social capital, even at a national level.

Cavaye (1999) investigated the role of the Department of Natural Resources in Wisconsin, USA, in facilitating the development of social capital in small rural communities. He observed how the government agency created a 'vehicle' for people to act on existing concerns, built relationships, and shifted communication from a 'vicious' to a 'virtuous' cycle of contact. He commented that agencies enhance social capital when they redefine citizen participation as "'real work' and include community contact in delegated work" (Cavaye, 1999, p.2-3). Sirianni and Friedland (1995) build on the work of Alinsky (1971) to argue that, at a community level at least, stocks of social capital are growing in some areas of the United States, and that there are policies and strategies that can help this. Such actions may fall within the province of government. Suggestions suitable for community application include: ensure that "economic and political negotiation are reduced." (Cavaye, 1999, p.5); or that it is important to build on small successes in your network or group as these may then serve as a "cultural template for further negotiation" (p.5). They argue, "dense networks of interaction probably broaden the participants' sense of self, developing the 'I' into the 'we,' or (in the language of rational choice theorists) enhancing the participants' 'taste' for collective benefits" (Sirianni and Friedland, 1995, p.6). Government agencies involved in facilitating the development of effective NRM partnerships may gain from these insights.

There is a parallel line of thought that recognises the existence of social liability as well as social capital. In terms of government agencies, social liability may come about in two ways. Firstly, longstanding relationships that NRM agency staff may have with various stakeholders may use most of the available agency resources for citizen participation and therefore stifle their ability to interact with others. Secondly, agency staff may interact with influential stakeholders who are viewed negatively by others, thereby causing others not to become involved. These are both examples of social liability. Social liability, like social capital, may be thought of as a collective as well as an individual good. Gabbay and Leenders (1999) have commented on this in some detail, using the terms corporate social liability and corporate social capital, and applying these notions to business and corporate settings.

The development of effective NRM collaborations and partnerships is closely related to the levels of social capital and liability evident in the relationship between the partners. It would appear logical that people are unlikely to work effectively together if they do not trust each other, if there are no norms of expected behaviour or sanctions for people 'free-riding' and 'not pulling their weight'. Leach, Pelkey and Sabatier (2000) borrow from the tradition of Putnam (1993) and others to develop a set of social capital indicators useful in measurement of the effectiveness and success of NRM participant partnerships. Leach and Pelkey (2001, pp.378-385) have conducted a review of the empirical literature on what makes watershed partnerships work in 37 studies in the United States of America, Canada and Australia. Their findings

indicate that the presence of an adequate level of social capital (eg high levels of trust, good conflict resolution processes and good interpersonal relationships) was significant in nearly all cases in determining the success of a watershed partnership. This may appear to be 'common sense', given that the on-ground, biophysical outcomes of watershed partnerships may be difficult to evaluate in the short-term. However, the breadth of the empirical evidence they provide indicates that social capital is a useful as a surrogate short-term indicator of the effectiveness of such a relationship. Such work will inform research undertaken for this Study into identification of the characteristics of effective NRM partnerships and the significance of factors influencing these characteristics.

1.7.2 Partnerships and social learning

When people learn what is normal and acceptable in a certain social setting, they build social capital. Such learning drives the positive 'trust accumulation loop' or a virtuous cycle of learning (Cavaye, 1999, p.28-31). Falk and Kilpatrick (1999, pp.1-25) have undertaken a study on the way social capital was 'produced' in a small rural community in Australia. They investigated the "nature of the interactive productivity between the rural networks in a small rural community" (p.7). Such interactions in social networks can lead to learning which can help drive this virtuous cycle of social capital building. This 'social learning' is also important in the development of effective NRM collaborations and partnerships.

At least four groups of literature use the term 'learning' to describe interactive processes between people and people and their surroundings: psychology/ social psychology; education; management and organisational learning; and the NRM/environmental education literature (Falk and Kilpatrick, 1999, p.3; Lee, 1993, pp.6-11 & pp.136-160; Milbrath, 1989, pp.88-93). In the research described in this review, the authors are predominantly interested in the last mentioned area. Without the help and presence of other people it would be almost impossible, not to mention dangerous for a young child to learn what is necessary to survive in the social and biophysical world into which they are born. "Fortunately, most human behaviour is learned observationally through modelling: from observing others one forms an idea of how new behaviours are performed, and on later occasions this serves as a guide for action" (Bandura, 1977, p.22). While we may also learn on an individual basis, such social learning provides constant lessons for us on the most appropriate behaviour in social settings. In some ways it compares to the *habitus* of Bourdieu (1985, 1986). While we may also learn by interacting with non-human technologies (e.g. books, computer CDs, watching videos), a large part of what we understand as the most appropriate ways to interact with our non-human or natural surroundings, occurs as a result of social learning. Our natural surroundings have the potential to be a great teacher.

Learning is common throughout all species in Nature. Milbrath (1989, p.89-91) details how other species, from rudimentary bacteria to complex animals such as dogs and apes, have the ability to learn from interactions with Nature. Understanding social learning is important to this study. It is the mechanism by which we build trust, an important component of social capital underlying the foundation of the NRM partnerships that are the focus of this research. People involved in NRM partnerships also make decisions together and take joint action to address NRM problems that are of common concern to them. Social learning is a mechanism by which they may gain information and learn values to guide these decisions and actions.

Milbrath (1989, p.94) advocates the need for a "learning society" that can 'learn its way out' of this dilemma, commenting that the ancient Greeks called such a society, one that nourished personal and social learning, *paideia*. He feels that such a modern *paideia* or learning society would:

- Utilise a wealth of information;
- Find better ways to disseminate and utilise information;
- Emphasise integrative and probabilistic thinking (rather than emphasising reductionist, linear thinking);
- Emphasise values as much as facts;
- Be critical of science and technology (rather than automatically paying it undue deference);
- Combine theory with practice;
- Be consciously anticipatory;
- Believe that change is possible;
- Examine outcomes to learn form them;
- Develop institutions to foster systems and futures thinking;
- Institutionalise a practice of analysing future impacts;
- Reorient educational institutions toward social learning;
- Support research; and
- Maintain openness and encourage citizen participation.

There are similarities between Milbrath's 'learning society' and a society based on Eisler's partnership model.[33] Participants in both societies would believe that "change was possible' and that both would "maintain openness and encourage citizen participation." In the above summary of the characteristics of a learning society, Milbrath appears to have described the social learning processes that would allow a society to make Eisler's cultural transformation from a dominator/control to partnership/respect society (Eisler, 2002, p.212).

The process by which people adapt the nature of their interactions with their natural, non-human surroundings as a result of the social learning that occurs as a result of those interactions can take place in a systematic manner. In NRM circles this has become known as adaptive management – "treating the economic uses of nature as experiments" (Lee, 1993, p.8). Lee (1993) describes adaptive management as an iterative, reflective process, providing those involved with information and skills to better manage natural resources and ecosystems with which they interact. It is a process of continuous improvement. Social learning can help us learn to better relate to each other and manage the conflict which inevitably arises when people with values derived from different ethical frameworks come together in an attempt to manage natural resources (Merchant, 1992). Lee (1993) uses metaphors such as 'road', 'compass', 'gyroscope' and 'map' to describe how these two learning processes interrelate. Lee argues that not all people involved in NRM conform to Eisler's partnership model in terms of use of power, domination and conflict. The conflict that is generated when people with different values come together in adaptive management and social learning processes can be creative, but it needs managing. Lee identifies this process of 'bounded conflict' as politics and says that it is the gyroscope that provides stability to the process. The map allows us to chart our progress along the road (Lee, 1993, pp.8-11).

In summary, the descriptions by Milbrath and Lee characterise a process by which a group of people may develop the social capital, knowledge, skills and values to live in a more sustainable, partnership-based society – a society where power in all its faces enables rather than controls citizens in this individual and collective endeavour.

1.7.3   Partnerships and dialogue

Relationships in this society would need to be based on mutual understanding between participants. Such an understanding may be gained through dialogue (Yankelovich, 1999). Dialogue occurs when participants achieve "mutual understanding" as to why others involved hold the viewpoint they do on the topic at hand (Yankelovich, 1999, p.14). "Dialogue is never a mere technical or deliberative exercise. It always reaches into deep pockets of personal convictions and fundamental values" (Yankelovich, 1999, p.71). Table 1.3 summarises the main points that Yankelovich (1999) says are critical for effective dialogue.

Table 1.3 Strategies for dialogue (Yankelovich, 1999)

Check for the presence of three requirements of dialogue – equality, empathic listening, and surfacing assumptions non-judgementally – and learn how to introduce the missing ones. (p.46)
Focus on common interests, not divisive ones. (p.56)
Keep dialogue and decision making compartmentalised. (p.57)
Clarify assumptions that lead to subculture distortions. (p.65)
Bring forth your own assumptions before speculating on others. (p.66)
Use specific cases to raise general issues. (p.67)
Focus on conflicts between value systems, not people. (p.70)
When appropriate, express the emotions that accompany strongly held values. (p.71)
Initiate dialogue through a gesture of empathy. (p.71)
Be sure trust exists before addressing transference distortions. (p.86)
Where applicable, identify mistrust as the real source of misunderstandings. (p.106)
Err on the side of including people who disagree. (p.107)
Encourage relationships in order to humanize transactions. (p.108)
Expose old scripts to reality check. (p.108)

While dialogue occurs between individuals, NRM collaborations and partnerships can also occur between organisations. Practitioners need to be able to identify key people within those organisations who are able

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[33] See Table 1.1

to influence their organisation either through use of power (authority) within their organisation, through the social capital they possess within their organisation, or skills they have in facilitating social learning. Gladwell (2000) identifies people in the last two categories as 'connectors', people who are able to influence social change within an organisation – as he puts it – cause 'positive social change epidemics'. Table 1.3 presents not just as a list of strategies that may be useful in facilitating dialogue between key people or 'connectors' within organisations, it is also a useful checklist in terms of evaluating the efficacy of the dialogue process. Habermas (1974) has developed a yardstick, the Ideal Speech Situation, which may be used to evaluate the effectiveness of any communicative act, including dialogue (Young, 1989, p.75). The Ideal Speech Situation makes four assumptions:

- That what we are saying or hearing is intelligible,
- That what we are saying or hearing is true in so far as it implies the existence of states of affairs,
- That the persons speaking are being truthful or sincere, and
- That the things said are normatively appropriate considering the relationships among the people and the situation they are in.

<div align="right">(Habermas, 1979, p.2 cited in Young 1989; pp.75-76)</div>

The strategies documented by Yankelovich and the ISS provide two useful tools to guide and evaluate dialogue in NRM collaborations and partnerships.

1.8   Conclusion

The chapter opened with a definition of key terms such as 'ecosystem' and 'natural resource management' and discussed the contemporary usage of concepts such as 'sustainability' and 'sustainable development' in NRM. This was related to the egocentric, homocentric and ecocentric ethical frameworks that guide people working in NRM. Social mobilisation approaches to sustainable NRM are common in Australia and elsewhere, with the call for people to collaborate or form partnerships and take collective action to address NRM problems, becoming increasingly common at all levels. This chapter has endeavoured, therefore, to show how the Topic, *Developing Effective Partnerships in Natural Resource Management,* is relevant to local NRM groups, to regional, State and National NRM initiatives and to the development and implementation of Type II partnerships arising from the WSSD. This call to collective action, emphasising a need for participants to work together if NRM problems are to be resolved, is part of the discourse of ecological modernisation. This set of shared understandings is increasingly becoming part of the dominant paradigm of agency-driven NRM.

The term 'partnership' has a significant place in the citizen participation literature. This study illustrates how the concept of power is central to any definition of partnership as a citizen participation process. Criticisms of citizen participation and tests to determine its legitimacy and usefulness in NRM contexts have been presented. In some instances, it may be difficult for government intent on entering into partnerships with others, or on facilitating partnerships between other parties, to recognise that the power that exists within these relationships must be shared, if true partnerships are to be formed. The cultural transformation theory of Eisler helps to explain this point. Her re-conceptualisation of power is a significant aspect of cultural transformation theory, as is her development of dominator and partnership models of society and human organisations. Her efforts to develop a comprehensive, partnership-based philosophy to guide human relationships at all levels – from the personal to the global – have also been discussed. Social capital and social learning have been defined. The role social learning plays in building social capital in human relationships and in the adaptive management process were also highlighted. The fundamentals of dialogue, a communication process leading to mutual understanding between participants, have also been discussed.

This chapter provides some of the conceptual and theoretical foundation to make both scenarios intelligible to the reader. The next chapter reviews relevant literature to complete this foundation as well as developing tools to aid in the analysis of collaborative NRM arrangements central to this study.

2.0 Literature Review (Part Two) and Analytical Tools

2.1 Introduction

This chapter has two purposes. Firstly, it builds on the literature review of the previous chapter to complete the theoretical foundation needed to inform the analysis of data central to this research. Secondly, it develops analytical tools to help in this task. To achieve the second purpose, the discussion in this chapter goes beyond the analysis and synthesis commonly found in literature reviews to the presentation of arguments to justify the nature of the analytical tools that are developed.

The chapter defines the term 'group', in a social sense and outlines the nature of effective groups, applying this discussion to NRM groups. The term 'effective' is discussed and defined. NRM collaborations and partnerships are shown to be social groups. It is argued that criteria used to determine effectiveness of groups might also be used to identify effective NRM collaborations and partnerships. This research seeks to identify the characteristics of effective NRM collaborations and partnerships and the factors that influence these characteristics, from an NRM group, coordinator and participant perspective. Therefore, the attributes of coordinators and participants that might influence the effectiveness of NRM collaborations and partnerships are also discussed.

Based on the literature review in this and the preceding chapter, three analytical tools are presented. In the first, collaboration and partnership are located as specific citizen participation processes within a new citizen participation hierarchy, a 'pendulum of citizen participation'. In the second, a 'decision tree', to aid in the selection of context-appropriate citizen participation processes, is presented. This tool finds use in the initial analysis of the case studies that make up the critical collective case study.[34] The third tool is an 'NRM collaboration and partnership diagnostic checklist', which includes a typology for NRM collaborations and partnerships. This checklist summarises concepts fundamental to partnerships outlined in the literature review. It also uses findings from this Study to assess the nature and effectiveness of the NRM collaborations and partnerships found in the case studies investigated in this Research.

Although, this Study focuses on the development of effective NRM partnerships at an NRM group level, it is important that the reader has an understanding of institutional, administrative and political milieu in which the NRM groups that make up the case studies, are situated. Therefore, the final section of this Chapter gives an overview of the setting in which these NRM groups are located.

2.2 Groups, partnerships and collaborations

Shaw (1976) defines a group as:

> A dynamic social entity composed of two or more individuals. These individuals interact interdependently to achieve one or more common goals for the group or similar individual goals that each member believes can be achieved through group participation. As a result of this participation, each member influences and is influenced by every other member of the group to some degree. Over time, statuses and roles develop for members, while norms and values that regulate behaviour of consequence to the group are accepted by members.
> (Shaw, 1976, in Bertcher, 1994, p.3)

Collaborations and partnerships are particular sorts of social groups. In many ways they fit the picture of a group painted in the quotation above. When two or more interdependent individuals interact socially and influence each other as a consequence of that interaction, they are a group (Forsyth, 1990). A social group may work as partnership. Presenting a school-based example may help to illustrate this point. A group of children in a classroom working silently on their schoolwork while a teacher watches would certainly constitute a group, by the above definition. However, the teacher may physically and verbally bully the group to ensure their compliance. They may be punished for speaking. The goals of the children and teacher may be markedly different. From a Foucauldian viewpoint, the power that flows through the network of relationships within the group is being concentrated and used by the teacher, through threat of violence and sanction. Their silence ensures that his will be the only discourse to have meaning in that classroom

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[34] This decision tree has been developed from the existing literature. It may also help other practitioners and participants to identify and use the most suitable process or 'right tool for the job' in terms of citizen participation in NRM.

setting. Such a class is a group of people, not a partnership. On the other hand, there may be children with a teacher in a classroom working after school working on ways to raise money for their end-of-year class trip. People are talking freely and yet prepared to listen to each other to achieve their common goal. They know that they will not be able to raise enough money individually, but they will if they work together. They are there because they want to be. They make decisions together. They act together. They share responsibility together. They are a group of people working in partnership.

From the above discussion, and using the definition of a partnership outlined in previous chapter, we can deduce that a group of people working together to achieve a common goal, and to share decision-making, action and responsibility are working in partnership. An NRM group works as a partnership when the power within relationships between group members is shared, and used as a tool by participants to achieve mutually desired NRM goals that are beneficial to all who may be affected. Whereas, when participants in an NRM group work towards achieving mutually desired goals that are beneficial to all who may be affected, yet do not share power, then they are working in collaboration, rather than in partnership.

2.3   A pendulum of citizen participation

Several of the typologies of citizen participation presented in Chapter 1, for example, Arnstein (1969), Pretty (1995) and South Lanarkshire Council (1998), locate citizen participation processes along a continuum relating to the disposition of power between citizens and government. If one accepts the 'Arnsteinian view' that power is held by government, or others in authority, then a renegotiation of power within the relationship is fundamental to the formation of a partnership. Appendix A presents a pendulum of citizen participation. It builds on this work and the definitions for cooperation, collaboration and partnership outlined in Chapter Two, placing citizen participation processes along the arc of a pendulum, with partnership, the citizen participation process that involves sharing and renegotiation of power located at the vertical point, at the base of the arc. Citizen management of an NRM problem is located at one extreme of the sweep of the arc of the pendulum. At this point, citizens have exclusive hold on power. Citizens are responsible for decisions that are made and for their implementation. Government management is positioned at the other extreme of the arc of the 'pendulum of power.' As is shown in Appendix A, it is here that government has exclusive disposition of power in relation to the resolution of an NRM problem.

2.4   When to partner – a decision tree

The pendulum of citizen participation describes various citizen participation processes including citizens having no role in the resolution of an NRM problem, through to citizens managing the resolution of an NRM problem without any support from government. In Australia, government agencies are usually the initiator of NRM citizen participation activities. This role is challenging. Matching an appropriate citizen participation process to a particular NRM problem and context, selecting the 'right tool for the job', is part of this challenge. Appendix B presents an adaptation of a decision tree developed by Lawrence and Deagen (2001, pp.857-872). These authors have researched the role of citizen participation in forestry. Their work is based on the work of Vroom and Yetton (1973) who were interested in the role of employees in workplace decision-making, a conceptually similar area. In this study, the decision tree developed by Lawrence and Deagen has been adapted. These adaptations:

- Make the terminology used in the decision tree compatible with that used in this study; and
- Introduce the concepts of social learning and partnership, as defined and described in Chapter 1.

The decision tree is written from the perspective of a government-employed NRM practitioner. The eight closed questions yield a total of sixteen options, labelled A to P, which provide nine different citizen processes. These are shown in the table that accompanies the decision tree in Appendix B. Working through the decision tree may provide an NRM practitioner with guidance on the most appropriate citizen participation process for a particular NRM problem in a given context. The citizen participation options outlined in Appendix B are similar to those outlined on the 'government side' of the pendulum of citizen participation shown in Appendix A, with two exceptions:

- Firstly, government management without provision of information to citizens is not included as a citizen participation outcome in Appendix B.
- Secondly, the concept of social learning is not included in Appendix A.

In terms of the first point, some government decisions about NRM problems may be considered routine and, as a rule, therefore, not generally requiring accompanying citizen information programs. In terms of the

second point, some NRM problems and contexts may be extremely complex. Both government and citizens may benefit from learning more about the problem, the context in which it occurs and how each party views the problem. This is known as social learning.[35] It may be superior to 'one-way' implementation of a program to ensure "learning occurs among the publics" (Lawrence and Deagen, 2001, p.863). Such wording implies that government knows all that needs to be known about an NRM problem and that various "publics" may benefit from a one-way transfer of information from government. While this may be the case, in some instances, government may have a very incomplete knowledge about what is needed to resolve an NRM problem. Learning in these contexts becomes more of a social learning process.

2.5   NRM partnership typologies

This research focuses on finding similarities and differences between partnerships, in an effort to understand the characteristics of effective NRM partnerships and the factors affecting these characteristics. As an aid to understanding, at an individual case study level, it may be helpful to typify these relationships. For example, Long and Arnold (1995, pp.52-56) describe several partnership typologies noting that they may be based on:

- The partnership's relationship to regulation (eg proactive, policy, response);
- The partnership's activity area (e.g. conflict resolution, research; or policy formation); or
- Based on negotiation and games theory.

Poncelet (1998, p.7) hints at the degree of inclusiveness of potential participants in relationships focusing on NRM problems as a way to typify NRM partnerships in his work on 'multilateral' partnerships. The common focus or interest shared by a community, is used by Duane (1997) to describe 'place', 'interest', or 'identity' focused communities. These terms are useful to describe collaborative and partnership-based relationships.

2.5.1   Conflict and core relevance

Figure 2.1 shows how the degree of conflict in a relationship may be plotted against relevance to participants give rise to a 'partnership map'. This map locates four partnerships types described by Long and Arnold (1995, p.61).

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[35] See Chapter 2.7 for an overview of social learning.

Figure 2.1 NRM partnership map: degree of participant conflict plotted against core relevance to participants
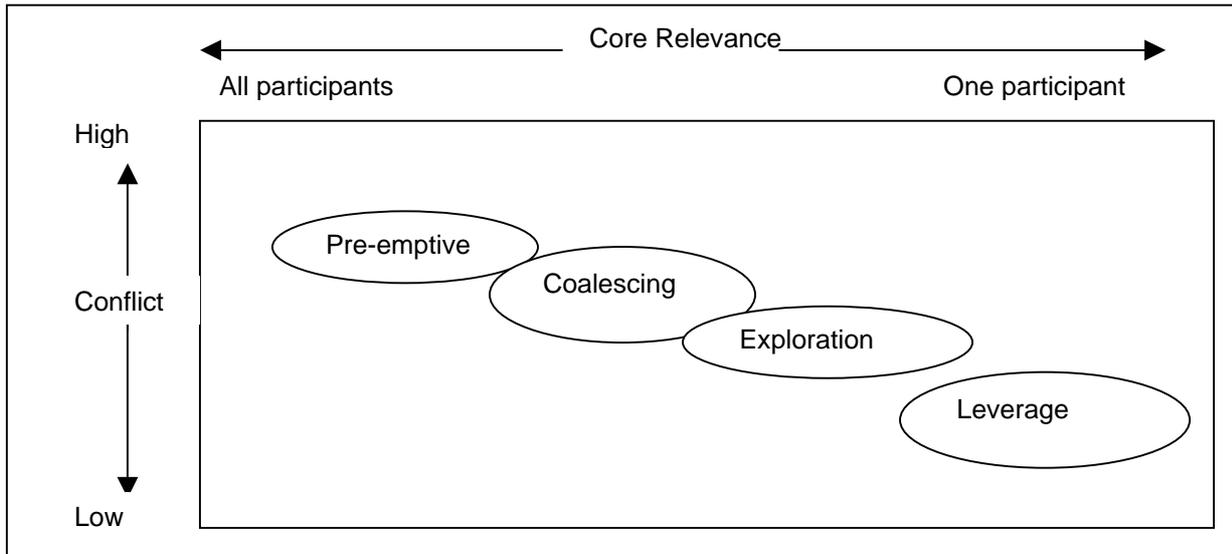
(Long and Arnold, 1995, p.61)

Long and Arnold (1995, p.61) developed their own partnership typology based on common characteristics they saw arising from the partnerships they studied. In summary, they describe the characteristics of the four types as follows:

- Pre-emptive partnerships: formed in an attempt to defuse a situation that is already, or is potentially, hostile with the problems at hand being of core relevance to all participants.
- Coalescing partnerships: formed because all parties need each other to accomplish their goals. A common vision is formulated amongst all parties in an attempt to overcome threats of hostility.
- Exploration partnerships: formed to make the most of opportunities to investigate environmental or NRM problems of shared interest.
- Leverage partnerships: the most opportunistic of all partnerships, formed when participants can see 'win-win' opportunities to make high social, political and economic returns for modest investments in sustainable NRM.

One difficulty with this typology is group size. Partnership activities in the large NRM groups, studied as part of this research, do not fit neatly into any of Long and Arnold's categories. In large multilateral NRM groups, there are a larger number of potential and actual relationships between participants. These relationships may fall within several of Long and Arnold's categories. Such 'large-scale' partnerships are found worldwide. Often the people involved see themselves as really working in partnership, as do researchers who have studied them.[36] While they may not always be functioning effectively as they might, any typology developed should be able to describe their efforts.

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[36] Two examples serve to support this statement.
1. In South East Queensland the Moreton Bay Waterways and Catchments Partnership (MBWCP) is a group of catchment groups, scientists, local governments, state government agencies and Indigenous and industry groups who are seeking to improve the condition of catchments of South East Queensland (Costantini, 2002). The diversity of their efforts and their relationships with each other mean that they do not fit neatly into any one category developed by Long and Arnold.
2. Leach and Pelkey (2001, p.378-385) have reviewed thirty-seven empirical studies from around the world of factors contributing to watershed (catchment) partnership success. Such partnerships aspire to be inclusive of all stakeholders (people who may be indirectly or directly affected by the condition of the catchment in question). Undoubtedly, not all stakeholders are interested or involved in such large-scale efforts and some of those involved may have ulterior motives. However, many of those involved would be working according to partnership principles, as described by Eisler (2002) and genuine in their collective attempt to improve the condition of their catchment. When participants are sincere in their efforts, the relationships they develop with others should be characterised as a type of collaboration or partnership, depending on degree of power-sharing within relationships, and not dismissed out of hand as window dressing or greenwash (Long and Arnold, 1995, pp.5-6).

This study focuses on two dimensions, level of conflict and core relevance, of the Long and Arnold typology, to map the relationships investigated in this research. Some of the case studies of larger NRM partnerships will fall with in several categories. They will be mapped as such.

2.5.2   A new NRM collaboration and partnership typology

A new NRM collaboration and partnership typology has been developed for use in this research. It typifies the collaborations and partnerships that are the focus of this research in three ways, on the basis of:

- *Initiative* – whether the partnership was externally initiated by a third party or was self-initiated by the partners (Pretty and Ward, 2001, p.218);
- *Focus* – whether the partnership is predominantly place, interest or identity focused (Duane, 1997); and
- *Inclusiveness* – whether the participants are from similar backgrounds (unilateral), two backgrounds (bilateral); a limited array of backgrounds (limited multilateral), or whether those initiating the partnership *aspire* to be fully inclusive (inclusive multilateral) (Poncelet, 1998, p.7).

The following section discusses ways that the effectiveness or success of NRM collaborations and partnerships may be evaluated.

2.6   Evaluating the effectiveness of NRM collaborations and partnerships

A discussion of the terms 'effective' and 'success' underlies the issue of evaluation in NRM collaborations and partnerships. 'Effective' means "serving to effect the purpose; producing the desired result" (Anon, 1991, p.558). 'Success' means "the gaining of wealth, position or the like" (Anon, 1991, p.1745). An NRM partnership may be judged a success for its ability to attract sponsorship and media coverage, but may be quite ineffective at achieving its stated purpose. Those external to the relationship (e.g. a government agency) may view an NRM partnership poorly because they have selected indicators that are relevant to their own organisational goals, rather than those of the NRM partnership under consideration (Chamala, 1995, p.74).

Some authors do not make this distinction. Wondolleck and Yaffee (2000) use the terms 'successful' and 'effective' almost synonymously. When investigating thirty-five case studies in NRM collaboration they recognised that they could rule out some case studies because they did not meet their definition of collaboration. However, they chose to use the positive perceptions of multiple participants from a diversity of backgrounds to define success. They saw early indications that improvements in human relationships would lead to improved ecological and social outcomes (Wondolleck and Yaffee, 2000, p.xiii). One may question participants whether or not 'things are better' as a result of their partnership work. A positive response from several participants from different backgrounds may well be a useful indicator that the relationship was 'successful.' Such triangulation, gathering the viewpoints of people from different backgrounds, may well help to obviate the 'success – effectiveness dichotomy' described earlier.

Tennyson and Wilde (2000) have focused in their work on partnerships developed for community development projects. They also used the terms 'successful' and 'effective' synonymously and focus on the social aspects of partnerships. They explain:

> What makes a partnership successful and effective? Such partnerships have partners who share four key characteristics:
> - Uphold the principles of openness and equity
> - Share risks and benefits
> - Adapt well to change
> - Work towards empowerment.
>
> (Tennyson and Wilde, 2000, p.14)

Partnerships may also be evaluated by comparing their outcomes to those that may have been achieved through use of other processes, or by comparing them to what most likely would have occurred if nothing were done to address the NRM problem at hand. In the literature on negotiation the term BATNA, **B**est **A**lternative **T**o a **N**egotiated **A**genda, has been coined (Fisher and Ury, 1983, p.104). In deciding whether or not to accept a negotiated agreement, one should compare it to the BATNA. A BATNA has been defined as:

> The standard against which any agreement should be measured. That is the only standard which can protect you from accepting terms that are too unfavourable and from rejecting terms it would be in your interest to accept.
>
> <div align="right">(Fisher and Ury, 1983, p.104)</div>

In a similar way, it is suggested here that the outcomes of NRM partnerships should always be evaluated against the BATPO, **B**est **A**lternative **T**o a **P**artnership **O**utcome. This involves comparing the partnership outcome against what would most likely have occurred if nothing at all were done to address the NRM problem that was the focus of the partnership (Long and Arnold, 1995, p.162). This may also be a useful way to evaluate NRM collaboration and partnership effectiveness.

Chamala (1995, p.87) says that an effective NRM group meets the needs of individual members. The same could also be said of effective NRM collaborations and partnerships. Obviously, what participants think of the relationship is an important measure of its effectiveness. As cited earlier, Wondolleck and Yaffe (2000, p.xiii) note a relationship between improvements in the process of human interaction and improved ecological and social outcomes. It would appear self-evident that people who have good inter-personal relationships will have more chance of being able to achieve the biophysical purpose that brought them together to work in partnership. Knowledge of this aspect of the social capital that exists within the partnership, how it changes over time and what factors are precipitating these changes would appear to be an integral part of NRM partnership evaluation.[37] Such data are important but predominantly qualitative in nature and therefore not readily translated into numbers. They are therefore not easily aggregated and reported on by bureaucracies. In the research undertaken, the social capital that existed within the relationships between partners was recognised as being an important surrogate indicator of the effectiveness or success in many of the case study relationships. The goals of these relationships were often quite long-term or were also being impacted on by other NRM processes, making the establishment of a causal relationship between partnership activity and amelioration of the particular NRM problem difficult to establish. Table 2.1 summarises the difficulties in evaluating NRM collaborations and partnerships.

Table 2.1 Difficulties in evaluating NRM collaborations and partnerships

Difficulty	Reason
Improvement or deterioration in ecosystem condition, as result of changing NRM practices, may be difficult to detect.	Ecological time scales are often longer than human interest and attention spans. Technology may not exist to adequately monitor change.
Progress in NRM practices and resultant ecosystem condition are reversible.	Unless an NRM partnership has access to ongoing funding and resources, any positive changes observed may be reversed when external funding and support to the partnership cease.
It may be difficult to causally link NRM partnership efforts to changes in ecosystem condition.	Recent ecological research shows that, generally speaking, natural ecosystems do not tend to towards equilibrium (Fiedler et al, 2001). Any changes observed may be 'natural' or due to NRM practices outside the control of the partnership.
Partnership goals may only seek the resolution of a small part of a much bigger environmental problem.	NRM partnerships may be place-focused, and interested in what, in ecosystem terms, is only a small component of a larger ecosystem. External human influences may therefore render partnership actions ineffective.

<div align="right">(After Long and Arnold, 1995, pp.155-157)</div>

For an NRM collaboration or partnership to be effective, the potential partners should ensure they work at appropriate spatial and temporal scales, recognising a match between the scale of the NRM problem confronting them and their available resources. It is important that participants develop an evaluation program as one of their first activities, looking at ways that they may regularly measure and evaluate performance. They should seek agreement on a range of indicators that can be directly measured and on 'surrogate indicators', ways that 'intangibles' such as social capital and liability can be indirectly measured.

The measures used to assess effectiveness may be either 'soft' or 'hard'. Soft measures are predominantly qualitative and may include the improvement of relationships amongst participants, particularly participants who were previously adversaries; formation of new partnerships as a result of the relationships and understanding built in the old partnerships, or a restructuring of organisations to help them meet the needs of the partnership of which they are a part (Long and Arnold, 1995, p.153). Hard measures are

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[37] See Section 1.7 for an explanation of social capital.

predominantly quantitative and relate to the achievement of the goal or purpose of the partnership (Long and Arnold, 1995, p.153). For example, these may include observations such as tree planting survival rates, areas of riparian regeneration, length of fence line constructed and changes in sediment loadings in a stream. From a government perspective, such quantitative measures from the activities collected from different NRM collaborations and partnerships funded by a similar program (e.g. Natural Heritage Trust I or Natural Heritage Trust II) are easily aggregated, thus giving an overall measure of the success and effectiveness of NRM collaborations and partnerships being funded and supported by a government program.[38] Other quantifiable data on volunteer participation time and attendance numbers at field days may also give some idea of the indirect benefits being achieved by a particular project activity. Qualitative measures are seen as less useful for bureaucratic purposes, as they do not allow for easy aggregation of data. Nevertheless, the collection and interpretation of qualitative data are necessary if we are to evaluate the overall benefits and costs of NRM collaborations and partnerships.

Rigorous evaluation of NRM collaborations and partnership relationships has not been common. "Given the novelty of partnerships as solutions to environmental challenges, it may not be particularly surprising that environmental partnerships are rarely evaluated rigorously" (Long and Arnold, 1995, p.152).[39] As the partnership approach to NRM and environmental management has increasingly been advocated over the last decade or so, the WSSD Type II partnerships initiative being the most recent example, moves to formalise the evaluation of such relationships, and their outcomes, are gaining pace.

As well as evaluating NRM partnerships against the BATPO and likely 'do nothing outcome', there is much that can be learnt about NRM collaborations and partnerships by evaluating them in at least three other ways:

- *Purpose and goals*: Did the partnership accomplish its purpose? Are the goals of the partnership, held in common by the participants, being achieved?
- *Indirect benefits*: What other benefits, not directly related to the purpose and goals of the partnership accrued to participants and/or others?
- *Process management*: How well was the process of partnership formation, implementation and evaluation managed? (Long and Arnold, 1995, p.153)

The following section presents an overview of factors presented in the literature that may impact on NRM group, collaboration and partnership effectiveness

2.7   Factors relating to NRM group and partnership effectiveness

This section outlines the views and findings of various authors who have investigated factors relating to NRM group and partnership effectiveness. Long and Arnold (1995, p.130) view success factors as fitting into three categories: people, goals, and capacity building.[40] They emphasise that people are the single most significant factor determining partnership success. They are the ones that "champion, coordinate and sell environmental partnerships" (p.130). Based on a review of the theoretical literature on small-groups research and various empirical studies, Chamala (1995, p.81-82) maintains that the effectiveness of community groups (CGE) involved in NRM is a function of "group internal factors (GIF), service agency factors (SAF), community factors (CF) and other external factors (OEF)." This relationship can be represented as:

$$CGE = f(GIF, SAF, CF, OEF)$$

Table 2.2 outlines specific factors that Chamala describes as making up the four sets of factors listed above.

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[38] For example, in terms of evaluation, Natural Heritage Trust project grant applications and final reports (2000, 2001, and 2002) report on indicators such as number of monitoring sites, frequency of monitoring, and on-ground outputs such as areas revegetated, lengths of fence line built. Quantifiable data that looks at people involvement (e.g. number of people attending a field day) are also requested.

[39] These authors favour the term 'environmental partnership' over 'NRM partnership,' to describe a relationship that is very similar to the definition of an NRM partnership presented in this chapter. The terms are used interchangeably in this literature review.

[40] As mentioned in the previous section, the term 'effectiveness' is favoured in this study to 'successful' when evaluating NRM partnerships. Partnerships may be successful (that is, viewed as being gaining in wealth or the like) when they are quite ineffective (are not meeting their purpose or goals).

Table 2.2 Factors affecting NRM group/partnership effectiveness

Set of Factors	Specific Factor
Group Internal Factors	• Group composition • Group structure and size • Atmosphere • Cohesion • Groups standards and norms • Leadership style • Balance between needs • Group think • Development phase • Group culture
Service Agency Factors	• Technical capabilities of staff • Staff's 'people skills' in managing groups • Staff attitude and commitment to groups • Type of planning methods used • Means or ends distinction • Support from field extension officers
Community factors	• Community structure • Community experience in working together • Availability of commercial service agencies in the community • Attitude and awareness of problems/opportunities
Other External Factors	• Media exposure • Pressure groups • Legislation • Market prices for inputs and products • Science and technology • Political vested interests

(Chamala, 1995, pp.82-85)

The number of factors and the way they are presented above, as a formula, can give the impression that they are linearly related to each other, or that the effectiveness of a group may be arrived at simply by summing the effects of each of the individual factors. However, Chamala (1995, pp.86-87) makes the point that this is not the case. Chamala cites Hackman's (1987) normative model of group effectiveness to explain that the significance of each factor will depend on the context within which the group is operating and its organisational design.

The adequacy and certainty of funding and resources, a factor not listed explicitly by Chamala, may also affect partnership effectiveness. Leach and Pelkey (2001, pp.378-385) have undertaken a review of the empirical literature as to what makes watershed partnerships work. Their review of 37 case studies undertaken on watershed partnerships in the United States of America, Canada and Australia catalogued the most "unequivocal and most contested" of the conclusions from these studies. It revealed that funding (23 studies) and the participation by an effective leader or coordinator (22 studies) were the two most frequently named factors contributing to partnership success. These were factors were closely followed by two other factors – having a limited scope of activities (16 studies) and having rules to encourage diverse participation (16 studies). Their review makes interesting reading. Their last two findings appear contradictory. For example, six studies indicated that having a broad scope of activities was a key to success while eight studies said that limiting participation appeared critical to effective partnership participation. It appears that the different contexts within which these partnerships were operating may play a part in explaining the apparently contradictory nature of these findings. In all they identified 451 conclusions amongst the 37 studies they reviewed as to factors contributing to an effective watershed partnership. By looking for identical conclusions amongst the studies, they were able to reduce this to 210 conclusions. By undertaking a factor analysis (Hardman, 1976), they were able to further coalesce the 210 factors listed down to 28 themes and four overall factors that encompassed the variability found between studies as to factors contributing to the effectiveness of watershed partnerships (Leach and Pelkey, 2001, pp.381-382).

These were:
Resources and Scope

- Adequate time; legislature encourages agency participation; limited membership; cooperative and committed participants; funding; appropriate geographic scope; agencies encourage staff participation; miscellaneous community resources.

Flexibility or Informality
- Reliance on moral authority not formal power; balanced local/state/federal participation; caution when using consensus decision-making; training in collaborative decision-making skills; appropriate geographic scope.

Alternative Dispute Resolution Theory
- Effective leader, coordinator or facilitator; trust; funding; scope of activities – limited or focused; broad or inclusive membership; consensus decision-making; well-defined decision or process rules; low or medium levels of conflict; effective communication and data sharing; balanced local/state/federal participation.

Institutional Analysis and Development
- Monitoring and/ or adaptive management; local, bottom-up leadership; scope of activities – realistic or ambitious; well-defined decision or process rules; adequate scientific and technical information; scope of activities – limited or focused; agency support and staff participation (Leach and Pelkey, 2001. p.382).

The extent to which themes presented under the overall factors appear contradictory may be accounted for by the differences in the contexts of the studies analysed for this review. Leach and Pelkey (2001, pp.382-383) have used concepts presented in alternative dispute resolution (ADR) literature to group the themes presented under the third overall factor (e.g. Carpenter and Kennedy, 1988; Gray, 1989; and Crowfoot and Wondolleck, 1990). Concepts from the institutional analysis and development (IAD) literature have been used to group themes under the fourth overall factor (e.g. Ostrom, 1990). IAD relies on a rational actor model of collective action, viewing groups of people and organisations as rational beings able to make decisions and to take action about specific issues (Allison, 1971).

Leach and Pelkey (2001, p.383) note that other theories may be able to explain and group the factors identified as significant in the development of effective watershed partnerships in the 37 studies reviewed (e.g. theories of participatory democracy, environmental coalitions) but that these other theories were rarely mentioned in the studies reviewed. It is for this reason that this study concentrates on theories relating to participatory democracy and citizen participation as well as associated areas of collaboration, partnership, power, values, social capital and social learning to help further inform this line of research. For example, the backgrounds of the potential partners, what their values are, what motivates them, in essence the differences and similarities of their 'meaning systems', may also be an important factor in determining the effectiveness of NRM partnerships. Participants and facilitators need to recognise the different meanings that may be placed on a common problem or opportunity and for them to identify and build on 'common ground', if their partnership is to be effective. A lack of common ground, may also be an important factor in determining whether or not to attempt to work in partnership or to try some other NRM approach, e.g. use of litigation or regulation (Dukes, Firehock and Leahy, 2001, pp.58-59). Table 2.3 outlines the different motivators, drivers or 'meaning systems' of three major groups of participants involved in NRM – government, business and community.

Table 2.3 Meaning systems of major groups involved in NRM

	Government (State democracy)	Business (Market capitalism)	Community
Institutions	Parliaments, governments, public service	Markets, businesses	Families, associations
Key regulator	Votes, law	Prices	Values
Dynamic	Representation	Competition	Reciprocity
Focus	Order, redistribution	Efficiency, productivity	Equity, cohesion
People	Citizens	Customers	Members
Tools	Programs	Contracts	Networks

(Adams & Hess, 2001, p.20)

The significance of factors affecting NRM partnership effectiveness may depend on the people involved in the relationship. From the point of view of the extension officer or coordinator facilitating the development of a partnership, gaining an understanding of the different meaning systems of the prospective participants, may be crucial to the formation of an effective partnership. From an NRM group perspective, the presence of a skilled and motivated facilitator may be highly significant. For the individual participant, high levels of motivation, having a reason or a real need to be involved, may be the overriding factors determining the development of an effective NRM partnership.

Relationships between people may change or 'mature' over time. The relationships that make up NRM collaborations and partnerships are no exception. The following section introduces a temporal perspective to the discussion. Not only may characteristics and factors differ in significance when viewed from the different perspectives, their significance may also differ over time. In the following I explore ideas and concepts relating to the way NRM partnerships as social groups may change over time and how this knowledge may be usefully applied to an investigation into the development of effective partnerships in NRM.

2.8   NRM group and partnership life cycles

In effective NRM collaborations and partnerships, as in effective social groups, participants realise that they must fulfil two roles – task roles and socio-emotional roles (Bales and Strodbeck, 1951, pp.485-495). Participants must do more than just 'get the job done,' they must also look after the 'social health' of the relationship so that it can 'do the job'. Task roles are those that group members undertake to help them achieve their collective purpose or goals. Socio-emotional roles relate to maintenance of effective group relationships. These 'group-function focused roles' may be positive or negative and include actions such as showing support for other group members, withholding or giving help or rewarding other members. Group members must undertake an appropriate mix of both roles, if the group is to be effective. The nature and mix of task and socio-emotional roles changes, depending on context and the phase of development of the group.

Tuckman and Jensen (1977, pp.419-427) have characterised various phases of group development. They talk of groups (i) forming, (ii) storming, (iii) norming, (iv) performing and (v) mourning or adjourning. These group phases may also be useful for the study of NRM groups and NRM partnerships. Participants will need to alter their task and socio-emotional roles as the partnership group moves from one phase to another, if they are to be effective and successful. For example, during the 'storming phase', when a relationship first forms, partners will need to be attentive to conflict within the partnership and to look at ways that conflict may be resolved or managed and used as a creative force to help partners achieve their collective purpose and goals. Participants may undertake predominantly socio-emotional roles at this time. During the 'performing phase' partners will hopefully have 'sorted out' conflict and will undertake more task-oriented roles looking to achieve the goals that brought them together. Pretty and Ward (2001) have focused specifically on NRM groups and summarised the ways that twelve other researchers have characterised NRM group evolution over time. They note that all the models of NRM group evolution they have studied have five things in common:

- They describe how transformations in human and social capital occur, but not necessarily why.
- They are essentially progressive indicating that one stage can lead to another.
- Progression is not taken to be inevitable, with outcomes being regression (going back to the previous stage), stagnation or arrested development (remaining at one stage), and extinction (organisations may fail or terminate).
- Organisations in higher or later stages are taken to be more resilient (capable of resisting shocks or stresses), and more adaptive (capable of innovating), and so have lower mortality rates.
- All relate some measures of group maturity to performance and outcomes, with higher or later stages being associated with greater maturity.

(Pretty and Ward, 2001, p.219)

The five phases of social group development of Tuckman and Jensen (1977) also share these characteristics. For example, one would expect that a group that was 'performing' had worked out any points of major conflict and progressed onwards to the 'next level.' However, one could equally well expect, using conflict as an example once again, that if points of major conflict could not be satisfactorily resolved, that the group may fail. One might also reasonably expect that as a group of people move from one phase to another, that levels of trust and expectations and norms of group behaviour are established and that the level of social capital in the group would therefore increase. It would then be more likely to withstand upsets and setbacks without falling apart. The same comments may apply to a group of people working in an NRM collaboration or partnership.

Synthesising the work of others, Pretty and Ward (2001) have developed their own typology of NRM group evolution. It is presented on the following page as Table 2.4. Their typology looks at changes in worldviews and sense making, and identifying outcomes of social learning process within the group. It describes at the

development of social capital within NRM groups, focusing on various elements of social capital including rules and norms, participant recognition of group value and development of a sharing ethic.

Table 2.4 Three stages in the evolution of NRM groups according to fifteen criteria

Criteria	Stage 1 Reactive-dependence	Stage 2 Realisation-independence	Stage 3 Awareness-interdependence
Worldviews and sense making • Sense making • Views of change • Attitudes and values	• Individuals in group tend to be looking back, making sense of old realities • Fear of change • No significant change in attitudes, beliefs and values	• Individuals and groups looking inwards, making sense of new reality • Adjusting to change • Realisation of new capacities	• Group self-determined and shaping reality by looking forward • Expect change as the norm • Critical reflection and abstract conceptualisation lead to new insights
Internal norms and trust • Rules and norms • Recognition if group value • Sharing ethic	• Tend to be externally imposed or derived • Some recognition that group has value to achieve something new • Some sharing of ideas, but tendency to mistrust the new	• Development of own rules and norms • Members increasingly willing to invest in group itself • Sharing within group common	• Evolution and strengthening of rules and norms • Group likely to express social value of group • Sharing to and from external actors
External links and networks • Horizontal • Vertical • External facilitators	• Few or no links with other groups • Links one way (from above to below) • Group relies on external facilitators to sustain group activities	• Links with other groups • Realisation that information can flow upward • New roles for facilitators, such as conflict resolution	• Groups capable of promoting spread and initiating new groups • Groups well-linked to many external agencies and strong enough to resist external power • Facilitators no longer needed
Technologies and improvements • Environmental aspects • Source of technologies • Capacity to experiment	• Eco-efficiency, reducing costs and damage • Waits for external solutions, hoping for a new 'silver bullet' • Some experimentation and adoption	• Regeneration, making best of natural capital • Realisation that solutions must be internally generated • Collective planning for experimentation;	• Redesign according to basic ecological principles • Internal and external solutions • Experimentation leads to adaptation and innovation

		some innovations	
Group life span • Reason for being • Resilience • Variability	• Initiated by external agency or emerging • Breakdown easy • Groups with same program look the same	• Group successfully achieve planned activities • Breakdown possible after achievement of initial goals • Groups diverge	• Groups now engaged in different activities • Unlikely to break down, passed a threshold • Groups look completely different from each other

(Pretty and Ward, 2001, p.218)

The extent of external links and networks are also identified as changing as NRM groups develop, as is the need for external facilitators to help to maintain both the task and socio-emotional functions of the group. The readiness of the NRM group to accept and experiment with different technologies developed both within and outside the group is highlighted as liable to change as the group evolves. Finally, Pretty and Ward comment on the life span of the group, whether it was self or externally initiated, its level of resilience and how NRM groups formed under similar programs may vary as they evolve in different settings.

In terms of understanding NRM collaborations and partnerships as a type of NRM group, Pretty and Ward's work is very useful. As types of NRM groups, NRM collaborations and partnerships share these characteristics. As a participant-researcher, two things stand out in terms of the many differences that exist between the work of Tuckman and Jensen (1977) and Pretty and Ward (2001). Firstly, Tuckman and Jensen are speaking in general terms about groups. They do not mention the role of the facilitator or coordinator, often associated with NRM groups. The work of Pretty and Ward is focused on NRM groups and their role in sustainable development in many countries throughout the world, including Australia. Government funded or employed facilitators or coordinators often initiate and support these groups.[41] Pretty and Ward state in Table 2.4 that, at the mature Awareness – Interdependence Stage, external facilitators are no longer needed by an NRM group. However, they do provide the caveat:

> It is often part of the rhetoric of development that external agencies should have an 'exit strategy' – a time or rationale for leaving local people to continue on their own. This is a mistaken idea based only on the notion of groups moving from dependence to independence. In practice, mature groups may never want external agencies to leave – they may wish to make the best of use of all the linkages that they have developed. The external agency, however, may need to exit for financial or administrative reasons.

(Pretty and Ward, 2001, p.223)

This may be an important point when we look at the role of external coordinators. If external coordinators are leaving, this may be according to some planned strategy that has been mutually agreed to by all participants, or it may be largely financial reasons.

Secondly, Tuckman and Jensen's work indicates that groups generally have a finite life span. Pretty and Ward's work indicates that NRM groups are ongoing in nature. For example, thinking in terms of Australian NRM groups, there are now over 4 000 Landcare groups in Australia, with approximately 38% of farmers belonging to a Group (Wiseman, 2001, p.1). New groups are forming.[42] It can be argued that many of these groups are working as place-centred, unilateral or limited multilateral partnerships and that they see themselves as ongoing groups, rather than having a finite life span. By contrast, it would be more difficult to make this assertion with respect to smaller, problem-focused, bilateral NRM partnerships. These may have

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[41] The notion of an NRM group, collaboration or partnership being externally or self-initiated is mentioned in the work of Pretty and Ward (2001, p.218). This study uses this as a characteristic to help typify NRM collaborations and partnerships. In terms of interest level and motivation amongst potential participants, it appears to be a useful way to divide relationships into to initial categories.

[42] Data on 'death' of established groups is difficult to find. However, personal communication with regional NRM Facilitators indicates that NRM groups sometimes 'die' or dissolve over time. This may be because the participants achieved their collective purpose and therefore decided to terminate their relationship, or for other reasons, e.g., that external support in the way of government coordinators and other project funding had been withdrawn.

a limited life span as two parties get together in an attempt to resolve a specific problem. Several of the case studies investigated in this study research are of this type.

Long and Arnold (1995) have developed a model Partnership Life Cycle (PLC) to describe changes that occur in environmental/NRM partnerships. This is shown as Figure 2.2. This PLC model shows partnerships as potentially moving through four phases, over time. It also shows that the life history of NRM partnerships may be linear, formed for a specific purpose and lasting until that purpose was achieved or cyclical and ongoing.

Figure 2.2 The partnership life cycle (PLC) (Long and Arnold, 1995, p.130)
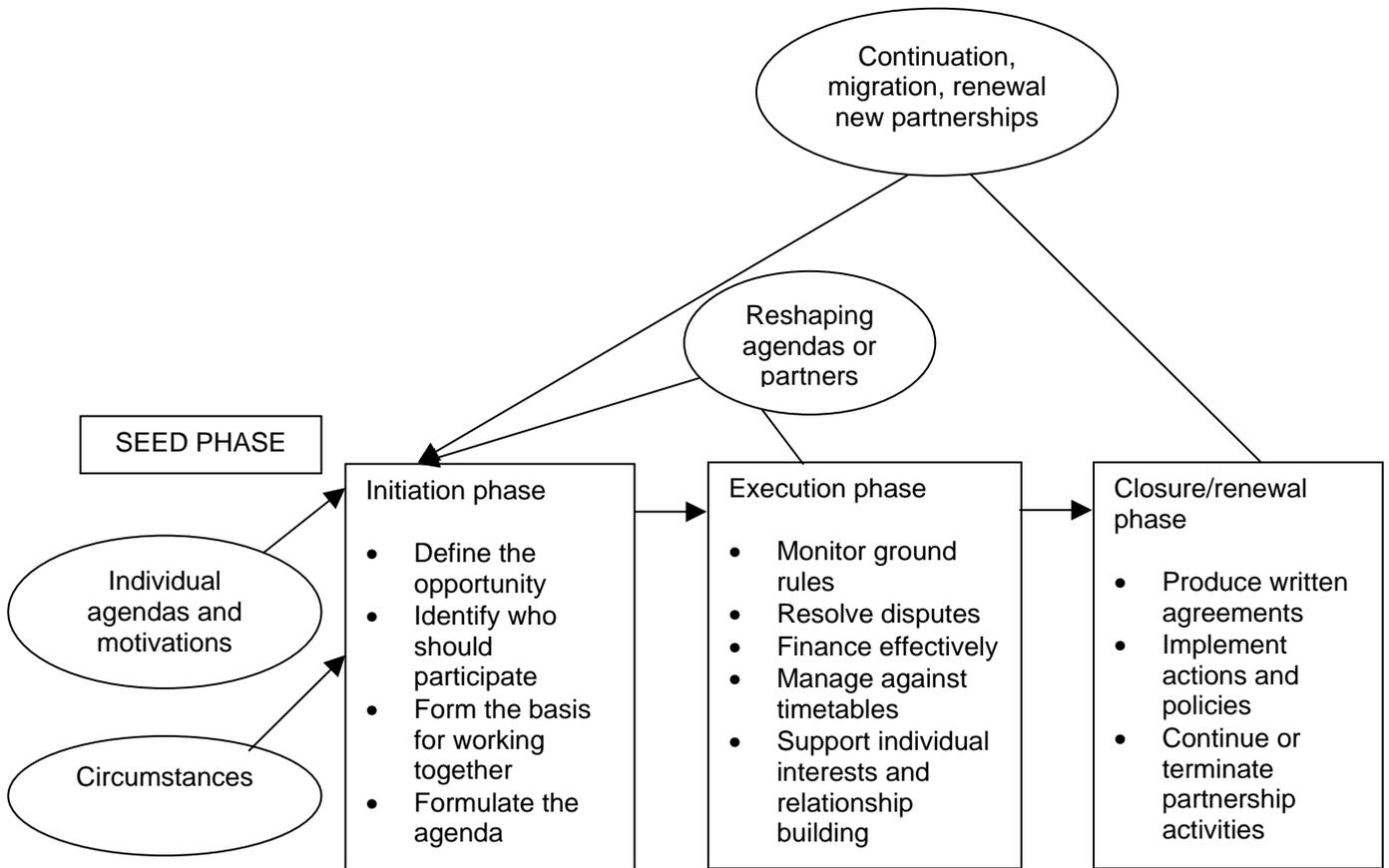
Long and Arnold (1995, p.131) have investigated how the categories of success factors they identified fit within the phases of the partnership life cycle. Table 2.5 illustrates these changes.

Table 2.5 Matrix of phases and success factors of environmental partnerships

		Phases of Environmental Partnerships		
		Initiation	Execution	Closure
Categories of Success Factors	People	*Include* – all critical stakeholders	*Respect* – players' needs and interests	*Share* – success and credit
	Goals	*Define* – a viable and inspirational vision	*Steward* – based on process learning and new science	*Evaluate* – results and goals and alternatives
	Capacity Building	I*nvest* – in relationships needed for long-term success	*Translate* – knowledge into signs of progress	*Sustain* – progress by institutionalising arrangements

(Long and Arnold, 1995, p.131)

The work of Long and Arnold (1995) further reinforces the observations of Tuckman and Jensen (1977) and Pretty and Ward (2001) that NRM groups, collaborations and partnerships change over time and that the ways they are facilitated, executed and evaluated will also change over time. As mentioned previously, extension officers and coordinator play an important role in the development of effective NRM groups and the collaborations and partnerships on which these groups are based (Chamala, 1995; Leach and Pelkey, 2001; Pretty and Ward, 2001). Their understanding of group socio-emotional roles and processes, and their ability to reflect on and evaluate the efforts of the group, make their role one that requires a diversity of knowledge and skills. Research presented in this study investigates the development of such relationships from three perspectives – one of them being the perspective of the coordinator or extension officer who facilitates these interactions. The discussion that follows focuses on the role of these people and the skills, knowledge and attributes they may use to help them in this task.

2.9　Extension officers and coordinators as effective NRM collaboration and partnership brokers

This study concludes that coordinators and extension officers, while also involved in coordinating and facilitating other citizen participation and education activities, are often called upon to initiate new NRM groups and to foster NRM collaboration and partnerships. Tennyson and Wilde (2000) help to train UN staff to develop multilateral partnerships involving the public sector, civil society and business to address environmental, economic and social problems relating to sustainable development. They use the word 'broker' to describe this role.

> A broker is a 'go-between' in making relationships (for example, a marriage broker) or a middleman (for example a stockbroker). In all cases, a broker acts as an intermediary between different parties, but in an active rather than a passive way, to interpret one party to the other or to negotiate some kind of agreement or 'deal.'

(Tennyson and Wilde, 2000, p.33)

From their perspective the partnership broker usually belongs to an initiating organisation that is external to the partnership. For Tennyson and Wilde, a partnership broker has four tasks, to:

- Act as an intermediary and build collaboration between the partners;
- Inspire others in initiating and partnership organisations to support the partnership;
- Encourage behaviours that help in the development of an effective partnership; and
- Protect the principles and goals of the partnership.

(Tennyson and Wilde, 2000, pp.33-34)

While these tasks may appear almost self-evident, their completion is complicated by the relationship that a broker has with the organisation initiating the partnership. There may be problems if this is not recognised. For example, if the government sees itself solely as an external organisation initiating an NRM collaboration or partnership, rather than being an active participant in the relationship, its actions could be viewed as being an abrogation of responsibility by those they are inviting to come together to solve the NRM problem that faces them. It could be seen as 'passing the buck'. That aside, the relationship that the broker has with the initiating organisation can strongly influence the role the broker plays in nurturing a partnership. Tennyson and Wilde (2000) have plotted this relationship against two axes: one showing the degree of independence the broker has from the initiating organisation, the other looking at whether the broker is acting proactively or reactively. This is reproduced as Figure 2.3.

Figure 2.3 Relationship of the broker to the initiating organisation (Tennyson and Wilde, 2000, p.35)

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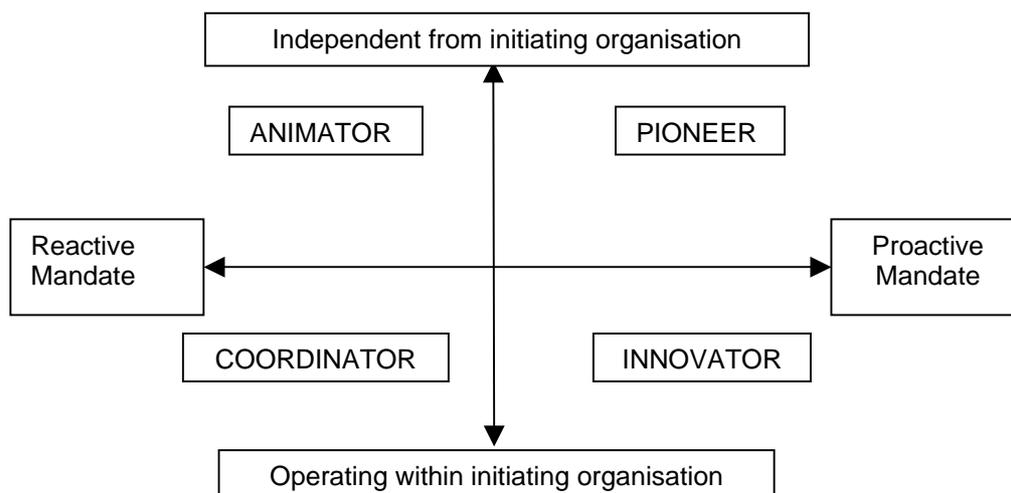
'Coordinator' is the term typically used to describe QDNR&M staff working with NRM groups, such as catchment groups. They are usually employees of the initiating organisation, specifically assigned to the role. Animators are usually brokers specifically appointed by the initiating organisation to perform that task. Pioneers are often people who have started partnerships and then persuaded relevant organisations to support them. Innovators are generally staff members of an existing organisation who have seen the value of a partnership and then persuaded their organisation to support them to broker it. Each of these roles has its advantages and disadvantages. These are summarised by Tennyson and Wilde (2000, pp.35-37). The added challenge for the sixteen partnership brokers involved in the research for this study, is that brokering partnerships is only part of their role. They are involved in facilitating and coordinating a wide range of citizen participation processes; developing and implementing community-wide and industry specific education programs; and in building capacity of the groups they support to undertake NRM in their area.

In 1999 and 2000, QDNR&M undertook a dialogue process with community and industry stakeholders to strengthen community-based natural resource management in Queensland (QDNR&M, 2001). Focus group discussions were also held with departmental staff involved in citizen participation. Table 2.6 summarises the attributes these conversations revealed as being important for staff involved in community-based NRM.

Table 2.6 Summary of attributes necessary for staff working in community-based NRM

Skills	Knowledge	Attitudes
• Communication – all aspects of verbal and non-verbal communication and verbal and inter-relationship skills. • Presentation – personal, technical and conceptual abilities. This also involves aligning personal style to the audience, research, planning and organisation skills. • Facilitation – ability to use psycho-graphic, socio-dynamic and adult learning principles. This also includes the ability to work as a team member and use a range of leadership and learning styles.	• Relevant technical information, particularly legislation and policies. • Knowledge of the community being engaged – issues of concern, cultural norms and values, structure. • Self awareness	• Personal qualities and values that Department of Natural Resources staff need to exhibit when working with communities of interest.[43]

(Queensland Department of Natural Resources (QDNR), 2000, p.3)

These attributes paint a picture of a person who is skilled technically and in working with people. They also reveal that the person should 'fit in' in a corporate sense and have qualities and values congruent with those desired by the department that employs them. Staff attending these focus groups recognised that people working in community-based NRM did a lot more than just broker collaborations and partnerships. They were involved in a wide range of citizen participation and community education processes. However, the ability to identify context-appropriate citizen participation and community education processes and to be skilful in their use, is not specifically mentioned, either in the report or in an associated document that presents a draft checklist of community engagement skills desirable for QDNR&M staff (QDNR&M, 2001(b)). Given that natural resources are collectively as well as privately owned, it will be necessary for government departments, charged as lead agencies for their sustainable management, to possess staff able to undertake these tasks. This will include having staff that have the skills, knowledge and attributes to broker effective collaborations and partnerships. This role may simply be assumed or, perhaps, not understood by staff as being a task that they perform.

The role for government employees working in NRM citizen participation and partnership brokerage can be further complicated by the relationships that these staff develop with community and industry members with whom they work. The report, mentioned above, notes:

> Staff working with the community are often very committed to their field of expertise and to the community they deal with. In some instances, however, the objectives of the community have become the key focus rather than government policy. Dealing with the consequences of this

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[43] The Queensland Department of Natural Resources was amalgamated with the Mines section of the Queensland Department of Mines and Energy and became the Queensland Department of Natural Resources and Mines (QDNR&M) in 2001.

blurring of responsibilities will be critical the more staff work closely and develop partnerships with the community.

<div align="right">(QDNR, 2000, p.3)</div>

Government staff involved in citizen participation walk a difficult path. They may act as partnership coordinators and innovators, but have much greater difficulty acting as animators and pioneers (Long and Arnold, 1995, p.35). As the calls for increased citizen participation become louder, the tension between representative and participatory democracy becomes more evident. [44] In terms of NRM, this tension has not really been resolved at the political level – NRM bureaucracies are sites of contestation and governments may really wish for "citizens and communities to be actively engaged in the policy-making process, …*while* the responsibility for the final decision or policy rests with government" (QDPC, 2001, p.5). Such thinking may be in order where government is making policy on the future of a resource over which it has sole ownership and legal responsibility (e.g. a public hospital), but it will not work where resources (eg land, water, biodiversity) are collectively owned and used or, in some cases, in both private and government ownership. This may be more than a case of industry or community 'capture' of public servants. These government-employed extension officers and coordinators may simply be highlighting the tension that exists between representative democracy, the bureaucracy in which they work and citizens involved in the participatory democratic processes they are facilitating. Encouraging reflection and open dialogue on potential and actual mismatches between government policy and community desires may help to enhance government policy, and community perceptions as well as providing reassurance and guidance for staff involved in NRM citizen participation.

The ideal partnership broker would be an exceptional person. They would have the:

- ability to neutralise potentially explosive situations, often with humour;
- skill in delegation and willingness to accept the implications of participant empowerment;
- capacity to serve as a 'window' into other sources of expertise;
- knowledge of how to erode, run around or obliterate roadblocks; and
- knowledge of the group's abilities and the pace that will maximise group performance.

<div align="right">(Long and Arnold, 1995, p.9)</div>

Other people involved in the partnership may also possess these attributes. The partnership broker would ideally be a person who is respected by participants from different sectors. Tennyson and Wilde (2000, p.38) say that, ideally, the broker should have experience in the government, business and community sectors – although such people are "few and far between." They also point out the personal qualities needed by partnership brokers include: "trustworthiness and integrity; willingness to take risks; equanimity in the face of pressure; personal modesty and dedication to the principles of partnership" (p.100).

Ideally, an NRM collaboration and partnership broker should also be skilled at 'learning while doing' and 'learning from doing'. Such a broker would be a reflective practitioner. They should do more than just apply a set body of knowledge to a particular problem or situation. They should be able to "reflect in action" – react to unexpected events in their workplace by 'thinking while doing' and using that thinking to improve their handling of that event (Schön 1991, pp.54-58). They should also be able to "reflect on action", take time to consider what it is that they are doing, why they are doing it and how their practice may be improved as a result (Schön, 1991, pp.276-279). While learning from reflective practice is an essentially personal process, learning can also take place in social settings such as NRM groups, collaborations and partnerships. For the coordinator, in terms of brokering NRM collaborations and partnerships, this social learning becomes a form of deliberative practice in which they "work and learn with others" (Milbrath, 1989, p.92; Forester, 1999, p.2).

Leach and Pelkey (2001, p.381) concluded that the presence of a skilled coordinator or extension officer to act as a broker is a significant factor leading to an effective partnership. The discussion presented above describes the attributes of such a person. It paints a picture of a person of super-human qualities. Tennyson and Wilde (2000, p.100) state quite fairly that, like all people, partnership brokers will have their faults and weaknesses and that we should look for a "good-enough" partnership broker when seeking to undertake

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[44] One may argue that if democratic governments exist to serve the people, that the wishes of the people and the objectives of government should be very similar. One could also argue that any government employee who is able to show their employer any dissimilarity in these two areas should be encouraged and rewarded, rather treated with suspicion.

this work. They emphasise that partnership brokers, serve as a catalyst for change, and that they are really a new type of leader in community and sustainable development (p.107).[45]

This discussion has examined the attributes of effective partnership brokers and examined the factors affecting NRM groups that may determine their effectiveness as partnerships or incubators for partnerships. These two discussions inform phase one and phase two of this research. The next section reviews relevant literature to reveal attributes of participants that may contribute to the development of effective NRM collaborations and partnerships.

2.10   Issues, collaborators and partners

Participants collaborate with others in their NRM group when they work together to achieve a goal that they would have difficulty achieving by working alone. Collaborators become partners when they share power and responsibility in undertaking this work. Partners do more than just contribute to discussions, exchange information or give grants and other support (Arnold and Long, 1995, pp.7-8). They are committed to the partnership. From an Eislerian viewpoint, they use 'partnership thinking' to help them, along with others, to achieve their goals (Eisler, 1987, 2002). From the point of view of both Eisler and Arnstein (1969), they share the power that exists within the relationship they have with others to help achieve that mutually desired or beneficial goal. The partnership typology presented elsewhere in this chapter speaks of '*aspirationally* inclusive multilateral partnerships', because while a broker, and other members of the NRM group, may *aspire* to develop an inclusive multilateral partnership, for some members the issue or problem has low 'core relevance' (Long and Arnold, 1995, p.61). This further complicates the task of the partnership broker. Some members of large NRM groups (e.g. catchment management groups – aspirationally inclusive multilateral partnerships) are working as partners. Others are simply participants. It may also be that some are neutral to the NRM problems and opportunities that have brought the group together. Others may be downright antagonistic to the purpose and process. This section concentrates on the attributes of an NRM issue, on which participants may be focusing, and on the attributes of the participants themselves that are mentioned in the literature as significant in terms of the development of effective NRM collaborations and partnerships.

Certain types of issues are best suited to being resolved by collaborative processes. These issues are ones that:

- Promote general community welfare and promote relationships
- Settle disputes between private interests
- Are highly fungible *(where there may be many ways of achieving the same purposes)*
- Involve questions of fact, such as how the salmon are doing, that require multiple parties; and
- Are agency initiatives requiring multi-party cooperation, such as restoration, cleanup, land development, or habitat conservation plans.[46]

Dukes, Firehock and Leahy (2001, p.15)

As, the process of collaboration is fundamental to the development of effective NRM partnerships, it is apposite that potential partners use these points to help them determine the suitability of an issue to a partnership-based resolution. These attributes describe NRM issues that are most suited to multilateral partnerships. For unilateral or bilateral partnerships, whether the NRM issue is of core relevance to the potential partner, and whether or not the problem can be solved working individually are also key factors in determining the suitability of an issue to resolution through partnership action.

Potential partners may also wish to look at the likely BATPO (Best Alternative To a Partnership Outcome) to help them to work out whether they should commit to a partnership. The circumstances or context within which the problem occurs are also significant to a potential partner's decision to be involved. Dukes, Firehock and Leahy (2001) note:

Conditions that make the collaborative effort promising include the following:
- The issue is of sufficient significance to warrant the effort;
- The issue will not require compromise of basic values and principles;
- The issue is 'ripe' for discussion (such as a stalemate that is unacceptable to several parties);

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[45] As "catalysts for change" NRM collaboration and partnership brokers, as described by Tennyson and Wilde (2000), are involved in transformative citizen participation (Buchy and Race, 2001, p.294, citing Nelson and Wright 1995).
[46] Author's addition (italicised text, dot point 3)

- Key parties are willing to participate;
- Relevant decision-making agencies support the effort;
- Sufficient time is available (and allocated) to address key issues;
- Implementation of any agreement reached is likely; and
- Success as defined by participants appears a reasonable possibility.

(Dukes, Firehock & Leahy, 2001, p.15)

In essence, these two sets of criteria mirror the definition of an NRM partnership presented in Section 2.3.3.4. They also tell us that it is worth potential partners working in an NRM partnership when the problem is of sufficient importance and is unlikely to be resolved any other way. Dukes, Firehock and Leahy (2001, p.15) also present a series of attributes relating to either an issue or its context that indicate when collaboration may be inappropriate. These closely mirror the three-way test developed by Wondolleck and Yaffee (2000, p.231) and presented in 2.4.[47] Section 2.4 presented a decision tree, written from a government perspective, as an aid to government decision-making about context-appropriate citizen participation processes. In many respects, this three-way test and the NRM issue and context attributes presented previously, fulfil the same purpose in describing a motived citizen considering working in partnership with others to resolve an NRM issue they see as a problem.

Tennyson and Wilde (2000) state that successful and effective partnerships have partners who "uphold principles of openness and equity; share risks and benefits; adapt well to change; and work towards empowerment" (p.14). The list of personal qualities that make an effective partnership broker described by Long and Arnold (1995, p.9) are also equally desirable in a potential partner.[48] The broker may be a champion of the new partnership, but it is important that the partners also champion the process. As Long and Arnold (1995) say, in the process of doing this, partners develop a 'common vocabulary'. In terms of monitoring and evaluation, indications that a common language or discourse is being developed between partners may be a useful NRM partnership evaluation tool.

Finally, people involved in partnerships are not always speaking or acting on their own behalf. They are sometimes representing others – be it a business, a government department or a non-government organisation. This can be challenging. Vanclay (1997) makes the point that while participation is a good thing, not all people are able to participate equally. He uses the example of farmers involved in research and development (R&D) corporations, noting, "farmer representatives are seldom representative of all farmers" (p.23). This is not to say that these representatives are unethical or bad, but that they are simply the people who are physically and financially able to leave their farm to attend meetings. Therefore, they are representative of farmers of a certain style or type. As a result, these farmers learn to use the language and business of R&D corporations. This can result in them having even greater difficulty communicating with, and representing the broad cross-section of farmers others involved in the process may wish them to represent.

Long and Arnold (1995) suggest that each participant should have:

- Some source of expertise;
- Credibility within their own organisation and within their sphere of activity;
- The ability to learn and listen;
- Commitment to the process; and
- A willingness to move toward unconventional solutions.

(Long and Arnold, 1995, p.9)

Having credibility within your "own organisation and sphere of activity" may help participants who are representing themselves, and those who are representing others. Bob Dick, a social scientist specialising in action research, advocates that stakeholder representatives in action research projects should be encouraged to "act for all those who have a stake in the issue, not just as (semi-autonomous) representatives," and that they, and the person facilitating this research, should "give attention to communication in both directions" between the representatives and the others that they speak for (Dick, 1995, p.7). Taking this action in NRM groups, collaborations and partnerships that involve representatives of groups and organisations might allay some of the concerns expressed by Vanclay (1997).

From the perspective of a potential partner, this section has presented a brief overview of the NRM issues and contexts that may be appropriate to a collaborative or partnership-based solution. It has also given some insight into the desirable personal attributes of a potential partner. The final section of this chapter

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[47] Is it fair? Is it wise? Is it legitimate?
[48] Listed in section 2.10

gives an overview of NRM groups, collaborations and partnerships in Australia, providing an insight into the settings in which these types of activities are taking place.

2.11   NRM groups, collaborations and partnerships in Australia

2.11.1 Administrative, legislative and political milieu

This section gives an overview of NRM activities and programs in Australia, endeavouring to give the reader sense of the complexity of the arrangements, and understanding of overlaps and gaps in responsibilities and actions that exist. It is within this milieu that the NRM collaborations and partnerships that are the case studies and focus of this research are found. It is important to situate the research undertaken within the NRM 'administrative landscape', at national, state and local levels. As will be recalled, such landscapes are rich in contest, negotiation and debate as to what constitutes 'nature', 'resources' and the 'environment' (Tsing, 1999, p.2).

2.11.2 Federal and State Government perspectives

Table 2.7 gives some idea as to who is traditionally regarded as having responsibility for various NRM activities throughout Australia. It highlights the significant impact of British colonisation has had on the nature of legislative arrangements relating to NRM.

Table 2.7 Traditional division of natural resource and environmental management responsibilities in Australia between the levels of government and individuals (House of Representatives Standing Committee on Environment and Heritage (HRSCEH), 2000, p.74)

Jurisdiction	Commonwealth	State	Region (eg Catchment Management Authority)	Local government	Individuals/ Corporations
Activity					
Adherence to international/national conventions	XXX	XX	X	X	X
Leadership and catalysing change	XXX	XXX	XXX	XXX	X
Administer land and water legislation and regulation	X	XXX	-	XXX	-
Undertake regional and local planning	X	XX	XXX	XXX	X
Support for research and development	XXX	XXX	X	X	-
Development of national NRM policy	XXX	XX	X	X	X
NRM extension and capacity building	X	XXX	XX	XX	XXX
On-ground management (except for crown lands)	XXX	XXX	XX	X	XXX
On-ground management of crown lands	XXX	XXX	XX	X	-

Levels of responsibility	
-	Not relevant
X	Low
XX	Medium
XXX	High

The Commonwealth-State delineation of responsibility shown in Table 2.9 reflects the fact that Australia is a federation, formed by British parliament passing the *Commonwealth of Australia Constitution Act*, in 1901.

This occurred after the holding of a federal convention and referenda throughout the six colonies of Australia (now known as States) (Bassett, 1987, p.93). Two referenda were held as the question of federation received an insufficient majority in the colony of New South Wales on the first occasion (Bassett, 1986, p.93). To varying degrees the federal-state and state-state rivalries and mistrust that existed then still exist over 100 years later. When the Australian Constitution was drafted in 1900, environmental matters were not considered significant and so were not explicitly mentioned in the Constitution (Environmental Defender's Office of New South Wales (EDONSW), 2001, p.1). While the constitution has not been amended in this regard, various pieces of federal legislation have been passed and the federal government now has twenty pieces of legislation relating to the environment in the areas of: environmental impact assessment; protection of biodiversity; pollution and toxic chemicals; and specific places. Two other Acts, one relating to exports and the other to taxation, have been used to control undesirable environmental practices or to provide incentives for improved NRM (EDONSW, 2001, pp.5-6).

This, and the rather haphazard and disjointed approach that the British government took to colonising Australia, have contributed to the rather complicated demarcation of who is responsible for what, shown in Table 2.7. Such a pattern is also seen in other areas of government in Australia.[49] The NRM legislative frameworks found throughout Australian states and territories differ markedly. An example of this is shown in Table 2.8.

Table 2.8 Approximate number of Acts with environmental implications administered by State Departments (as of December 2000)

State	Department/s	Number of Acts Administered
New South Wales	Department of Land and Water Conservation	52
Queensland	Department of Natural Resources	19
Victoria	Department of Natural Resources and Environment	103
Western Australia	• Water and Rivers Commission • Department of Environmental Protection • Department of Conservation and Land Management • Agriculture WA • Office of Water Regulation • Water Corporation	77 (combined total)
South Australia	• Department of Water Resources • Department of Environment and Heritage	10 24
Tasmania	Department of Primary Industries, Water and Environment	95
Northern Territory	• Department of Lands, Planning and Environment • Department of Primary Industries and Fisheries • Parks and Wildlife Commission of the Northern Territory	42 26 15
Australian Capital Territory	Department of Urban Services	72

(HRSCEH, 2000, p.71)

As we see from Table 2.8, each state or territory has its own suite of legislation. It should be noted also that the Table is really a rather conservative approximation and that the pieces of legislation relating to the protection of the environment and NRM are probably higher than this.[50]

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[49] For example, the colonies (now states of Australia) could not agree on common railway gauges. As a result, railways of three different gauges were built throughout Australia. Some standard gauge lines have now been built, but the inter-state rivalry and mistrust that led to this ridiculous state of affairs have caused considerable problems (Bassett, 1987? p.214).
[50] For example, in Queensland, the Environmental Protection Agency and Department of Primary Industries and Fisheries implement a variety of legislation that is directly or indirectly related to environmental and

Table 2.9 outlines that NRM extension and capacity building activities are largely the province of the states. A group approach has increasingly been used to undertake these activities, both in Australia and overseas (Chamala, 1995, pp.73-77). Some of these groups, such as Landcare Groups are common throughout all Australian states. There are around 4 500 Landcare Groups in Australia (Wiseman, 2001, p.1). While the federal government largely relates to these groups through funding programs, each state and territory government has its own way of providing support. Apart from Landcare Groups, there are also substantial numbers of Catchment Management and other NRM groups throughout Australia (eg Bushcare, Coastcare). For example, in 2000 there were:

> 127 NRM groups and Catchment Management Groups in New South Wales alone. Many of these groups do not operate in conjunction with other groups in their area, resulting in a poorly coordinated management approach.

(HRSCEH, 2000, p.71)

Problems of coordination and integration become even more complicated when one realises that lead agencies for NRM, such as QDNR&M in Queensland, also facilitate an array of other citizen participation processes where groups of people from a wide variety of backgrounds are consulted about or work together on various NRM issues. These include new regional bodies, community reference panels and river improvement trusts. For the most part, these groups are comprised of individuals and representatives of agency, industry, and community groups. Recent Coastal CRC research in South East Queensland suggests that community participants consider regional NRM arrangements very complex. Asked to identify and describe regional NRM decision-making groups, one active voluntary community contributor (Armstrong 2003) readily identified more than twenty 'collaborative' groups and the relationships between them. The volunteer commented that her assessment was probably not a complete picture.

The federal government has sought to support NRM groups, through the Natural Heritage Trust (NHT I and II) and the National Action Plan for Water Quality and Salinity (NAPWQS). Established under *The Natural Heritage Trust of Australia Act 1997,* using $AUD 1.1 billion from the partial privatisation of *Telstra,* the NHT funded over 10 400 NRM projects in Australia, up to end of financial year 2001. Funds have gone to NRM groups as well as state and local governments. "At least 370 000 volunteer and other workers have now contributed time and effort towards implementing Trust-funded on-ground works" (Environment Australia (EA), 2002, pp.iii, 3&5). Through partnership agreements with state and territory governments, the federal government has sought to secure the terms and conditions for the provision of this financial assistance including provision of financial, in-kind and administrative support for Trust-funded activities from these governments (EA, 2002, pp.9-10). The federal government has also sought to work in partnership with local governments who have managed more than 1 250 NHT projects worth $AUD 90 million to the end of 2000-1 (EA, 2002, p.10).[51] The NHT conducts periodic consultation with stakeholders. In 2002 there were over 800 coordinators and facilitators partly funded by the Trust, agencies from other levels of government and communities throughout Australia (EA, 2002, p.11). "The Commonwealth strongly encourages cooperation and partnerships between community organisations and government at all levels so that all Australians take joint responsibility for the environment" (EA, 2002, p.9). In effect, the federal government has used the Trust as a financial lever to encourage attempts at cooperation and coordination for NRM across Australia.

Recognising that Australia faces serious salinity problems, the federal government, working in partnership with state and territory governments, has also provided $AUD 1.4 billion over the next seven years to undertake NRM activity in specific areas of Australia to address salinity and water quality problems (Agriculture, Fisheries and Forestry Australia (AFFA), 2003, p.1). The federal government states that the National Action Plan for Water Quality and Salinity that will provide these funds "relies heavily on partnerships between governments and communities to lay the foundations for effective NRM" (AFFA, 2002, p.1). To develop these NHTII and NAPWQS partnerships the federal government has worked with state and territory governments, community and industry to form regional NRM bodies throughout Australia. NHTII and NAPWQS funds will be made available to on-ground groups through these regional NRM bodies, once the NRM bodies have completed and received federal government accreditation for an NRM plan for their region (HRSCEH, 2000). These NRM bodies are presently being developed. The impact they will have on increasing or decreasing the complexity of NRM group administrative arrangements and the level of on-ground activity remains to be seen. Given that the Labour Party is in power in all states at present, it may be

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NRM matters. Local government, under their planning schemes and other laws, also impact on such matters.

[51] The term partnership is used here as that is the term used by the federal government in the documentation referenced in this section. While these relationships are not the focus of this study, it should be noted that relationships may not necessarily fulfil the definition of an NRM partnership in Section 1.3.3.

that the federal government is using financial leverage it is providing to NRM programs and regional bodies to minimise the influence of state governments.

2.11.3 Local government perspective

Local government also plays a key role in NRM and is becoming increasingly active in this area. This role is particularly high profile in South-East Queensland, the area from which the majority of the case studies have been drawn for this research. A whole-of-government, whole-of-community strategic framework for the integrated and sustainable management of waterways and catchments called the *Moreton Bay Waterways and Catchments Partnership* has been developed, supported by local government and various state government agencies (Brisbane River Management Group Secretariat (BRMG), 2001. p.1). This Partnership is responsible for implementing outcomes of the *SEQ2001 – Regional Framework for Growth Management* and for planning, coordinating, resourcing, and implementing Waterway and Catchment Management plans throughout South-east Queensland (BRMG, 2001, p.1).[52] However, these South-East Queensland attempts at NRM group-catchment body-local government coordination may not be typical of rest of Australia. A federal government report on catchment management states:

> Testimony received by the Committee indicated that there was poor integration and coordination between catchment bodies and local government agencies. Catchment bodies may develop a catchment management strategy, while local governments may develop their own, competing plans and, in addition, have the legal authority to ensure implementation through zoning and planning laws and by-laws.
>
> (HRSCEH, 2000,p.71)

2.11.4 Catchment Management Groups in Australia

Catchment Management Groups are composed of a range of stakeholders (e.g. community, industry, different levels of government) who seek collaboratively to manage land, water and biodiversity using the catchment or drainage basin of a stream system as the fundamental unit of NRM. In Queensland a 1991 Integrated Catchment Management (ICM) strategy lead to the establishment of catchment groups that are advisory and rely on the cooperation of stakeholders to implement the catchment management strategies they develop (McDonald, 1997, p.139). ICM is the management of water and land through the integration and cooperation of government agencies, community and industry within a catchment (McDonald, Bellamy, McDonald and MacLeod, 2000, p.115). The Queensland ICM Strategy highlights the role of the individual, whilst also focusing on the need for participants to work together, indicating that:

> While individual actions provide valuable contributions to the resolution of catchment management issues, in many situations coordinated action by many people, community organisations and government agencies will be required.
>
> (Queensland Department of Primary Industries, 1991.p.14)

There are 33 ICM groups endorsed by the Queensland government working according to this strategy (Bellamy et al, 2000, p.217-219).

In some parts of Australia, Catchment Management Groups are defined by specific legislation and have been subject to review in recent years. For example, in New South Wales the 43 Catchment Management Committees (CMCs) and five Regional Catchment Management Committees (RCCs) have been replaced by eighteen Catchment Management Boards under the Catchment Management Act 1989. (New South Wales Department of Land and Water Conservation, (NSWDLWC) 1999, p.1). This occurred as a result of a growing number of community-based natural resource management committees (e.g. in New South Wales, there were not only CMCs and RCCs, there were also 22 Water Management Committees, 15 Regional Vegetation Management Committees, and about 70 Floodplain and Coast/Estuarine Committees). "This has placed a strain on the limited number of people available, willing and skilled to contribute to them" (NSWDLWC, 1999,p.2). The government reported that CMCs had been limited in their capacity to implement the catchment strategies they had developed, explaining that "a community-government partnership is needed which will operate at a level where it can make a real difference to each region's natural resources" (NSWDLWC, 1999, p.2).

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[52] The term 'partnership' is defined in Section 1.3.3. The way the term is used in the name, 'Moreton Bay Waterways and Catchment Partnership', given the centralised power and decision-making structures of the 'Partnership', is not consistent with this definition.

A similar situation exists in Victoria where the government has adopted a "community-based service delivery model for catchment management" (Victorian Department of Natural Resources and Environment (VDNRE), 1997, p.1). This involved the integration of various boards and community-based groups to create Catchment Management Authorities (CMA), with overall numbers of groups being reduced and each (CMA) producing and implementing a Catchment Management Strategy (CMS). The management of catchments in Victoria was said to be an example of "partnerships in action" (VDNRE, 1997, p.1).

Legislation specifically focusing on catchment management exists in New South Wales, South Australia and Victoria. There is no direct legislative base for catchment management in Queensland, Western Australia and Tasmania. There is a range of legislation that partly covers catchment management in the Australian Capital and Northern Territories (HRSCEH, 2000, pp.32-37). McDonald (1997) has investigated factors critical to the progress of catchment management in Australia, concluding that as a nation, we are still seeking a "new paradigm of integrated resource management to replace the undeniably inadequate old exploitive and compartmentalised one", but that catchment management had still not been identified as a "dominant or commonly accepted way forward" by natural resource managers and the community in general (p.139). McDonald et al (2000) have provided an anthology of papers on the progress of catchment management in Queensland throughout the nineties. This work places Queensland catchment management within the national context and explains its origins and development. They describe Queensland ICM as a "real time experiment in locally based resource management", explaining that it has a fragile funding base and is in constant change (McDonald et al, 2000, pp.115-116). The Australian federal government recently released a report into Catchment Management in Australia, highlighting this funding issue and making three major recommendations on the need for:

- An assessment of the feasibility of an environment levy to pay for the public contribution to implementing the policy of ecologically sustainable use of Australia's catchments;
- A national catchment management authority to ensure that the many programs are coordinated, funded and appropriate to the problem at hand; and
- National catchment management coordinating principles, targets, and legislation.

(HRSCEH, 2000, p.viii)

However, from a national perspective, at present the complex approach to catchment management, a major NRM initiative throughout Australia, continues to be funded and administered in a disjointed and incremental manner.

2.11.5 Political environment

The legislative and administrative environment in which NRM groups work is a complicated and intricate one. The issue of political influence warrants attention in this study as so many government agencies and legislatures have a stake in NRM. Politics, after all, is all about getting elected and "at any one time in Australia there will always be at least one jurisdiction within twelve months of an election" (HRSCEH, 2000, p. 54). The legislative and administrative overview presented here paints a picture which, while accurate at the time of writing, is subject to continuing review and change, due in no small part to political pressures caused by the number of different levels of government involved in NRM. It is for this reason, that rather than focus on the constantly changing large scale institutional level in relation to the development of effective NRM partnerships, this study concentrates on endeavouring to understand the nature of collaborative and partnership-based relationships existing at the 'on-ground' NRM group level.

2.12   Conclusion

The two chapters of this literature review take the reader on a journey of discovery, to unearth the theoretical, conceptual and practical background necessary to analyse the empirical evidence resulting from an investigation into the development of effective partnerships at the NRM group level.

Chapter 1 presented background on ecological theory and NRM, summarising the scope of the major NRM problems that confront us as nationally, also placing these in a global context. Australian NRM problems were shown to be symptomatic of cultural mal-adaptation. A discussion was presented on the differing approaches governments throughout Australian have taken to correcting this problem through social mobilisation approaches to sustainable NRM. Collaborative and partnership-based approaches to NRM, were analysed using theoretical frameworks relating to citizen participation, cultural transformation theory and power. The concepts of social capital, social liability, social learning and dialogue were applied to a discussion on NRM collaborations and partnerships to aid in an understanding of both the partnership building process and of limitations of partnerships.

This Chapter has taken the journey further. It had two purposes. Firstly, it built on the literature review of Chapter 1 to complete the theoretical foundation needed to inform analysis in this study. It explored NRM groups as social settings within which collaborations and partnerships may develop, and theories relating to group development and effectiveness and the ways that NRM groups change over time. It examined the characteristics of effective NRM groups as discussed in the literature. The significance and nature of the NRM issue at hand, its relevance to participants and the attributes of the participants and those endeavouring to broker NRM collaborations and partnerships were all discussed as factors influencing the effectiveness of NRM collaborations and partnerships.

Secondly, it developed analytical tools to help in this task. To achieve this second purpose, the discussion went beyond analysis and synthesis commonly found in literature reviews to the presentation of arguments to justify the nature of three analytical tools that were developed.

The first tool was the pendulum of citizen participation. This combined the government-citizen power continuum found in the ladder of citizen participation by Arnstein (1969) and the definitions of collaboration and partnership presented in Chapter 1. The second tool was a citizen participation decision tree. Developed from the work of others, the decision tree asks eight questions which are designed to assist government staff to select context-appropriate citizen participation and social learning processes for a given situation (Vroom and Yetton, 1973; Lawrence and Deagen, 2001). By blending concepts from a range of sources, the third tool, an NRM partnership typology, was constructed (Duane, 1997; Poncelet, 1998; Pretty and Ward, 2001). Along with the concepts and theories presented in these two chapters, these three tools have been organised into a diagnostic checklist to aid in the analysis of the collaborations and partnerships under examination during this study. Finally, the reader has been given a brief insight into the legislative, institutional, administrative and political milieu in which NRM groups are operating.

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