Place and natural resource management:
The case of the Barmah-Millewa Forest, Australia

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A thesis submitted for the degree of Doctor of Philosophy of The Australian National University
This thesis is entirely my own work, except where I have indicated otherwise.

[Signature]

Heidi Maree Ellemor
October 1998
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mind and to believe in myself and my ability. I thank him for the countless thesis discussions and for his theoretical insights. Without his encouragement I would probably never have embarked upon this project; without his companionship this thesis would have been a much more difficult task.
This thesis explores constructions of place and the way in which they may relate to the process of natural resource management. It reviews the current and potential application of contemporary place theory (particularly from the sub-discipline of cultural geography) to natural resource management. This is necessary given that cultural geography has been criticised for failing to contribute to policy formation and that resource management is seeking to engage disparate local communities. This thesis reveals that contemporary place theory, particularly more politicised notions of place and identity, are increasingly relevant to natural resource management in Australia.

Although there is increasing recognition of the social, cultural and political dimensions of managing natural resources, there has been insufficient research explicitly exploring these dimensions in a management context. This research addresses this gap through a detailed case study of the Barmah-Millewa Forest. It presents a picture of complexity involved with the management of the Barmah-Millewa Forest and its resources. In particular this research has explored the ways in which the forest is constructed as a place by the local communities and the resource management agencies.

This thesis has trialed and reviewed relevant methodological approaches and techniques. Qualitative research techniques, including interviews and observation, have been conducted with a range of individuals from key interest groups, focusing on the Yorta Yorta community of indigenous people (with a current Native Title Claim active over the area), the local non-Aboriginal community dominated by timber and grazing interests, and the government agencies responsible for the management of the forest. Three separate, though interrelated approaches have been employed to interpret the case of the Barmah-Millewa Forest. These are: value categorisation; description of the 'cognitive context' of interested parties; and interpretation of various constructions of the forest. A review of the theoretical literature relating to place, existing applications of place theory to resource and cultural heritage management, and Australian cases of environmental conflict have informed the case study.

This thesis illustrates the central role of place and identity construction in contestation over the management and allocation of natural resources. It does this by exploring different constructions of the forest in relation to forest uses, forms of knowledge, perceptions of environmental change and opinions on resource management. This highlights the relationships of power that currently surround and impede the process of natural resource management in the Barmah-Millewa Forest, as meanings of place are negotiated and contested through the processes of Native Title and resource management. As a way of moving forward, this thesis proposes that an ongoing local dialogue on place is one way of identifying and acknowledging difference and building common ground.
between diverse local communities with an interest in natural resource management. A discussion is presented on methodological issues, research implications, and mechanisms whereby issues of place might be furthered in natural resource management contexts.
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<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABC</td>
<td>Australian Broadcasting Corporation</td>
</tr>
<tr>
<td>ACF</td>
<td>Australian Conservation Foundation</td>
</tr>
<tr>
<td>ACT</td>
<td>Australian Capital Territory</td>
</tr>
<tr>
<td>AHC</td>
<td>Australian Heritage Commission</td>
</tr>
<tr>
<td>ANCA</td>
<td>Australian Nature Conservation Agency</td>
</tr>
<tr>
<td>BFPL</td>
<td>Barmah Forest Preservation League</td>
</tr>
<tr>
<td>CAC</td>
<td>Community Advisory Committee</td>
</tr>
<tr>
<td>CAMBA</td>
<td>China-Australia Migratory Bird Agreement</td>
</tr>
<tr>
<td>CCC</td>
<td>Communities of Common Concern</td>
</tr>
<tr>
<td>CRG</td>
<td>Community Reference Group</td>
</tr>
<tr>
<td>CV</td>
<td>Contingent Valuation</td>
</tr>
<tr>
<td>DC&amp;E</td>
<td>Department of Conservation and Environment (Victoria)</td>
</tr>
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<td>DCFL</td>
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</tr>
<tr>
<td>DCNR</td>
<td>Department of Conservation and Natural Resources (Victoria)</td>
</tr>
<tr>
<td>DLWC</td>
<td>Department of Land and Water Conservation (New South Wales)</td>
</tr>
<tr>
<td>DNRE</td>
<td>Department of Natural Resource and Environment (Victoria)</td>
</tr>
<tr>
<td>EPA</td>
<td>Environment Protection Authority</td>
</tr>
<tr>
<td>FN</td>
<td>Field note book</td>
</tr>
<tr>
<td>GL</td>
<td>Gigalitre</td>
</tr>
<tr>
<td>HEC</td>
<td>Hydro-Electricity Commission (Tasmania)</td>
</tr>
<tr>
<td>ICOMOS</td>
<td>International Council on Monuments and Sites</td>
</tr>
<tr>
<td>JAMBA</td>
<td>Japan-Australia Migratory Bird Agreement</td>
</tr>
<tr>
<td>KM</td>
<td>Kilometre</td>
</tr>
<tr>
<td>LCC</td>
<td>Land Conservation Council (Victoria)</td>
</tr>
<tr>
<td>MDBA</td>
<td>Murray-Darling Basin Agreement</td>
</tr>
<tr>
<td>MDBC</td>
<td>Murray-Darling Basin Commission</td>
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<tr>
<td>MDBMC</td>
<td>Murray-Darling Basin Ministerial Commission</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-Government Organisation</td>
</tr>
<tr>
<td>NPWS</td>
<td>National Parks and Wildlife Service (New South Wales)</td>
</tr>
<tr>
<td>NSW</td>
<td>New South Wales</td>
</tr>
<tr>
<td>NT</td>
<td>Northern Territory</td>
</tr>
<tr>
<td>RAC</td>
<td>Resource Assessment Commission</td>
</tr>
<tr>
<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organisation</td>
</tr>
<tr>
<td>US</td>
<td>United States of America</td>
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<tr>
<td>VS</td>
<td>Visiting stakeholder interviews</td>
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CHAPTER ONE
INTRODUCTION

1.1 The Problem

In a letter to *The Australian* newspaper, Peter Garrett, lead singer of the Australian band *Midnight Oil* and Executive Officer of the Australian Conservation Foundation, indicates the importance of the topic of this thesis. He writes: "Land and water resources are always managed better with the involvement of people. Aboriginal people have a special right to be involved with making decisions about developments on their country" (Garrett 1998). The management of Australia's land and water resources is under the spotlight. Never before have so many letters, reports, papers and books been dedicated to the degradation of Australia's resources; never before have Australians been so actively thinking and talking about their relationships with land and resources.

The degradation of our natural environment has led us to question management practices and the philosophies which underpin them. This search for a more sustainable future has led many to not only question past management acts, but also to recognise the rights and voices of the people dispossessed and marginalised by these acts of management. The rights of Aboriginal people in relation to land and water resources, and the injustices of the past are only just beginning to be formally recognised in Australia. In so doing, indigenous relationships with land and resources are being formally heard in courts of law and are slowly infiltrating systems of resource management. Settler Australians1 are beginning to understand that the way in which we manage our land and water resources reflects the way in which we conceptualise ourselves in relation to these resources. The recognition of indigenous rights to land and resources and increasing awareness of environmental degradation are forcing non-indigenous Australians to (re)think their own relationships to place. Further, other groups and individuals who have not previously been directly involved with formal processes of natural resource management (such as farmers, local communities and non-government organisations), are also seeking a voice and a language of engagement. Even state and federal governments are writing the community into natural resource management, at least in part, at least in principle. As people engage in managing places, a discussion of the meaning of place is emerging.

A growing body of literature has emerged concerning the relationship between people and place. In particular, the sub-discipline of cultural geography in Australia has sought to contextualise the connections between people and place, uncovering the

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1This term is commonly used to refer to non-indigenous Australians. I use the terms non-indigenous, non-Aboriginal and settler Australian interchangeably.
relationships of power that in so many ways structure our experience of the world. This thesis draws on this body of work, to apply a cultural geography perspective to the process of natural resource management. This is both timely and necessary given the diversity of interests and the complexity of issues currently surrounding the management of natural resources in Australia. Through the case of the Barmah-Millewa Forest, this thesis illustrates the complexity that can surround the management of natural resources. It demonstrates the way in which natural resource management increasingly involves broader issues such as indigenous rights to land and resources, Aboriginal reconciliation, community involvement in resource management and the rethinking of relationships to place by non-indigenous Australians. Importantly, this thesis comments on the relationships of power that are associated with resource management processes. It advocates a mutual compromise from both cultural geographers and natural resource managers, to achieve a more equitable and sustainable system of resource management.

1.2 Research Context

Natural resource management in Australia is characterised by a diversity of interests. Increasingly, resource management agencies are being challenged to engage with a broader range of meanings and values. The current emphasis on participatory processes, issues relating to indigenous rights to resources, and recognition of the cultural and social value of the environment are increasingly challenging the dominance of an expert and economic paradigm in natural resource management.

The range and complexity of interests in the management of resources has been well documented in literature from Australia and abroad (see Boyd et al 1996; Boyd and Cotter 1996; Brandenburg and Carroll 1995, Mitchell et al 1993). There are many instances in Australia where this diversity of interests has led to conflict over resource management (see for example Toyne 1994). Increasingly these resource-related conflicts are seen to be focused more on values than on facts (Vining and Ebreo 1991; Floyd 1993; Aslin 1994; Holmes 1994). It has also been noted that the primary source of contention is often related to the disparate values associated with a resource and its use and the different weighting given to these values (RAC 1993a). As a way of including a broader range of meanings in the process of resource management, much recent research and writing has focused on the values ascribed to resources, with an emphasis on non-commodity values, such as social and cultural value (see Johnston 1994; Packard and Dunnett 1994; Coakes 1998).

More recently, issues relating to indigenous rights to resources, including Native Title, have become important in resource management debates in Australia. The formulation of the Native Title Act 1993 has provided one process through which Aboriginal groups can make claim to land and water resources. Successful Native Title determinations formally legitimise indigenous interests in resource tenure and management. In response to these
issues, significant debates have emerged in Australia over resource management and attachments to place. These debates suggest that to be successful, processes of resource management must engage the multiple meanings and values ascribed to particular places and resources. They also highlight the need for a continuing Australian dialogue on place.

Meaningful community participation is regarded as an essential step towards the inclusion of this diversity of interests in the resource management process. This process has gained increasing recognition since the notion of sustainable development emerged in the late 1980s (Dovers 1998). Community participation and the inclusion of indigenous and local knowledges in Australian resource management have, over recent years, been inscribed in international convention, international policy, and federal and state policy (e.g., nationally, the *National Landcare Program*, *National Rangelands Strategy*, and the *National Strategy for the Conservation of Australia's Biological Diversity*). Stakeholder participation has also been part of major state-federal processes such as the Regional Forest Agreement process (see *Australian Journal of Environmental Management* 1998). These policies document the importance of recognising local and indigenous knowledges and consulting with community groups when managing natural resources. The 1992 *Rio Declaration on Environment and Development* (United Nations 1992) of which Australia is a signatory states:

**Principle 10**  
Environmental issues are best handled with the participation of all concerned citizens, at the relevant level...

**Principle 22**  
Indigenous people and their communities and other local communities have a vital role in environmental management and development because of their knowledge and traditional practices. States should recognize and duly support their identity, culture and interests and enable their effective participation in the achievement of sustainable development.

The recently formulated *Australian Natural Heritage Charter* (AHC 1996), which sets standards and principles for the conservation of places of natural significance also notes the importance of consulting with local communities and recognising their knowledges:

**Article 24**  
Work or other *conservation* action or processes at a *place* should be preceded by research, and review of the available physical, oral, documentary and other evidence about the existing *biological diversity*, *geodiversity* and *ecosystems* including evidence from Indigenous people.

**Article 32**  
Consultation with individuals or organisations with an interest in the *natural significance* or future use of a *place* is always a desirable component of *conservation practice* (emphasis in original).
These policies confirm recognised principles for cultural heritage management, such as those embodied in the *Burra Charter*, which was adopted by the Australia International Council on Monuments and Sites (ICOMOS) in 1979, and has been widely accepted as the standard for conservation philosophy and practice in Australia since the early 1980s (Purdie et al 1996). Although these policies recognise that local and indigenous knowledge and consultation with community groups is important for resource management, they do not explain how meaningful community consultation can be achieved, how local and indigenous knowledge can be recognised, or the kind of issues that will arise when these are attempted. These are the challenging issues currently facing resource management agencies and local communities.

This thesis argues that the theories and methodologies employed by cultural geographers have much to offer our understanding of the complex relationships between people, places and the institutions that manage our natural resources. Baker has illustrated "how cultural geography can be part of an applied geography that constructively addresses one of the most important issues facing Australian society - land degradation" (1997: 61). Recent place theory from Australia and abroad offers insight into the complexity and diversity of interests currently being expressed in relation to resource management. These works emphasise that places are constituted by social processes; that there can be multiple constructions of place; and that these meanings are often contested, involving relations of dominance and subordination (see Jackson 1989a; Jackson and Penrose 1993a; Massey and Jess 1995; Huggins et al 1995). Importantly, they also emphasise that individual and group identities are often constituted in and through place (see Jacobs 1996; Keith and Pile 1993). Cultural geographers' interest in the role of place, power and local knowledge in constructing how different groups see the world is extremely relevant to natural resource management (Baker 1997).

In response to criticism that cultural geography does not sufficiently contribute to policy debates, research by Australian cultural geographers has been described as "critically reflexive, politically engaged and policy relevant" (Dunn 1997: 1). As Anderson and Gale note:

...cultural geographers need continually to confront the connections between culture, human geographies and the workings of power. This is especially so if we are to avoid a style of self-congratulatory discourse analysis where the researcher is consumed by the task of deconstructing knowledges to the neglect of the conditions, impacts and political functions of people's cultural conceptions (1992: 7).

Following in this manner, Australian cultural geographers have emphasised the political aspects of the construction of place (see Huggins et al 1995; Anderson and Jacobs 1997). In particular specific political issues which are pertinent to "a settler nation like Australia, where Aboriginal and non-Aboriginal Australians struggle to find a way to co-habit", are being considered by researchers engaging with both "racialised minorities" and "dominant
cultural forms" (Anderson and Jacobs 1997: 20). Such research offers insight into the complex relationships that currently exist between people and place in Australia.

The theorisations of place which have developed within human geography have recently been applied to the challenges facing resource managers. Research from abroad is building a rationale for the inclusion of a place perspective in natural resource management. As Williams and Patterson note, "geography serves to remind resource managers that an ecosystem is as much a socially constructed place as it is a scientifically delineated space" (1996: 514). They argue that in the long-standing instrumental (economic) paradigm of resource management:

...place was only considered in the more abstract sense of the spatial and temporal distribution of resource commodities; the result was to disembed the various elements, attributes, or features of natural resources from their spatial and temporal context. The concept of place embeds these resource attributes back into the system of which they are a part, reminding managers that they exist in a meaning-filled spatial (and temporal) context (Williams and Patterson 1996: 508-509).

This work recognises the need to include an understanding of the meanings and values people ascribe to places and resources in the resource management process. In the United States research is exploring people's attachments to place within the context of resource planning (see Mitchell et al 1993, Brandenburg and Carroll 1995, Williams and Patterson 1996). It acknowledges the challenge natural resource managers face in meeting the diversity of needs, desires and values held by stakeholders (Brandenburg and Carroll 1995). Writing about America's forestlands, Mitchell et al note that:

If one accepts the thesis that public lands can be viewed by their constituencies in terms of both their utility and as the object of emotional attachments, and that affective ties with a place or landscape are important, then public land management planning should address both values (1993: 32).

In Australia, research and practice in the area of cultural heritage management is leading the way in addressing issues such as community participation and the inclusion of values and meanings into the management process. Australian cultural geographers have emphasised the wider political and economic context in which cultural heritage management must operate. In particular they have highlighted that "this context is characterised by disparities and inequalities in the allocation of resources as well as conflicts of interests" (Gale and Jacobs 1987: 97; see also Jacobs and Gale 1994). Good management is seen to take account of local factors, notably groups which may not be powerful, but which may have a non-economic interest in the site (Gale and Jacobs 1987; Jacobs and Gale 1994). Working in the area of Australian cultural heritage management Boyd et al (1996) have noted that cultural heritage sites exist within complex modern social landscapes. They argue that it is necessary for cultural heritage management to identify the multiplicity of meanings ascribed to heritage sites, the broader landscape in which they are located, and the relationships between interested parties. Without this understanding, "the
practicalities of cultural heritage management of each site will be founded only on partial understanding of the site, and will result in unsatisfactory solutions to management issues" (Boyd et al 1996: 137).

The term place is inherent in the *Australian Heritage Commission Act* (1975) (Dargavel 1998; Commonwealth of Australia 1994). The Australian Heritage Commission (AHC) carries out regional assessments which combine an assessment of natural and scientific values with aesthetic, historic and social values. This leads to an integrated view of the conservation values of a place or region, in large part through consultation with local communities (Pearson and Sullivan 1995). The Regional Forest Agreement process currently under way in Australia, involves comprehensive assessments of the economic, social, environmental and heritage values of forest regions. The AHC has an integral role in this process, which, among other things, endeavours to bridge the gap between the natural and cultural values ascribed to Australia's forests, ensuring that the full range of values are recognised and included (see Lennon 1998; Coakes 1998).

Although contemporary place literature has been applied to problems surrounding cultural heritage management in Australia, and natural resource management abroad, very little work of this kind has been applied to the context of natural resource management in Australia. With the diversity of interests in places (and resources) and the current emphasis on community participation in resource management, a heightened understanding of the relationship between people, places and institutions in the Australian context is of both intellectual and practical import. This requires not only acknowledging that there are multiple meanings ascribed to place, but also that these meanings are negotiated and contested through the processes of natural resource management.

Consider for example a forested public space which is constructed by a variety of individuals and groups as a place of work; a place of leisure; a place representing white family history; a place which embodies the heritage of the local timber and grazing industries; a place representing Aboriginal cultural heritage; and a place symbolic of Aboriginal land rights and the fight for social justice. As a public forested space, it is controlled by government agencies responsible for the 'management' of individual resources. How can this space be managed to meet the needs and aspirations of all those who construct it as a place? Management for one version of this place may compromise the needs of those with an alternative construction of the same space. We may ask: who is this place and its resources being managed for? Whose place does natural resource management seek to protect?

Drawing from both theory and observation, this thesis argues that it is integral for natural resource management organisations to understand the multiple meanings and values ascribed to places by local communities, whilst acknowledging their own constructions of the places they seek to manage. In order for this to happen, there is a requirement for
dialogue on place that engages both local communities and natural resource managers. This will be crucial to aid problem definition and canvas management and policy options.

1.3 Research Focus and Approach

This research explores connections between cultural geography and resource management. The aim of this research is:

_to explore constructions of place and the way in which they may relate to the process of natural resource management._

By dividing this aim into three sections - review, application and implication - a set of research questions has been developed to guide the research.

Review

1. Does place theory have any current or potential contribution to make to the process of natural resource management?
2. What role have aspects of place played in conflicts over natural resource management in Australia?
3. How useful are current approaches which seek to include meanings and values into the process of natural resource management?

Application

4. How do constructions of place differ amongst local communities, and between local communities and the institutions responsible for the management of natural resources?
5. How do different constructions of place relate to different resource uses, differing opinions on resource management, and different forms of knowledge?
6. What capacity do resource management institutions have to include multiple constructions of place in the process of natural resource management?

Implication

7. Can this style of research contribute to the theory and practice of cultural geography and natural resource management?

These questions and the broad research aim have been informed by the theoretical literature relating to place and substantive issues relating to resource management. The methodology employed to undertake this research cuts across a number of these research questions. These methods are described in chapter four; in chapter ten I will reflect upon their application.

A case study approach is adopted in this research. This allows the aim and research questions to be explored within the context of a specific geographical location, a formal institutional structure, and the broader political, economic and cultural context. Key issues appearing in the literature and key resource management policy issues aided the selection
of the Barmah-Millewa Forest, a unique river red gum (*Eucalyptus camaldulensis*) forest in southeastern Australia (see figure 5.1, before chapter five). Having been chosen with key policy and substantive issues in mind, the case of the Barmah-Millewa Forest offers insight into some of the challenges currently facing Australian resource managers (see chapter 4.2). The case study is informed by a review of theoretical literature relating to place and the application of place theory to resource and cultural heritage management (in chapter two). It is also guided by a review of Australian cases of environmental conflict (in chapter three). Figure 1.1 (page 12) illustrates the relationship between the various aspects of the thesis.

1.4 Research Contribution

This research explores constructions of place and the way in which they may relate to the process of natural resource management. In doing so it seeks to further the link between cultural geography and resource management. This is of both intellectual and practical import given that cultural geography has been criticised for failing to engage with policy (see discussion in Dunn 1997), and that resource management is seeking to engage local communities and balance multiple uses.

This thesis makes the connection between cultural geography and natural resource management in a number of ways. *First*, the connection is made in a general sense by reviewing the relevant literatures to identify pertinent and parallel themes. The literature reviewed includes theoretical literature relating to place, particularly that which addresses the politics of place and identity in the field of cultural geography; a growing body of literature from the United States which links the concept of place with resource planning and management; an emerging body of literature in Australia which advocates the use of a place perspective in cultural heritage management; and documented Australian cases of conflict over place and the environment. The review of both theoretical and applied literatures illustrates the current and potential contribution of place theory to resource management.

*Second*, the connection between cultural geography and resource management is made through the specific case of the Barmah-Millewa Forest. This case illustrates the way in which the meanings of place are negotiated and contested through the processes of natural resource management and Native Title. This empirical research is informed and guided by the review of both the theoretical and applied literatures and the review of Australian cases of conflict over place and the environment. This allows the thesis to reflect on the contribution of place theory to the process of resource management and vice versa.

And *third*, as well as contributing to both theory and practice, this thesis also makes a contribution to research methodology. Qualitative research techniques (interviews, observation and document analysis) have been employed in this research and the practicalities, limitations and applicability of these techniques for future research projects
are considered. In addition, three distinct, though interrelated approaches are employed to
describe, analyse and interpret the case of the Barmah-Millewa Forest. The use of these
three approaches - value categorisation, 'cognitive context', and a detailed discussion of
various place constructions - allows greater levels of contextualisation, and a greater detail
of analysis to be achieved. The categorisation of values is an approach increasingly used in
cultural heritage and resource management processes to account for the range of
perspectives involved with particular places (see RAC 1993a; Packard and Dunnett 1994;
Johnston 1994; Coakes 1998). The description of the 'cognitive context' of interested
parties has been developed as a way of eliciting and contextualising the multiplicity of
meanings ascribed to places for input into the cultural heritage management process (Boyd
et al 1996; Boyd and Cotter 1996). The consideration of various place constructions, an
approach which is informed by the place literature, offers further insight into competing
and contested interests in the resource management process. A comparison between these
three approaches adds insight into the applicability of these for eliciting values and
meanings ascribed to the environment in the resource management process. This creates
further links between natural resource management and the place theory of cultural
geography.

1.5 Key Terms

Place

Places are physical locations that have been given meaning by the people associated with
them; they are sites which are infused with feelings and emotions (Rose 1995), as well as
being socially and culturally constructed (Rodman 1992; Jackson and Penrose 1993b).
Both of these definitions of place are acknowledged in this thesis, so that place is
understood as a geographical location that is both socially constructed and emotionally felt.

Williams et al have explained that:

[A place perspective] demonstrates that places are not just the sum of interchangeable
attributes, but whole entities, valued in their entirety. It recognises that resources are
not only raw materials to be inventoried and molded into a recreation opportunity,
but also, and more important, places with histories, places that people care about,
places that for many people embody a sense of belonging and purpose that give
meaning to life (1992: 44).

A place perspective is employed in this thesis because it allows the multiple meanings and
values ascribed to particular geographical locations and resources to be acknowledged and
explored. In addition, it is acknowledged in this thesis that the identities of individuals and
groups are frequently bound up with the construction of place. Negotiation and
contestation over the meanings of place frequently involves relations of dominance and
subordination. Some constructions of place are understood as more 'natural' or 'essential'
than others. In this way, the construction of place and identity is inherently political. This will be explored further in chapter two.

Natural resource management

The term natural resource management is used in this thesis because it is the term used by formal organisations and many local communities to refer to the planning and management of public and private land and water resources. In this thesis it is used to refer specifically to the management of public land and water resources. The term refers to a conscious process of decision-making whereby natural (and cultural) resources are allocated over time and space to optimise the attainment of stated objectives. This occurs within the framework of society's technology, political and social institutions, and legal and administrative arrangements (Goodall 1987).

There are, however, a number of problems associated with the use and definition of this term. Emel and Peet have asserted that "the term resource management is troublesome because of its technocratic and positivistic overtones, and because it is often narrowly interpreted to mean conscious, rational decision making" (1989: 49-50). Their criticism is that "typically, socialized knowledge, ideology, and contradictions in economic and political rationality have been neglected by the dominant resource management paradigms" (Emel and Peet 1989: 50). This limited and limiting definition and use of the term has led to recent calls for the less tangible values and meanings ascribed to places to be included in resource planning and management (see for example Brandenburg and Carroll 1995; Williams and Patterson 1996). Such a call can be seen as a challenge to the technocratic and positivistic emphasis of many current resource management paradigms, favouring a consideration of the relationships at play in the environment and the cultural, economic and political dimensions of these. The integration of society, environment and economy is a broadly endorsed policy goal and even a statutory objective in Australia, if not one yet achieved (for example the National Strategy for Ecologically Sustainable Development).

This thesis supports the re-definition of the term natural resource management to include the social, cultural and political dimensions of natural resources and their management. A more inclusive definition would allow managers to more effectively engage with the social and cultural issues currently challenging natural resource management, including the multiplicity of meanings ascribed to resources and places.

Natural resource management is viewed in this thesis as a process. The process is embedded within the culture of the institutions and organisations responsible for resource management. The current emphasis on participation and calls for bottom-up rather than top-down approaches to natural resource management also allow the process to be socially determined by exposing it to the values and attitudes of local communities. As such, natural resource management is context specific; the physical and social issues and appropriate
responses will vary from place to place despite the fact that management organisations and institutional arrangements often cover large regions, states or nations. Further, natural resource management necessarily encompasses aspects of the management of cultural heritage sites, as well as the cultural aspects of natural resources. These aspects are often not acknowledged by resource management organisations.

**Native Title**

In June 1992 the High Court of Australia handed down a decision in the landmark Mabo case, finding that Aboriginal and Torres Strait Islander people had held, and in some cases continued to hold, title over their land (*Mabo and Ors v State of Queensland*). The court recognised that Aboriginal and Torres Strait Islander people had common law rights to land known as Native Title. This decision ended the legal fiction of *terra nullius* (land unoccupied or land belonging to no one), which had been held over Australian land since the arrival of the British in 1788.

The Commonwealth *Native Title Act* which was passed in December 1993, was a political response to the Mabo decision. The Act provided for the recognition and protection of Native Title and validated past government acts that extinguished Native Title. Under the Act, Aboriginal and Torres Strait Islander people could make claims to land on which Native Title had not been extinguished by the granting of freehold. This enabled claims to be made over vacant Crown land, and it left open for the courts to decide whether valid pastoral leases extinguished Native Title.

In the Wik decision of December 1996, the High Court of Australia ruled that pastoral leases and Native Title could co-exist (*The Wik Peoples and the Thayorre Peoples v Queensland and Ors*). Although the court found that the rights of the pastoralist prevailed where conflict occurred, the current Coalition Government's response, with the support of industry and state governments, was to legislate to end this 'uncertainty'. In July 1998, the *Native Title Amendment Bill* was passed in the Australian Parliament, legislating on some of the issues that remained 'uncertain'. Many see this bill as an attempt by the Coalition Government to limit the rights of Aboriginal and Torres Strait Islander people, and to oppose the rulings of the High Court in relation to Native Title. At the time of writing this thesis it remains unclear whether or not the amended *Native Title Act* will be subject to a constitutional challenge. The Coalition Government sees the amendments as creating a "workable" Native Title Act (Department of the Prime Minister and Cabinet 1998). The National Indigenous Working Group on Native Title has described the amendments as "winding back Native Title rights" (National Indigenous Working Group 1998). The amended Act is seen by many commentators to provide much scope for ongoing litigation.

An existing Native Title Claim currently awaiting a decision from the Federal Court of Australia covers, among other areas, the land and water in the vicinity of the Barmah-
Millewa Forest. This is the first Native Title Claim to inland waters. The Yorta Yorta Native Title Claim was lodged in 1994 and a decision is expected in late 1998 or early 1999. Although the recent amendments to the *Native Title Act* effectively rule out Native Title Claims to waters, the impact of this and other amendments on the existing Yorta Yorta Claim are unclear at the time of writing this thesis.

1.6 Thesis Outline

The relationship between the various aspects of this thesis is illustrated in figure 1.1. The theoretical background to this research is outlined in chapter two. This chapter reviews literature relating to place and place construction, focusing on recent contributions from cultural geography. A review of a recent academic dialogue on place illustrates the complexity involved with thinking and writing about place issues in contemporary Australia. This chapter demonstrates that more politicised notions of place and identity are of relevance for natural resource management in Australia. Literature from Australia and abroad which has applied place theory to the context of resource management is also reviewed. This further demonstrates the current and potential contribution of place theory to natural resource management.

In chapter three the practice of place is reviewed. Some Australian cases of conflict over the environment are explored to determine the role aspects of place have played in the development and resolution of these conflicts. As examples of conflict over the environment, these cases were chosen as being more likely to highlight important themes than less contested cases. Important themes are distilled from these cases, which are then
used to guide the case study of the Barmah-Millewa Forest. This chapter illustrates the increasing complexity of resource management, and it demonstrates that although always implicit, too little attention has been given to aspects of place in natural resource management.

The methodology of this research is presented in chapter four. This describes in more detail the case study approach adopted in this research and further considers the choice of the Barmah-Millewa Forest. The qualitative research techniques that have been employed to gather information and the methods used to describe, analyse and interpret the data are also described in this chapter. The chapter includes a detailed discussion of my position as researcher and my relationship with the research participants, and explains the confidentiality and reporting convention employed throughout the research. To conclude the chapter, supplementary questions are added to the research questions presented in chapter one. These have guided data collection and analysis, making the primary research questions operational in the context of a specific place.

The contested and complex nature of the Barmah-Millewa Forest environment is presented in chapter five. This begins with a discussion of the physical setting. The 'creation' of the forest in terms of both scientific and indigenous knowledge is discussed, followed by a brief outline of the key biophysical management issues facing the area, as perceived by both the scientific and the local communities. A discussion of the historical setting is included to provide some insight into the different ways in which the forest has been known and experienced. This section considers the use of the forest and river system by the local Aboriginal communities prior to white settlement, the history of white settlement and development of the forest, and the local Aboriginal communities' experience of this. The institutional setting governing the management of the forest is also discussed, indicating the plethora of policy instruments, government agencies and non-government groups responsible for the forest.

In chapter six the range of values ascribed to the forest by the various interest groups are outlined, using a categorisation of values developed from the cultural heritage and biodiversity literature and policy. Six characterisations of attachment to the forest are proposed as a way of eliciting some of the complexity and overlap that occurs between the different categories of values. Relationships with the forest are revealed to be complex and multi-layered. In this chapter and the following three chapters, quotes are used liberally, to allow the 'voice' of local people to emerge more fully.

The multiplicity of meanings and values ascribed to the Barmah-Millewa Forest are further explored in chapter seven. The concept of 'cognitive ownership' (Boyd et al 1996; Boyd and Cotter 1996) is introduced as a way of contextualising the relationships between interested parties and the forest. A representation of interested parties and the context in which they view the forest is presented. Three constructions of the forest (those held by the
Yorta Yorta community, the local timber and grazing communities, and the resource management agencies) are outlined and discussed, illustrating the importance of the cultural, political and economic context in which places are known and experienced. These groups, and their constructions of the forest, have emerged as the most engaged with the forest and (potentially) the most influential in terms of forest management. This chapter shows the important role that history plays in defining different constructions of the forest. It also reflects on the different ways in which the individuals and groups are talking and thinking about the forest. The context of the Yorta Yorta Native Title Claim helps to illustrate these points.

In chapter eight the different forms of knowledge which underlie the meanings and values assigned to the forest are discussed. Perceptions and observations of environmental change amongst the local communities are also documented. This discussion identifies differences between and amongst the three groups outlined above. Importantly, it also identifies commonalities between the Yorta Yorta and timber and grazing communities, particularly in relation to the health of the river system and the notion of a sustainable future for the forest. This is common ground on which resource management can build.

In chapter nine the Yorta Yorta and timber and grazing communities' constructions of the forest are revisited. This discussion reconsiders some of the complexities of association with the forest, documenting the ways in which different forms of knowledge and particular appropriations of the concept of environment are deployed to support or oppose arguments for particular management regimes. This chapter illustrates how issues of resource management are tied up with the different constructions of the forest. It reflects on the racialised politics of place that has emerged strongly through the Native Title Claim and discusses the institutional dimensions of these issues. It highlights the relationships of power that currently surround and potentially impede resource management in the Barmah-Millewa Forest.

A synthesis of the thesis is presented in chapter ten. The primary research questions are reconsidered, as are the limitations of the research. The theoretical and methodological implications of this thesis for future research are outlined and the challenges facing resource management in the Barmah-Millewa Forest, and resource management more generally, are explored. The notion of a local dialogue on place, and some necessary conditions for this are outlined in a speculative manner, as a way of moving forward. The value of applying a cultural geography perspective to natural resource management is reconsidered, including the need for a mutual compromise between cultural geographers and natural resource managers.
CHAPTER TWO

THE THEORY OF PLACE: A REVIEW

2.1 Introduction

Contemporary place theory, particularly from the sub-discipline of cultural geography, has particular relevance for the management of places and resources in Australia. Concepts such as 'sense of place' have frequently been used in the field of resource management to describe and explain the relationships between people and place (see for example Carr 1994; Baker 1997). This chapter will demonstrate that more politicised notions of place and identity are increasingly relevant to the context of natural resource management in Australia.

The disciplines of geography, architecture, anthropology, environmental psychology and sociology have given considerable attention to the concept of place and the connections and attachments that people form with places. The geographical literature on place has particular relevance for this study as it emphasises the social construction of place, and the way in which the identities of individuals and groups can be bound up with the construction of place. This chapter gives particular attention to contemporary theorisations of space and place, the phenomenon of globalisation, and theorisations of the politics of place and identity emerging from the sub-discipline of cultural geography. A comprehensive review of the geographical place literature could be the subject of a whole thesis in itself. This chapter reviews the difficulties associated with the notion of place in order to establish some important themes of relevance to the case study of the Barmah-Millewa Forest. In this chapter the theories of place are reviewed; chapter three will review the practice of place.

This chapter is divided into two parts. The first section (2.2) reviews particular aspects of the place literature, drawing out themes of relevance for resource management issues in Australia. This section examines some of the different ways in which place has been defined and conceptualised. The work of the humanistic geographers and the concept 'sense of place' is reviewed. This is followed by a discussion of the impact of globalisation on the relationship between space and place. The notions of place and identity and the politics involved in the construction and identification of place is also considered, particularly in light of Aboriginal land rights in Australia. A discussion of a recent academic dialogue on Australian attachments to place concludes this section. This contextualises the discussion and raises important issues of how we write, represent and think about places and people's attachment to them. The second section of this chapter (2.3) reviews research from Australia and abroad that has applied theories of place to the context of resource and cultural heritage management. This section illustrates the existing
and potential contribution of place theory to resource management. The emphasis on Australian theoretical and applied literature in this chapter is a deliberate attempt to contextualise the notions of place and identity in the substantive issues associated with resource management in Australia.

This review of the theory of place and its application to natural resource management draws out themes of importance for the study of the Barmah-Millewa Forest. This chapter illustrates that a place perspective has much to offer to resource management in Australia, particularly given the multiplicity of interests in the resources and places being managed and the different relationships with place that have developed in settler nations like Australia. With increasing recognition of indigenous rights to resources and increasing awareness of environmental degradation, attachments to place are being re-thought in Australia.

2.2 Defining and Conceptualising Place

Previous decades have seen geographers attempt to identify a concept common to all geographical work. This has lead to statements such as that of Tuan, that "place, like space, lies at the core of geographical discipline" (1975: 213). Although concepts such as space and place have received increasing attention in the social science disciplines, studies of space and place have been and continue to be an important component of geographical research and teaching. In order to understand the relevance of the place concept for natural resource management as well as the "troubled modes by which we have come to dwell in postcolonial Australia" (Jacobs 1997: 505), this section will review some of the theoretical literature relating to place, focusing on its relevance to the Australian context. It will also introduce the notion of identity which is important for the study of the Barmah-Millewa Forest. The following section will review the application of place theory to resource management.

Despite its frequent use, the concept of place has a number of ambiguities which have been documented in the literature. Harvey has demonstrated that "place has to be one of the most multi-layered and multi-purpose words in our language" (1996: 208). Words such as locality, locale, region and neighbourhood refer to generic places; terms such as city, town and state designate particular kinds of places; and words such as home, community, nation and landscape also have very strong connotations of place. In addition, place has a range of metaphorical meanings, for example, we might refer to the place of women in society, we might feel that we know our place, or feel that we have a place in the affections of others, and we might seek to put things in their proper place (Harvey 1996, 1993; see also Agnew and Duncan 1989). Harvey views the generality and the ambiguity associated with the concept of place as an advantage, suggesting that it may offer "some underlying unity...which, if we can approach it right, will reveal a great deal about social, political and spatial practices in interrelation with each other over time" (1996: 208).
The different words used to refer to particular places such as home, neighbourhood, community, nation, locality, and landscape designate different kinds of places conceptualised at a range of different scales. As we shall see, the scale at which a place is conceptualised has become an important issue in this era of globalisation. In addition to differences of scale, the rural/urban dichotomy is another major distinction that is often made. Places are conceptualised as being either rural or urban; as being in "the country" or "the city". An important criticism of contemporary studies of identity construction and cultural hierarchy (which intersects with studies of place and identity) is that they "focus primarily on urban contexts, ignoring rural culture altogether" (Ching and Creed 1997a: vii). While much cultural geography research in Australia has focused on the urban environment (see for example Johnson 1994; Gibson and Watson 1994; Jacobs 1996), conflicts over the environment (and hence the environmental movement in Australia), draw heavily from conceptualisations of 'wilderness' constructed in opposition to the urban environment (see chapter three). In addition, environmental degradation and indigenous rights to resources have focused attention on rural environments. In these relatively small rural communities, conceptualisations of place and identity are being negotiated by both Aboriginal and settler Australians. Resource issues in relation to Aborigines in rural Australia have received some attention (see for example Young 1992; Connell and Howitt 1991; Howitt and Connell 1996), however, little work has explored resource management issues across both Aboriginal and non-Aboriginal communities, or the construction of and identification with rural places. This kind of research is important given that current contestation over the management of places and resources in many rural areas is underwritten by differences in the way in which place is constructed and experienced. It is also important because land degradation and the declining economic viability of farming in Australia means that "people in rural areas now face the greatest problems and hardship since European occupancy" (Johnson 1994: 39). Socio-economic decline in smaller rural communities can intensify place issues, as existing relationships with place are challenged and negotiated. My research has been conducted in a small rural community where issues of place, identity and livelihood are being contested. It explores both Aboriginal and settler Australian attachments to the Barmah-Millewa Forest, in southeastern Australia.

2.2.1 A 'sense of place'

Place became one of the key concepts used by the humanistic geographers in the 1970s, as they sought to distance their approach from that of positivist geographers who had dominated the discipline throughout the 1960s (Johnston et al 1994). The humanistic geographers sought to explain the characteristics of space and place from the "humanist perspective" (Tuan 1975: 245). The central argument of humanistic geography was that place is a holistic experience (Rose 1993). Place was understood as more than just location; it was a unique entity, a "special ensemble" (Lukermann 1964: 170), with a history and a meaning (Tuan 1975).
The humanistic geographers drew from the philosophical tradition of phenomenology, particularly the work of Heidegger (see Relph 1976, 1985; Buttimer 1976; Dovey 1985; Mugerauer 1985). This came as a response to the effects of modernity which were seen to isolate people from place, rendering them placeless and their lives meaningless. Research in this tradition assumed that "a deep human need exists for associations with significant places" (Relph 1976: 147). Hence, the importance of having and maintaining or re-creating close associations with place were emphasised through the notions of dwelling in place, of rootedness in place, and of place as an origin (see Tuan 1977; Relph 1976, 1985; Seamon and Mugerauer 1985). 'Sense of place' became a term frequently used to refer to the affective relationship between people and place. The concept was used to express a oneness or connection with the environment (Frawley 1992). 'Sense of place' was seen to contribute to individual and group identity and attach meaning to a locality (Johnston 1994). The philosophical approach of the humanistic geographers has been continued in the 1980s in the work of Seamon and Mugerauer (1985) and Black et al (1989). The term 'sense of place' continues to be widely used to denote an affective relationship between people and place. Although the notion is vitally important, the term seems to have lost meaning because of the frequent and imprecise manner in which it is often used.

Importantly, humanistic geography focused attention on the nature of human relationships with place and paid attention to the human dimension of environmental problems. In this tradition, environmental degradation is understood as both the degradation of the physical environment and the loss of meaning (Walter 1988). The Preface to Relph's Place and Placelessness (1976) begins by expounding his concern at the way in which environmental problems are approached. He writes:

Much of the recent discussion on environmental issues I have found both unsatisfactory and disquieting. Unsatisfactory because the analyses of behaviour or of particular problems are so frequently mechanical and abstract, simplifying the world into easily represented structures or models that ignore much of the subtlety and significance of everyday experience. Disquieting because these simplified structures often then serve as the basis for proposals for the design of environments and the manipulation of people and places into patterns that are supposed to be more efficient...This book has been written, if not exactly in opposition to these types of studies, at least as an attempt to participate in the development of an alternative approach to understanding environment (Relph 1976: Preface)

Approaches such as this brought the human dimension of environmental issues to the fore. Writing in the preface to his famous work of 1974, Tuan emphasises that the environment was perceived as "not just a resource base to be used or natural forces to adapt to, but also sources of assurance and pleasure, objects of profound attachment and love" (Tuan 1990: xii). This was significant, given that at the time, the discipline of geography, and other disciplines engaging in environmental issues, had been dominated by positivist science. As this chapter shows, these ideas have been carried through to present research on environmental issues. Contemporary research applying place theory to resource and cultural heritage management continues to lobby for the inclusion of the meanings and
emotions people ascribe to places in the management process (see section 2.3). In addition, Heideggerian phenomenological approaches, such as those applied in humanistic geography, continue to be applied to the people/place relationship, particularly in relation to environmental degradation.

A number of shortcomings have been identified in these approaches to the people/place relationship. Humanistic geography, and humanism more generally, has been criticised for promoting a white, masculine, middle-upper class subject as the norm. In so doing, it has been argued that humanistic geography suppressed the multiple ways in which places were constructed and known, and cast those deviating from the norm as 'other' (Gregory 1993; see also Rose 1993). Thus humanistic geography has been criticised for failing to "adequately theorize the broader social power relations which in all sorts of ways structure experiences of place" (Rose 1993: 44). As a way of further addressing the social and cultural elements of place, recent place theory highlights broader political, cultural and economic influences in order to better contextualise the way in which place is conceptualised and experienced.

2.2.2 Place, space and globalisation

The concept of space and its relationship to place has received much attention in the geographical and broader social science literature (see for example Sack 1980; Gregory and Urry 1985; Harvey 1989; Giddens 1990; Lefebvre 1991; Massey 1994; Casey 1997). The humanistic geographers theorised space by focusing predominantly on the way in which it is experienced and conceptualised using the human body as a reference point (see Tuan 1975; Relph 1976). However, more recent theorisations of the relationship between space and place emphasise "a more dynamic and politically progressive way of conceptualizing the spatial" (Massey 1992: 67).

These conceptualisations of place emphasise the role of both global and local processes in constructing place. Massey notes that place is constructed out of a particular pattern of social relations which are articulated together at a particular locus (1993a: 66). As such, a place needs to be seen as being constituted of a much wider set of social relations than just those operating at any particular place (Massey 1993a). Similarly, Harvey explains that "what goes on in a place cannot be understood outside of the space relations that support that place anymore than the space relations can be understood independently of what goes on in particular places" (1993: 15). Place is viewed as a process (Massey 1993a; Harvey 1993); as a net of social relations (Massey 1993b); and "as constantly shifting articulations of social relations through time" (Massey 1995a: 182). Importantly, space is now recognised as "an active constitutive component of hegemonic power"; relationships of power are expressed spatially (Keith and Pile 1993a: 37).
The phenomenon of globalisation and its impact on place has refocussed attention on the relationship between space and place. Globalisation has been facilitated by improved technologies (for example aeroplanes replacing boats and telecommunications replacing surface mail), which allow people and ideas to be moved increasingly greater distances at increasingly greater speeds (Giddens 1985). The (partial) dissolution of many economic and political divisions has been a feature. This phenomenon has been given many different names, all of which refer in some way to the "geographical stretching out of social relations ...and to our experience of this" (Massey 1993a: 59-60). Giddens (1990) has referred to this phenomenon as 'time-space distanciation'; Harvey (1989) refers to the increase in movement and communication across space as 'time-space compression'; and Massey has described a new phase in what Marx called 'the annihilation of space by time' (Massey 1993a).

The impact of globalisation on place has caused a rethinking of the way in which place is conceptualised. For example, Massey has asked "how can we think about - that is, conceptualize - 'place' in these global times?" (1995b: 46). The response to this question has resulted in varying conceptualisations of place, from a resurgence of the idea of local and unique senses of place, to more politically aware theorisations of place and identity. This re-negotiation of place stresses more and more the links between the global and the local. This creates challenges for the way in which places are managed, as institutions and the law continue to exist and be determined largely (but not solely) at the level of the nation-state.

Globalisation and its impacts have been considered widely in relation to the economy and mass culture, as well as human rights and environmental issues. The compression of space-time relations has resulted in the global spread of what have been called 'post-industrial' values. Recent work on the Australian Rangelands has identified a shift away from predominantly commodity (industrial) values to a mix of commodity and amenity ('post-industrial') values (Holmes 1994). This new suite of values includes Aboriginal land rights, preservation of biodiversity and semi-natural landscapes, sustainable management, tourism and recreation (Holmes 1994) (see also chapter three). This transition towards multiple uses and values can be seen in Australian environments other than the Rangelands and in other nominally 'post-industrial' and postcolonial1 countries, such as the United States, Canada and New Zealand. The global spread of environmental perspectives has resulted in international conventions and agreements between countries such as the Rio Declaration on Environment and Development which was accepted by 179 countries in 1992. At a more local level, in Australia global perspectives on the environment have been seen to displace local knowledge (Gill 1994). On the one hand, the global spread of environmental perspectives has

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1Postcolonialism is a contested term generally used to refer to both the formal political status of a country (whether or not they are formally independent of the colonising country), and more informal political processes and cultural articulations (such as dialogue about black-white reconciliation and Native Title) (Jacobs 1996: 22).
environmental perspectives can be seen as a welcome recognition of common, global challenges; on the other as a new imperialism and a capture of the agenda by the wealthy Northern countries (Sachs 1993).

Concerns about human rights have also influenced natural resource management in Australia. There is currently increasing pressure from both within Australia and abroad to recognise indigenous rights to land and resources. In Australia this has been legislated through the *Native Title Act* (1993) and recent amendments. A body of common law is also emerging as indigenous groups take their cases to the courts. In addition to this, Australia is a signatory to international agreements on human rights, as well as having its own Human Rights and Equal Opportunity Commission which has Commissioners for Aboriginal and Torres Strait Islander Social Justice, Disability Discrimination, Human Rights, Privacy, Race Discrimination and Sex Discrimination.

The impacts of globalisation are frequently viewed negatively and there is much concern about the effect it has on place construction. Many writers have expressed concern over the impact of both time-space compression and capitalism on the meaning of place and our attachment to it. Massey is perplexed that the phenomenon of time-space compression generates such feelings of insecurity among many of the academics who write about it (Massey 1993a). Similarly, Harvey reflects on "why it might be that the elaboration of place-bound identities has become more rather than less important in a world of diminishing spatial barriers to exchange, movement and communication" (1993: 4; also 1996).

As a counter to the feeling of insecurity surrounding time-space compression many academics have turned to "a very particular (and unprogressive) sense of place" (Massey 1993a: 63). Amidst all this "flux" and "insecurity" generated by globalisation, many writers have conceptualised place as "a source of stability and unproblematical identity" (Massey 1993a: 63). Importantly, Harvey has noted that this response to the effect of time-space compression has seen a "widespread acceptance of Heidegger's claim that the authenticity of dwelling and of rootedness is being destroyed by the spread of technology, rationalism, mass production, and mass values" (1996: 302). This has seen an emphasis on the local and particular aspects of attachments to place. This emphasis sometimes occurs at the expense of the non-local processes and relationships that can and do influence local constructions of place.

The work of Heidegger has been interpreted as emphasising the notion of place as "dwelling" (Harvey 1996; 1993), the notion of "being-in-place" (Jacobs in Huggins et al 1995), place as Being (Massey 1993a), and place as the "Locus of Being" (Harvey 1993; 1996).

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2This important paper is written from three speaking positions, enabling each of the authors to draw on their own specific histories and to record their own experiences of place. When citing this paper I will note the individual speaker that I am referring to.
Importantly, Heidegger's notion of place and notions such as 'sense of place' are used to refer to 'authentic' experiences of place and the 'essential' qualities of place (see Relph 1976). They "presume the necessity of embeddedness, permanence, presence" (Jacobs in Huggins et al 1995: 167), and assume that some constructions of place are more real or natural than others. As well as influencing the humanistic geographers, Heidegger's work has also influenced approaches within the environmental movement such as bioregionalism (for example Sale 1985) and communitarianism. This literature asserts that by developing closer relationships with place, or reviving a 'sense of place', care for the environment will also be revived (Harvey 1996).

Critics of Heidegger's work argue that essentialising the notion of place asserts the idea that some constructions and experiences of place are more authentic than others. Massey's criticism of Heidegger is that his conceptualisation is of a place with a single and essential identity, an identity that is constructed out of an introverted and inward-looking history (1993a: 64). Harvey (1996) highlights the problematic notion of authenticity in the experience of place. He stresses that "the rediscovery of place, as the case of Heidegger shows, poses as many dangers as opportunities for the construction of any kind of progressive politics" (Harvey 1996: 325). So while (re)-creating links with place is very appealing and in many cases very important, the construction or re-construction of place involves issues of power and identity that require careful consideration. This is evident in the case of the Barmah-Millewa Forest (see chapters seven and nine).

Instead of simply rejecting essentialised notions of place as reactionary (or moulded on former ideas in response to the current situation), Massey argues that we need to face up to people's need for attachment of some sort whether it be through place or anything else (1993a). What she proposes instead is a "progressive sense of place", a conceptualisation of place that integrates in a positive way both the global and the local (1993a: 66). This notion of place is based on the premise that places are not static and do not have single, unique 'identities'. Instead they are composed of internal differences and conflicts (Massey 1993a: 66-67). For Massey "the question is how to hold on to that notion of spatial difference, of uniqueness, even of rootedness if people want that, without it being reactionary" (1993a: 64). In considering the reactionary notions of place that have emerged in recent times, Massey is careful to note that "none of this denies place nor the importance of the specificity of place" (1993a: 68). What is important though, is that a 'non-parochial' view of place is taken, one "which stresses its linkages with the wider world" (Massey 1993b: 144). Similarly, Jacobs makes a strong argument for the consideration of the local as a way of getting to know "the complex variability of the (post)colonial politics of identity and place" (1996: 6). Jacobs, like Massey, conceptualises the local as constituting the global, arguing that it is possible to focus on the local without retreating to "nostalgic localism or a spatialised relativism" (Jacobs 1996: 6). What is less clear, however, is exactly how local communities can move away from the essentialised notions of place that
are currently flourishing as a response to the effects of globalisation. Empirical research is required to explore the way in which place is being constructed, contested and negotiated in this era of globalisation. The case study of the Barmah-Millewa Forest is one example of the way in which local constructions of place are occurring in response to issues such as Native Title, increasing levels of environmental concern and the marginalisation of rural farming communities through declining product value.

2.2.3 Place and identity

The complex relationship between place and space incorporates issues of power and highlights the way in which individual and group identities are bound up with the construction of place. Current struggles over Aboriginal land rights in Australia illustrate that political and power struggles occur through the construction of place, and are frequently related to the identities of individuals and groups. Further, it has been noted that the construction of place involves a politics of identity and issues of power which do not just occur in space, but are articulated through space and are fundamentally about space (Jacobs 1996: 1). Relationships of power are expressed spatially, particularly as the current political climate in settler nations like Australia requires individuals and groups to strategically 'fix' their identities in place (Jackson and Jacobs: 3). This will be seen in the case study of the Barmah-Millewa Forest (particularly in chapters seven and nine).

The notion of identity in relation to place was discussed by the humanistic geographers (see Relph 1976). Identity is also one of the central themes of contemporary theorisations of place. The literature refers to two aspects of identity, although this distinction is rarely made explicit. First, individuals and groups associated with a place are seen to ascribe meanings to that place which give it its own identity or character. Hence, the identity of a place, or 'place identity' is discussed in the literature. For example, Massey (1995a) talks of 'the identity of a place' and the 'identification of places'. Second, place is seen to be an important component of individual and group identity. For example, Rose addresses the connection between people and place by thinking about identity, noting that "geographers, anthropologists and sociologists, among others, have argued that the meanings given to a place may be so strong that they become a central part of the identity of the people experiencing them" (1995: 88).

When used in the context of the individual and the group, identity involves the lived experiences and the subjective feelings associated with everyday consciousness, and the wider sets of social relations within which these experiences and feelings are embedded (Rose 1995). More recent geographical texts on place have considered the importance of identity. For example, the edited volume Constructions of race, place and nation gives consideration to the construction of both the identities of place and the identities of groups associated with particular places (Jackson and Penrose 1993a). Similarly, the edited volume
Place and the politics of identity considers the way in which place and identity are interrelated (Keith and Pile 1993). Entrikin (1991) argues that place is an important source of identity, and Agnew and Duncan, asserting the contemporary relevance of place, note that:

...place, both in the past and in the present, both in the third world and in the first, serves as a constantly re-energized repository of socially and politically relevant traditions and identity which serves to mediate between the everyday lives of individuals on the one hand, and the national and supra-national institutions which constrain and enable those lives, on the other (1989: 7).

The identities of individuals and groups are bound up with the construction of place. Just as the construction of place is a process, the construction of identity is always an incomplete process which occurs within and is inseparable from its context (Keith and Pile 1993a). When considering place, it is therefore important that the identities of the individuals and groups associated with the place are also considered.

An important aspect of contemporary theorisations of place and identity is the acknowledgment that places have multiple identities, which can be both a source of richness and a source of conflict (Massey 1991a). This introduces the notions of diversity and difference which have received much attention in recent theorisations of place and identity, as well as being at the core of current substantive issues relating to the management of natural and urban environments and the rights of marginalised social groups. However, to engage with this diversity requires more than just acknowledging that there are a multiplicity of meanings ascribed to places. The concept of "multivocality" is used by Rodman (1992), an anthropologist, to encourage an understanding of the complex social construction of spatial meaning. However, Jacobs (1996) explains that simply acknowledging that many people see one place in different ways does not avoid 'univocality'. Likewise, Anderson and Jacobs have noted that the recognition of the diverse and "entangled experiences" that constitute Australian society is not a "call for a 'polyvocal' relativism" or a "benign agenda designed to give melodious voice to exoticised difference" (1997: 21). Rather, the relationship between identity and place needs to be reconsidered in a way that questions notions of identity and difference which are viewed as "fixed" or essential (Jacobs 1996: 8). In valuing diversity and difference there is an ongoing tension between ensuring that one does not lapse into relativism on the one hand, or encourage homogeneous and singular representations on the other. These are issues which currently challenge research and thinking in the social sciences. This is a complex issue that will be taken up again in chapter ten, where the notion of a local dialogue on place, cognisant of differences in power, will be explored.

Feminist theorisations of subjectivity and identity politics (see Butler 1990; Ferguson 1993) have been employed by Jacobs (1996) to reconsider the relationship between identity and difference. This approach "unsettles the notion of a bounded, pre-given essence of
Places are understood as the accumulation and combination of many layers of social relations over time, so an historical appreciation is important (Massey 1995a). The way social relations have varied over time and the historical contexts of social relations are integral to the history of a place. However, the history of a place is open to interpretation (see Lowenthal 1979). For example, certain events or actions can be emphasised over others, some can be ignored or omitted, and a variety of meanings can be given to certain actions or events. In this way historical interpretations are central to the construction of place; the identity of a place depends on particular readings of its history. As Massey has explained:

the past of a place is as open to a multiplicity of readings as is the present. Moreover, the claims and counterclaims about the present character of a place depend in almost all cases on particular, rival, interpretations of its past (1995a: 185).

Writing in the Australian context, Jacobs notes the need for "a more productive notion of identity and place" (in Huggins et al 1995: 171). However, she argues that Massey's 'progressive sense of place' (discussed above) "may not be deconstructive enough to accommodate the often ambiguous 'senses of place' which are generated in contemporary settler Australia and which are forced into a political space by the arbitrations of Aboriginal eligibility to land rights" (Jacobs in Huggins et al 1995: 172). For Jacobs, the 'progressive sense of place' that Massey describes "could surely only flourish within a more even, more democratic, terrain of power than that which characterises the present" (1996: 163). How we might move towards more progressive conceptualisations of place given the current situation in Australia remains unclear. For as long as there are differences in power between the dominant and the marginalised groups in Australian society, the development of more 'progressive' senses of place seems unlikely. Recent dialogue in Australia concerning both indigenous and non-indigenous attachments to place and subsequent resource management issues relate to this problem. One particular academic dialogue on such issues is outlined in section 2.2.4, and this issue is explored further through the context of the Yorta Yorta Native Title Claim and the management of the Barmah-Millewa Forest in chapters seven and nine.

In short, the construction of place and identity is inherently political. Indeed, the process of place construction is seen to produce a "politics of identity in which ideas of race, class, community and gender are formed" (Jacobs 1996: 2). This 'cultural politics' of place
is where "meanings are negotiated and relations of dominance and subordination are defined and contested" (Jackson 1989a: 2). A cultural politics of resource management has been identified in the case of the Barmah-Millewa Forest (see chapter nine).

The politics of place and identity

Recent writing on place has sought to politicise the notions of place and 'sense of place' (see Huggins et al 1995; Jackson and Penrose 1993a). For many theoreticians and practitioners, places are increasingly being understood to be politicised, culturally relative, historically specific, locally and multiply constructed (Rodman 1992). This has been achieved by demonstrating that place is not a neutral concept, but that it is given meaning by those who wish to control it (Peach 1995). Understanding that places are socially constructed enables identification of multiple constructions and the way these are used for political purposes. Social construction theory has been employed to reconsider the categories or concepts which we use to structure our understanding and experience of the world. Recent applications of social construction theory to concepts such as 'race', 'place' and 'nation' demonstrate that these concepts are "the product of specific historical and geographical forces, rather than biologically given ideas whose meaning is dictated by nature" (Jackson and Penrose 1993b: 1; see also Jackson 1987, 1989b, 1998). By identifying the components and processes of category construction, social construction theory challenges the idea that some categories or concepts are more fundamental, or 'essential' or 'natural' than others.

Social construction theory has informed, either explicitly or implicitly, recent writings on place and our relationships with place. In particular, this approach has allowed the politics surrounding the construction of place and identity to be recognised. It has facilitated the criticism of conceptualisations of place in response to the effects of globalisation and modernity (outlined above). Massey notes that single and essential identities of place are constructed out of introverted and inward-looking histories (1993a: 64). Similarly, through case studies in Australia and England, Jacobs has recognised various versions of the "return to origins - the claim that identity is 'given' through some uncontested inheritance or static place-based genesis" (1996: 162). Importantly, it is noted that such claims are used by the powerful "to legitimate their rights over territory, to categorise Otherness as 'outside' and to domesticate difference", in other words, "claims of origin can be hegemonic" (Jacobs 1996: 162).

A number of significant and challenging insights into theorisations of place, particularly in the Australian context, are offered by Jacobs. She explains that "while the fractured and contingent nature of identity is undeniable, so too is the necessity of temporary fixings of identity around...essentialised notions" (Jacobs 1996: 162). Further, she notes that while essentialised notions of place are often used by dominant groups, these "claims of origin, such as strategies of fixing identity in place, are also very important for
marginalised groups who want to distinguish their claims from the hegemonic" (1996: 162). Thus, to propose that essentialised notions of identity and place are social constructs - often strategic social constructs - is to destabilise those claims for rights over space which are argued through the idea of origin. Inversely, however, while this can serve to destabilise hegemonic claims to rights over space, it can also compromise claims for land made by marginalised groups. In this way Jacobs illustrates how "theoretical generalisations about the socially constructed nature of essentialised identity have an uneven political consequence which is far from incidental to ongoing political struggles" (1996: 163).

Aboriginal claims to land in Australia have been forced into this political space by the current legal processes through which land rights and Native Title can be recognised. Identity is integral to constructions of the Barmah-Millewa Forest, particularly given the Native Title Claim over the area (see especially chapters seven and nine).

Jacobs' work is a reminder that as academics, we must always be mindful of the political ramifications of our theorising. In a review of Jackson and Penrose's (1993a) edited volume *Constructions of race, place and nation*, the privileges given to Aboriginal concepts of the sacred in Jacobs' chapter on Coronation Hill have been questioned (Peach 1995). Peach argues that this chapter "presumes an essentialism denied to categories which are less politically correct" and asks "are we against essentialism or against white essentialism?" (1995: 150). (This issue has plagued resource management and decision-making about Coronation Hill and Kakadu National Park more generally, particularly with respect to the involvement of the Resource Assessment Commission (RAC), see chapter 3). Jacobs' later (1996) recognition of the essentialised constructions of place by marginalised groups (such as Aboriginal Australians), goes some way towards addressing Peach's criticism by arguing for the importance of considering the ongoing political struggles of marginalised social groups.

There is a growing recognition in the social sciences, including the discipline of geography, that constructions of 'race' apply equally to dominant groups, and the social construction of 'whiteness' is increasingly gaining attention (Jackson 1998; see also Bonnett 1997). In Australian cultural geography, research is now as much concerned with "dominant cultural forms as it is with the conditions of life of racialised minorities" (Anderson and Jacobs 1997: 20). Nevertheless, in Australia there is still insufficient attention given to the nature of white attachments to place. The current process of Native Title is forcing both local communities and academic researchers to (re)think white attachments to place and the political consequences of these (see chapters seven and nine). Given that the political climate in settler nations like Australia requires individuals and groups to strategically 'fix' their identities in place, there is a need for ongoing empirical research which explores "the messiness of the...politics of identity and difference", and the need for "increased attention to the everyday competing negotiations of place" (Mendes-
This thesis provides one example of the way in which place is being constructed, negotiated and contested.

2.2.4 Thinking and writing about place

The points outlined above lie at the core of both the current academic debate surrounding the conceptualisation of place, and the problems being experienced by local communities around the world. For academics the dilemma becomes how to write about places and people's conceptualisations of place, and indeed how to conceptualise place for themselves. For local communities the dilemma is how to develop or maintain progressive conceptualisations of their place in a constantly changing environment. The theoretical literature discussed above certainly outlines the way in which we should be conceptualising place, and some of it outlines the way in which place is conceptualised by specific local communities. What is largely missing is discussion about how local communities can go about achieving Massey's 'progressive sense of place' (1993a: 66), or how the essentialised notions of place that Jacobs (1996) notes as being of importance to marginalised groups can be maintained in a constructive way.

Recent academic dialogue in Australia is beginning to address the issue of how to write and think about the conceptualisation and attachment to place in a political environment where "Aboriginal [land rights] claimants routinely turn to the map to give legitimacy to their claims, [and] non-Aboriginal pastoralists claim spiritual lineages to specific places" (Jacobs 1997: 502). A recent dialogue between Jacobs (1997) and Read (1996) illustrates this point. Read's book Returning to nothing: The meaning of lost places (1996) focuses on the feelings people have for lost or destroyed places. He considers, for example, Darwin after Cyclone Tracey, the flooding of the town of Adaminaby in New South Wales, the inundation of Lake Pedder in Tasmania, bushfire at Macedon in Victoria, and the loss of farmland to National Parks. Jacobs has considered Read's work in light of the broader context of place theorising and "the troubled modes by which we have come to dwell in postcolonial Australia" (1997: 505).

Considering the loss of farmland to Namadgi National Park in the Australian Capital Territory (ACT), Read (1996) asks questions that have yet to be answered in Australia. Writing about the attachment of one high country pastoralist, Granville Crawford, who 'lost' his country when it was declared a National Park, Read relativises the attachment the pastoralist has with the high country, and the attachment that the Ngunnawal Aborigines have with the same area. He asks, "who loved this country more?" The reply is that "philosophically the question is meaningless. Both Granville Crawford and the Ngunnawal Aborigines loved the country to the depth of their beings, but their beings were culturally formed and framed differently" (1996: 71). Further, Read (p 73) asks "how, if at all, can this country be shared?" For Read there are no definitive answers to these questions; his aim is to
demonstrate "the complexity and depth of feelings for lost places in Australia" (1996: x). Importantly, he indicates the need to consider the multiple place attachments that exist in Australia, and the difficulties of coming to terms with these:

We have still to learn the nature, and think through the consequences, of multiple profound attachments to country which can be emotionally shared, at one level or another, by many generations. Australians have yet to understand how all these deep attachments can and must be accommodated in the national ethos (Read 1996: 74).

Read's writings highlight a difficult issue - namely, how can different attachments to place be studied without reverting to hollow comparison that asserts one claim over others, or over-emphasises the difference between world views and cultures? Part of the answers to these questions might lie in more theoretical and politically informed considerations of place construction. In her review of Read's book *Returning to nothing*, Jacobs challenges Read's emphasis on the individual and his lack of consideration of the broader issues of "politics and national history" (1997: 504). She notes that:

By individualising these attachments to place Read imagines that they can be seen simply for what they say about the human condition. He is sensitive to the emblematic meaning of loss but tries to keep it out of contact with issues of politics and national history (Jacobs 1997: 504).

Here the discussion returns to the earlier discussion of place, notably the different conceptualisations of place of the humanistic geographers. Jacobs notes that "there is certainly an uncanny familiarity between Peter Read's place-sensitive history of the 1990s and the humanistic sense of place geographies of the 1970s" (1997: 504). What she finds most difficult to understand is why Read chooses to privilege the earlier forms of theorising about place and identity, such as the work of the humanistic geographers, rather than the later forms which seek to politicise the notion of place and identity (Jacobs 1997). Jacobs explains:

...this suits the geographical assumption which underpins this oral history of recent loss - that identity is formed in and through place under conditions of stability, convergence and harmony. The disasters which befall Read's cast of 'homeless' people are just that, aberrant events which undo the natural order of things. When Read contemplates the 'heart of the matter', which for him is home, he suggests that loss of home is devastating, producing illness, crime, even death. Read, then, has an investment in retrieving a notion of a monogamous sense of place, characterised by certain levels and kinds of association (1997: 504).

This leads Jacobs (1997: 504-505) to ask whether Read could also accommodate the "more promiscuous models of dwelling" that currently characterise people's relationships with place in Australia: where Aboriginal people, dispossessed by white settlement, currently seek to be re-connected with their country; where settler Australians are thinking through their own relationship with place given the history of Aboriginal dispossession and Native Title Claims; and where numerous racialised minority groups seek to create their own place amidst this confusion. Jacobs notes that Read makes "no attempt to address a condition of
unsettled settledness" which, she believes, "better speaks to the troubled modes by which we have come to dwell in postcolonial Australia" (1997: 505). This emphasises the need to be aware of the frameworks within which we view place and people's attachments to place, in particular, the need to be aware of the broader political, cultural and economic contexts in which they are formed. It also highlights the difficulties associated with comparison, relativity and notions of authenticity between diverse cultural groups.

The point of Read's work should not be lost amongst this criticism. It is deliberate that except in the case of the discussion of Lake Pedder, Read has not placed the emotions expressed to him in the interviews conducted for the study "into the current context of memory or place theory" (1996: x). The reason for this can only be speculated upon, and regardless of one's view of this, the book has achieved its mission to demonstrate "the complexity and depth of feelings for lost places in Australia" (1996: x). Indeed, the complexity is such that it has instigated debate about how we should think and write about place given the multiple attachments and competing claims to place that currently exist in Australia.

Read's writing and Jacobs response both highlight the current trend in Australia for non-Aboriginal people to 'aboriginalise' their own attachments to place. This is displayed most clearly through the story of Margaret Johnson who lived and worked and raised her family on a grazing property, Windermere Station in New South Wales. When she and her husband retired from farming life they moved away from their property. In recounting this experience, Margaret Johnson compares her feelings to Aboriginal attachments to place (Read 1996: 10). As this thesis shall show through the case of the Barmah-Millewa Forest, non-Aboriginal Australians are (re)thinking the meaning of place. This is happening as Aboriginal conceptualisations of place are asserted through the Native Title Claim process, and as settler Australians recognise and reconcile the Aboriginal dispossession that occurred through white settlement.

This dialogue encapsulates the essence of the discussion thus far. It emphasises the difficult issues that surround the conceptualisation of place, particularly in settler nations like Australia. Importantly, it highlights the attraction (political or not), of romanticised notions of place which emphasise close and meaningful associations. Further, it shows that the way towards more 'progressive' notions of place is to acknowledge rather than deny the desire for some kind of attachment to place at the same time as acknowledging that identity and relationships of power are an integral part of place construction. This discussion also emphasises the need to think about how all of this theorising translates into practice; if nothing else, the current challenges in Australia will require a continuous dialogue between theory and observation. This is necessary if we are to find new ways of writing and thinking about place in the current political context. Indeed, current struggles over land rights in Australia show that difference is constantly being reconfigured (Jacobs 1997). In addition,
the increasing importance of environmental issues are changing the way people think and act. Thinking and writing about the role of place construction in this process will be important if we are to move towards more 'progressive' constructions of place. This thesis will explore the way in which both Aboriginal and non-Aboriginal people are constructing the Barmah-Millewa Forest as a place in the context of contested resource management and an ongoing Native Title Claim. This review of theoretical literature has highlighted aspects of place and identity which are of relevance to the case study of the Barmah-Millewa Forest.

2.3 Place Theory and Natural Resource Management

Studies of resource and cultural heritage management in Australia and abroad are increasingly recognising aspects of place. Foremost is the recognition of the diversity and complexity of interests in place. For example, Brandenburg and Carroll (1995: 381) note that "today, natural resource managers are challenged as never before to meet the diverse needs, desires, and values of these stakeholders". Salwasser (1990: 32) has noted the frustration of American field foresters "always being caught in the crossfire between competing interests for how forests should be managed" and Mitchell et al (1993) have echoed this statement. In Australia, Boyd et al (1996) and Boyd and Cotter (1996) have documented the diversity of interests in cultural heritage sites; the diversity of values currently being expressed in resource management have been discussed (Holmes 1994), and the range of interests in the management of resources are beginning to be studied (see Ellemor 1994; Gill 1994; Brock 1996).

Nevertheless, there is only a small amount of literature which has applied place theory to the context of resource management. New and innovative research is emerging in the United States, which is building a rationale for the inclusion of environmental values and landscape meanings into public forest planning and management (see Mitchell et al 1993; Brandenburg and Carroll 1995; Williams and Patterson 1996). In Australia, applied research of this kind is limited. Gill (1994) has examined the cultural politics of resource management, and there has been some research on the social and cultural value or significance of heritage sites (see Packard and Dunnett 1994; Johnston 1994) and the multiplicity of meanings ascribed to heritage places (Boyd et al 1996; Boyd and Cotter 1996). New resource management processes in Australia, such as Regional Forest Agreements, are beginning to link these approaches to the management of natural resources (see Lennon 1998). This research contributes to this body of work by extending the embryonic connections between place theory and natural resource management in the Australian context.
2.3.1 A 'place' perspective

Recent research has advocated a broader place perspective in studies of cultural heritage and natural resource management. As described in chapter one, a place perspective embeds resources in the systems of which they are a part, recognising that places (and resources) are ascribed with meanings and values (Williams and Patterson 1996). Most importantly:

The concept of place offers a framework for integrating environmental meanings into ecosystem management. Place constitutes a concrete focal point where natural forces, social relations, and human meanings overlap and can be integrated in theory and practice (Williams and Patterson 1996: 507).

A place perspective therefore connects place theory and related methodologies. Place becomes not just the object of study, but also a component of the research approach, informing not only what is studied, but how and why it is studied. In this way, research adopting a place perspective contributes to both theory and methodology.

Using a place perspective to examine resource management counters the view that resource management is merely about sustaining the economic value of resources. Brandenburg and Carroll note that:

resource planning has traditionally emphasized the economic values of resources, often ignoring the emotional, symbolic, spiritual, and widely perceived intrinsic values of the environment that are inherent in the creation of place (1995: 382).

As a counter to the emphasis on economic values, a body of work has grown around the recognition of non-commodity values, particularly social and cultural values (see Johnston 1994; Packard and Dunnett 1994; Pearson and Sullivan 1995). Also, from an economic perspective, increasing effort is being expended on seeking to determine 'non-market' values, to various degrees of success and appropriateness (eg Common 1995). This is not pursued here. An important component of the work on social and cultural values, involves recognising the importance of place to local communities. This involves recognising that places are constructed and experienced by people operating at the local scale, but also that places are shaped by processes operating at the non-local or global scale (Massey 1991a). It also requires an understanding that local people in specific places can have a very powerful sense of attachment or ownership over places, whether these are formally recognised or not, and that these feelings can translate into a strong stake in the management of the place. As the review of place literature has revealed, it is necessary to consider the political dimensions of these attachments to place.

There is a personal aspect to this discussion which has been recognised in resource management. For example, Griffiths' illustrates the importance of considering the local in his discussion of British naturalist and historian Richard Mabey's (1980) book entitled The common ground: A place for nature in Britain's future. Griffiths describes Mabey's book as
"an eloquent justification of the importance of the local and the personal in conservation debates" (Griffiths 1991: 31). He explains that "Richard Mabey's commitment to nature conservation originated, as it does for most people, in a sense of personal loss - despair at changes in the landscape of his own county of Hertfordshire" (Griffiths 1991: 31). Similarly writing in the 1940s Leopold blends personal experience with his training as a forester and wildlife ecologist in the Sand county almanac (Leopold 1987).

The importance of retaining the particularity of places and the range of meanings ascribed to them has been emphasised by Read (1996) writing on the inundation of Lake Pedder in Tasmania, Australia (see also chapter three). He has noted that particularity is not valued sufficiently and that in order for most threatened places to be saved, the special qualities of the place must be able to be "universalised", extended beyond the particular (1996: 142). On the loss of particularity he has written:

Outsiders - the decision-makers - no longer understand specific localities in relation to their specific meanings. Throughout most of the twentieth century changes analogous to the English enclosure movement have steadily emptied a thousand Australian localities of their special significance (Read 1996: 143).

This emphasises the issue of local-global connections considered earlier. Increasingly greater global (non-local) links have heightened awareness of certain issues and events. Television and newspapers carry stories and most importantly, pictures of 'threatened' places, that someone somewhere is seeking to 'save'. Whether or not these places are saved depends on a number of things, but who the place is being saved for is often instrumental. The power and influence of those doing the saving, or their ability to demonstrate universal qualities that others agree are worth saving, can play an important role determining whether or not, and for whom a place is saved (this will be considered in more detail in the following chapter). The meanings of places are contested and negotiated through struggles over the management, use, or protection of places and resources.

There is some recognition of the need to include the particularity of places, and the range of meanings and individual and group attachments to place, in the process of resource management. However, insufficient connections have been made between more politicised notions of place and identity (which were reviewed above) and natural resource management. In light of the literature already reviewed, the following sections will explore existing (and potential) applications of place theory to the process of resource and cultural heritage management. This will help to determine the value of place theory to substantive resource management issues in Australia.

2.3.2 Multiple meanings

There is a strong acknowledgment in the literature applying place theory to resource management that places are ascribed with meaning by the people who are associated with
them. For example, Williams and Patterson note that "American land management agencies are increasingly challenged to address a broader range of meanings and values in natural resource management" (1996: 507). There is increasing recognition of the need to include in the management process an understanding of the multiple meanings ascribed to places (and resources or sites). Writing about America's forestlands, Mitchell et al (1993) advocate viewing public lands in terms of both their utility and as the object of emotional attachments. In Australia, research by Boyd et al (1996) develops an approach to help cultural heritage managers recognise and identify the range of meanings.

Brandenburg and Carroll, building on the work of Mitchell et al (1993), illustrate how the identification of the diversity of constituencies and their values can provide the first step in learning how to incorporate place and people's emotional ties to the environment into public land management (1995: 382). They have conducted an inductive qualitative analysis of environmental values, landscape meaning, and place creation as it relates to natural resource planning. From their research, they found places to be both enabling in that they allowed people to create their own individual environmental values and landscape meanings and embedding because they also have meanings and values associated with them that are passed along to the individual from their social group (1995: 382). Thus they emphasise that "physical locations affect people and people affect and construct social meanings of those physical locations" (1995: 395).

Writing in the Australian context, Gill (1994) examines the cultural politics surrounding resource management through the case of bushfires in the Flinders Chase National Park in South Australia. Examining the conflict between the rural community and the National Parks and Wildlife service over bushfire management, Gill explains that "attachment to place" can have powerful political implications and important consequences for environmental policy (1994: 237). Importantly, Gill notes that:

Place also problematizes approaches to conflict resolution that recognise only a physical reality to the landscape, and which assume that conflict is merely a result of misunderstanding of the physical nature of the landscape (1994: 237).

Further, Gill explains that National Park management has emphasised biophysical and visitor management, while the social contexts of reserves have not been adequately addressed (1994: 237). The failure of the resource planning and management process to include the range of meanings and values ascribed to the environment is seen to influence the progress and resolution of resource-related conflict.

The multiplicity of meanings ascribed to places by the people associated with them have also been considered in contemporary resource and cultural heritage research. Boyd et al (1996) note that groups construct different meanings about places which reflect their different responsibilities, experiences, politics and world views. Similarly Williams and Patterson explain that:
a place (resource) may symbolize local or national heritage, ancestral ways of life, recreation opportunity, scenic views, valued commodities, rare habitat, or sacred rite. Each is a legitimate meaning for a place. Each can be threatened by another (1996: 518).

Qualitative research methodologies in resource planning and management are advocated by Brandenburg and Carroll as a way of not just identifying but also legitimating the range of voices that represent a place (1995: 396). This raises an important issue for resource and cultural heritage managers, namely the legitimacy or validity of claims of association to a place and the meanings ascribed to place. As a way of addressing this issue, Boyd et al advocate the adoption of a social construction approach in heritage management, as it "shifts the interest from the validity of any individual group's claim to a heritage feature, to an acceptance of the reality of that claim, and of the full range of claims, regardless of their validity" (1996: 125). This enables the full range of meanings ascribed to a place to be elicited and recognised. It has also led to the recognition that the meanings and values ascribed to places can change over time and in accordance with changing contexts and circumstances (Boyd 1996; Boyd and Cotter 1998). Importantly, social construction theory "provides an analytical tool with which to tackle the complexities of multiple meanings inherent in social landscapes, with the managerial advantage of dealing with the realities rather than validities of multiple meanings" (Boyd et al 1996: 123). This is essential given the political nature of the construction of place and identity that was outlined in section 2.2. It is also important given that resource and cultural heritage management agencies assert their own particular constructions of the places they seek to manage.

As a way of providing contextual input into the management process, Boyd et al (1996; see also Boyd and Cotter 1996) have demonstrated the advantage of identifying the interested parties associated with particular heritage sites and describing the interest in, or claim of association with the site. They use the term 'cognitive ownership' to denote "some form of intellectual, conceptual or spiritual value that the group attaches to the site" (Boyd et al 1996: 125). The notion of cognitive ownership, they argue, avoids making value judgements of the meanings held by each group. Instead it identifies the range of interests associated with a site, the broader contexts or landscapes in which the site is viewed, and the relationships between parties (Boyd et al 1996). This thesis explores both the values ascribed to, and the cognitive ownership of the Barmah-Millewa Forest as a way of describing and interpreting attachments to the forest (see chapters six and seven). A social construction approach is also adopted as a way of further exploring the contestation over the forest and its management (see chapters seven and nine).

2.3.3 Whose place?

One point that is implicit in all these studies is that the management of resources, sites, or places necessarily involves decisions regarding the character of the place to be preserved,
maintained or created. Each meaning given to a place is 'real', in the sense that it is held by an individual or group, and each meaning can be threatened by another. The question becomes, how can these multiple meanings be identified and incorporated into place (resource) management without sacrificing one in favour of another? More importantly, what moral and ethical obligations do resource managers have when making management decisions? Reflecting on the difficulties of conservation, Mabey comments that:

On the surface the problems of conservation present themselves as practical ones: how to manage woods so that they produce timber at the same time as sustaining wildlife, which areas of countryside are best used as farmland and which as nature reserves. Yet underneath there are more fundamental and less easily resolved conflicts of values - about who can legitimately be said to 'own' natural resources, about the rights of humans and animals, about the relative importance of present livelihoods and past traditions - conflicts which involve deeply held personal beliefs and meanings (1980: 25).

Mabey concludes that he has "explored the issues at both levels, practical and ethical, but always the argument ends with questions of value and meaning which, like all such questions, can only be answered in a social context by a continuing cultural debate" (1980: 25). As the theoretical writings reviewed above have emphasised, notions of place and identity are inherently political, involving complex relationships of power. As such they must always be viewed in the broader social context in which they are formed. Effective management of natural resources will therefore necessary involve the identification of the range of meanings ascribed to places and a consideration of the broader political, economic and cultural social contexts in which these meanings were formed.

The concern with legitimacy is emerging as an important aspect of recent work in Australia, especially that considering Aboriginal and non-Aboriginal claims to place. Writing about the contested site of Coronation Hill in Northern Australia, Jacobs' concern is "not with the truth or the validity of one claim [to the site] over another, but with the context..." (1993: 105). Similarly, the approach developed by Boyd et al (1996, outlined above), emphasises the importance of context over validity. Although management decisions must ultimately be made, the emphasis on context allows managers to understand the meanings and relationships involved more fully. As Boyd et al explain, "without such understanding, the practicalities of cultural heritage management of each site [or resource, or place] will be founded only on partial understanding of the site, and will result in unsatisfactory solutions to management issues" (1996: 137). The emphasis is not on proving or disproving the validity of associations with place, but on first identifying the range of values and meanings and the contexts from which they emanate.

In Australia, issues of environmental degradation continue to challenge the way we use and relate to land and water resources. More recently, indigenous issues have been formally added to resource management debates. These issues have fostered a (re)thinking, at both the practical and intellectual levels, of the relationships between people and place.
Despite the increasing complexity, and the numerous layers of difference, there have been few research efforts to incorporate the meanings and values ascribed to places in the Australian resource management process. This thesis explores the multiple meanings and constructions of the Barmah-Millewa Forest, illustrating the cultural and political complexity associated with managing natural resources and hence the need to engage with this diversity in a serious way.

There is no immediate solution to the issue of diversity and difference in relation to the meanings ascribed to places and resources. The degree of the intellectual (and practical) challenge that this poses can perhaps be gauged by the extent of Habermas' attempt to reconcile these tensions (see for example Habermas 1990). Habermas' attempt to grapple with these issues through the idea of 'communicative rationality' has been sustained and profound, providing testimony to the intractability of the problem. Nevertheless, resource managers are required to make decisions and act amidst this diversity and difference everyday. It is therefore of both intellectual and practical importance to reflect on diversity and difference in the context of Australian natural resource management. Whilst there are no easy answers, we must continue to engage with and reflect upon them in a serious way.

2.4 Conclusion

This chapter has outlined some of the issues associated with the theory of place and its application to resource management processes. In particular, the impact of globalisation on constructions of place and discussions of the politics of place and identity emerging largely from the sub-discipline of cultural geography have been considered. This has shown that places are both socially constructed and emotionally felt by the people who interact with them. Drawing largely from research in Australia, this chapter has highlighted the political dimensions of place construction. This has shown that the construction of place defines not only our relationship to nature, but also our relationships to other people.

The value and relevance of applying place theory to the process of resource management has been illustrated by reviewing both contemporary place theory and applied research. This chapter has demonstrated the embryonic nature of Australian research that applies place theory to resource management. It has illustrated that place theory has much to offer given the substantive issues of indigenous rights to resources, as it engages with the multiple meanings and layers of difference which are expressed through constructions of place. This thesis will demonstrate some ways in which this body of theory can be applied to practical problems of resource management in the Barmah-Millewa Forest.

This chapter has shown that careful investigation and theorisation of place is important if we are to continue to address contemporary social and political issues. Given the complex political context in which natural resource management currently operates,
there is an important role for studies which explore the multiple meanings and constructions of the place to be managed. Such a situated or contextualised critical methodology might offer a way forward for the process of natural resource management. This chapter has demonstrated the potential and current contribution of place theory to natural resource management by highlighting key theoretical and substantive issues which will be further explored in the following chapters. This chapter has reviewed the theory of place; in light of this the following chapter will explore the practice of place in Australia.
CHAPTER THREE
THE PRACTICE OF PLACE:
AUSTRALIAN CASES OF PLACE AND ENVIRONMENT

3.1 Introduction

The previous chapter has shown that places are physical locations that have been given meaning by the people associated with them. As social constructions, there can be conflict and negotiation over the multiplicity of dynamic meanings that are attached to places. Chapter two has illustrated that the construction of places is inherently tied to the identities of individuals and groups. The political component of place construction becomes visible when we understand that some constructions of place and the identities attached to them are projected as being more essential or natural than others. Over time certain place constructions, the meanings attached to place and the identities bound up with place, can become more dominant than others.

While it has been shown that social processes and relations define place, it is also important to note that the physical characteristics of a geographical location also contribute to place construction. Just as the meanings attached to a place may change as the social and political context is transformed, changes to the physical environment may also contribute to the renegotiation of meanings. For example, the degradation of a river caused by human manipulation of the system may lead a local community, previously unaware of the environmental requirements of the river, to develop an interest in the ecology of the area. This is important for the management of a place, as a changing environment and changing social relations will influence the way in which people relate to that place.

Multiple and often competing construction of places are increasingly being publicly expressed and contested through environmental disputes. The importance of place to environmental disputes has been noted by Harvey (1996: 303). He explains that a consideration of environmental issues is almost impossible without (at least at some point) confronting the idea of place. He writes that:

Place is the preferred terrain of much environmental politics. Some of the fiercest movements of opposition to the political-economy of capitalistic place construction are waged over the issue of the preservation or upsetting of valued environmental qualities in particular places. (Harvey 1996: 303).

The history of the modern environmental movement in Australia is marked by a number of key issues and events which gained widespread media coverage. This media coverage conveyed images of what were perceived to be "some of the most striking and beautiful landscapes in Australia" (Frawley 1994: 72), which were fiercely contested as
places imbued with very different meanings. The different meanings ascribed to places or the resources that exist in those places, and the different interpretations of the history of places, have played a significant role in many environmental disputes in Australia. This chapter will review literature concerned with the social aspects of managing places and resources through specific Australian cases of contestation over place and the environment. The aim of this review is to consider when and where place has been considered in this literature and to further explore the relevance of notions of place and place theory for the process of resource management. Whereas chapter two reviewed the theory of place, this chapter reviews the practice of place. It establishes important themes of relevance for the case study of the Barmah-Millewa Forest, which are used to explore the cases included in this chapter. They include:

- multiple meanings and values
- symbolic places
- future or imagined places
- belonging
- authenticity
- context
- Nature/Culture

The literature reviewed in this chapter is diverse. It includes research that has examined the meanings and values ascribed to particular environments, which have been the subject of contestation or at least ongoing management discussions, as well as literature documenting and analysing specific cases of conflict over the Australian environment. Although very little of this literature draws specifically on place theory, the different meanings attached to places are implicit. Some of the literature also explicitly considers the values assigned to places or the individual resources that exist in those places. The emphasis on conflict in these cases is deliberate. Firstly, as extreme and notable cases of environmental management, much has been written about them. Secondly, these cases may be more likely to highlight important issues than less extreme cases. And finally, as arguably the bulk of all resource-related conflicts (apart from broad policy debates) are place-based, an analysis of such cases will reveal the opportunities for the application of place theory to resource management.

The cases included in this chapter are predominantly concerned with the natural environment. This reflects a bias in the literature that stems from Australian conservationists' preoccupation with the preservation of the natural environment (Bonyhady 1993) and the broader Australian preoccupation with 'wilderness' or natural landscapes (section 3.9 will consider the relationship between the natural and cultural environment in more detail). Another factor influencing the choice of cases for this chapter is the limited amount of detailed analysis of individual environmental disputes. Despite the environmental, economic and political significance of many disputes, some of the most prominent conflicts have not been written up at length (Bonyhady 1993). Part of the
reason why this has not occurred relates to the challenge of finding a framework for analysing campaigns which have varied greatly over time and place and which have involved very different groups, resources and institutions of government (Bonyhady 1993).

Much of the analysis of contestation over the environment has occurred in a political, legal or policy framework (see Toyne 1994; Doyle and Kellow 1995; Bonyhady 1993; Papadakis 1993; Hall 1992; Bates 1995). This dominates the existing literature on conflict over the environment. Although the legal and political context is certainly central to a full understanding of many Australian environmental disputes, very little attention has been given to the role of place in conflicts over the environment. Aspects of place are mentioned, but they are rarely the focus. For example, in Toyne's (1994) analysis of environmental law and politics, he draws attention to the different ways in which place or resources have been viewed by proponents of conservation and development and the political roles these have played in environmental disputes. Although the focus is on the relationship between environmental law and environmental politics, Bonyhady's (1993) book *Places worth keeping: Conservationists, politics and the law*, considers the importance of particular places displayed through environmental disputes. Further, Read's 1996 consideration of the meaning of lost places, although not focusing on specific environmental disputes, considers the particular meanings ascribed to places that have often been overlooked. Nevertheless, in at least the works of Toyne and Bonyhady, place is a peripheral rather than a central theme.

A more detailed consideration of the role of place in environmental disputes is important given that the meanings and values ascribed to place, and the politics of place and identity construction seem to underlie many conflicts over the environment. A detailed analysis of nationally significant cases in terms of place is not viable in this chapter given the range of people with an interest (many of which remain undocumented) in these places. Rather, an examination of these cases highlights themes of relevance for the study of the Barmah-Millewa Forest and possibly other cases. It would be possible to explore these cases from many different perspectives, for example class, gender and power, however a review of the role of place is most appropriate for the purposes of this research.

This chapter does not provide a detailed account of each case of contestation over place and the environment. Instead, themes of relevance are identified and cases are considered under the relevant sub-headings. Some cases are examined in more than one section as they simultaneously illustrate a number of relevant themes. These themes are not exclusive typologies of places, but rather broad themes which provide a useful way of organising the literature of relevance for this thesis.

This chapter begins with a discussion of the notion of value as it is used in the resource and cultural heritage management literature. Following this, the multiple meanings and values ascribed to places are considered in the context of environmental disputes
including the flooding of Lake Pedder, the proposed damming and subsequent World Heritage Listing of the Franklin River, the World Heritage Listing of Kakadu National Park, and the controversy surrounding mining at Coronation Hill. This is followed by a discussion of 'remote' places which are viewed as symbolic, including disputes over the flooding of Lake Pedder and the management of Antarctica. In contrast to these symbolic places that have rarely been visited, the following section considers places that may be just as symbolic but are lived in, inhabited places or places to which people 'belong'. Cases considered in this section include Uluru National Park and Australia's coastal zone. The vision that people have for the future of a place and the role this plays in environmental disputes is considered in the following section on imagined places. The Snowy River, including the Snowy Mountains Hydro-Electric Scheme and the high country more generally are considered in this section, along with the proposal to restore the Lake Pedder to its former state. An important theme emerging in many disputes over the environment in Australia is the authenticity of claims of association to particular places, particularly in relation to the claims of Aboriginal people. This is considered in a section entitled authentic places, through the consideration of the debate over mining at Coronation Hill and recent proposals to mine uranium at Jabiluka. The following section on contextualising places considers work that focuses in more detail on the particular meanings and values ascribed to places in the context of resource management. Research on the Beachmere midden complex in Moreton Bay in southeast Queensland, and Lake Victoria in southwestern New South Wales, as well as studies of the significance of the coastal environment, all illustrate the importance of describing the context in which conflicts over the environment occur. Finally, the relationship between nature and culture, a theme that will flow throughout this chapter, is considered through the conflict over grazing and conservation rights in the high country in New South Wales (NSW) and Victoria (and other cases previously considered).

### 3.2 Place, Resource, Value

Before considering actual cases of environmental disputes in more detail, it is necessary to consider the relationship between some of the terms used in the place literature reviewed in chapter two, and the resource and cultural heritage management literature that will be included in this chapter. Chapter two illustrated that the use of a place perspective embeds resources back in place and that places (and resources) can have multiple meanings ascribed to them by the people associated with that place. Hence, place is understood as space that has been given meaning by the people associated with it. This use of the word meaning in the place theory literature can be compared with the use of the term value in the resource management literature and policy, where value not only denotes worth, desirability and utility, but also the general importance or significance of a place or resource. In this context, the term value should not be taken to evoke only positive connotations. Negative experiences associated with a particular place may also lead to that place being valued. The
place may become symbolic of an event or experience that is central to the identity of an individual or group.

In an attempt to counter (but nevertheless still working within) the dominant economic paradigm of resource management, much attention has been paid to the value of resources. This includes ongoing attempts to put a monetary value on the environment (see Jacobs 1991; Department of the Environment, Sport and Territories 1995a), and attempts to define the non-commodity values of resources (see Johnston 1994; Packard and Dunnett 1994). Identification of the range of different values assigned to places and resources has become a popular approach in cultural heritage and resource management.

The use of the term value is not without its problems. This is reflected in the confusion over the definition and use of the term in the resource and heritage management context. Some of these problems will be considered in chapter six, where this discussion is extended. For now, it is sufficient to arrive at a useable definition by considering the way in which the term value is used in the resource and heritage management context. However, in any discussion of values we must always think about whose values are being discussed and who is speaking about these values.

For the purposes of this study, the definition adopted by the Resource Assessment Commission (RAC) in its Coastal Zone Inquiry will be used (RAC 1993a). The RAC definition notes that the process of valuing involves both a valuing subject (a person or group) and an object or state of affairs which has attributes considered to be valuable. The process by which something is valued, involves two distinguishable, yet interdependent aspects - the values that are held by the person or group, known as held values, and the values that are assigned to the object or state of affairs, referred to as assigned values (RAC 1993a; Brown 1984). Held values are the product of our experience, education and socialisation, and encompass of wide range of orientations and principles concerning modes of conduct (for example honesty), end-states and ideals (for example freedom), and qualities (for example beauty) which are considered desirable or proper. They include both emotions and principles (RAC 1993a). Assigned values are the product of the interaction between the held values of an individual or group and the attributes of an object or state of affairs; for example, the economic and utilitarian value of a forest for logging and grazing. An object may have a variety of values assigned to it, depending on its attributes and the held values of the person or group. Both the physical properties of the resource and the held values of the individual or group will impose limits upon how the resource is valued (RAC 1993a: 4).

The relationship between held and assigned values can be understood as a manifestation of the pervasive modern subject-object split, whereby the object can never be fully understood in isolation from the subject (see Morrow 1994 for a comprehensive discussion of the various attempts to come to terms with the subject-object split). In the
context of values, this means that the object (resource or place) and the values ascribed to the object, cannot be understood without also considering the subject (individual or group) who ascribes the value contingent upon their held values, attitudes and beliefs. For resource and heritage management this raises important issues that were noted earlier, such as which and whose values are being identified, and who is identifying or describing them. These are issues which managers are currently struggling with. They are issues that are repeatedly raised in chapters six, seven, eight and nine of this thesis.

The resource and heritage management literature primarily considers the values assigned to resources or sites, although as noted above these are informed to a significant extent by the held values of an individual or group. It is understood that values influence the way in which people behave, although this relationship is complex and it cannot be assumed that people will always act in accordance with their professed values. In the context of resource-related conflicts, values influence the use and management of resources (RAC 1993a: 6). The different values assigned to the resource by different individuals or groups will often translate into different uses (actual or potential) of places or the natural resources that exist in those places. The held values of an individual or group, the values they assign to the environment, the physical properties of that environment and the uses and management of the environment are all related. The relationship between these factors, particularly the relationship between held values and assigned values, and between values and behaviour, is complex (Shulman and Penman 1994; RAC 1993a).

As assigned values reflect in some way the held beliefs or value systems of individuals and groups, there will be a suite of assigned values for any particular place, some of which may conflict with one another. These can be compared with the multiple meanings of place discussed in the theoretical place literature. Hence contestations over the use of place may involve deeper contestations over the values assigned to these places and the broader sets of values held by the individuals or groups assigning those values. As such, theorisations about place should be integral to resource management, because they add insight into the way in which places and resources are conceptualised and the contestation that may occur between these conceptualisations (and therefore uses) of place. The notion of 'resource conflict', a term often used in resource management, does not capture the full picture in relation to the values and meanings assigned to places or resources. This thesis explores the broader range of issues involved in the contestation over place and the context of resource management.

It has been recognised by a number of authors that conflicts over resources are increasingly being focused more on values than on facts (Vining and Ebreo 1991; Floyd 1993; Aslin 1994; Holmes 1994). As noted by the RAC Coastal Zone Inquiry, "the disparate values that may be associated with a resource or its use, and the different interpretations and weighting people give to these values, are often the primary source of
contention" (RAC 1993a: 1). Research considering Australia's rangelands has identified a transition towards multiple uses and values (Holmes 1994). This trend reflects a move away from traditionally dominant commodity values towards a combination of commodity and amenity values. Holmes refers to this as a shift from industrial to 'post-industrial' socio-economic values (1994: 147). In the rangelands this new suite of 'post-industrial' values includes Aboriginal land rights, preservations of biodiversity and of semi-natural landscapes, sustainable management, tourism and recreation (Holmes 1994: 147). These observations can be seen to apply to other natural or semi-natural environments in Australia, for example forested lands that have served as important sources of hardwood timber. This is evidenced by the attempts to include social and cultural values into forest contexts - a sector traditionally shaped around an environment/development dichotomy - through the ongoing Regional Forest Agreement process (see Coakes 1998; Lennon 1998).

A major challenge posed by these new sets of values, is that most of the new resource values fall outside the market sector (such as biodiversity and Aboriginal land rights). Further, "these new resource values are dependent upon a complex mix of value orientations held by diverse interest-groups, rather than tied to commodity-related market values" (Holmes 1994: 148). This poses a new set of problems for resource managers, and calls for new ways of managing multiple-use resources. Resource management therefore needs to broaden its purview to encompass the more complex environment in which core resources are located.

3.3 The Multiple Meanings and Values of Places

One theme that has been emphasised in chapter two, and that is central to the environmental disputes considered in this chapter, is the multiplicity of meanings and values that are ascribed to places or the individual resources that exist in places. The disputes over the environment that are described in this chapter are not just disputes over the use of particular resources, but disputes over the meanings and values ascribed to the resources which are fundamentally about the different sets of values held by the various interest groups. In Australia, many notable environmental disputes have been characterised by conflict between pro-development and pro-conservation groups. As this chapter shows, this simplistic dualism is increasingly complicated by alliances of interests, such as between human rights, indigenous rights, and environmental groups. Although the themes raised in this section will be carried throughout the chapter, the disputes over Lake Pedder and the Franklin River in southwest Tasmania, and over Kakadu National Park in the Northern Territory all illustrate the way in which different meanings and values ascribed to a place can result in very different opinions over the management of the place and its resources.

It is important to note here that the use of the term 'wilderness', which is widely used by the environmental movement, is contested. This will be discussed further in section 3.9,
however for now it is important to note the essence of this debate. The term wilderness has often been used to denote emptiness and naturalness in the landscape, therefore denying the prior or continuing existence of Aboriginal people and their relationships with the environment. As Langton has explained:

Just as *terra nullius* was a lie, so was this European fantasy of wilderness. There is no wilderness, but there are cultural landscapes, those of the environmentalists who depict a theological version of nature in posters, and those of Aboriginal people, present and past, whose relationships with the environment shaped even the reproductive mechanisms of forests (1996, cited in Langton 1998: 18).

Importantly, in a comprehensive survey of the notion of wilderness in Australia by Robertson et al (1992: xi) define wilderness as an area that has not been substantially disturbed by, and is remote from, evidence of *colonial and modern technological society*. 'Wilderness' qualities have been formally or informally assigned by the environmental movement to many of the places discussed in this chapter.

Lake Pedder, in its natural state, was a small lake in the south-west corner of Tasmania. It was famous for its three-kilometre long beach and pink glacial sands, was inundated in 1972 as part of the Middle Gordon Hydro-Electric Scheme. The lake was considered to be an important 'wilderness' area, significant because of its remoteness, its pink glacial sands, its pristine condition, its unique species of flora and fauna, and its status as a National Park (see Johnson 1972). In the battle that was played out in both Tasmania and mainland Australia, thousands of people fought to save the lake prior to its inundation, and even more tried to reverse the decision after inundation began (Read 1996).

Lake Pedder and its environs were dedicated for the purposes of nature conservation on three separate occasions between 1955 (when the Lake Pedder National Park was proclaimed) and 1968 (when the Tasmanian Government gazetted the South-West National Park, absorbing the Lake Pedder National Park within its boundaries) (Johnson 1972). However, the environmental values of Lake Pedder and its surrounding button grass plains were dismissed by the Hydro-Electric Commission, advocates of the Gordon Hydro-Electric Scheme, who saw the area somewhat differently. In a report to the Premier of Tasmania, the Hydro-Electric Commission (HEC) of Tasmania explained that:

The areas which will be inundated are for the most part marshy and covered with scrub and button grass, a worthless growth commonly found on land which is more or less permanently waterlogged (Report on the Gordon River Power Development Stage 1 and Thermal Power Station 1967, cited in Johnson 1972: 65).

Throughout the campaign waged against the proposal to flood Lake Pedder, the recreational and scenic qualities of the area were stressed. The rare and spectacular scenic qualities of Lake Pedder were made even more important by the isolation of the area, being several hours walking distance from nearest access point. The area's principal characteristic was seen to be its isolation and it principal asset was 'wilderness' (Johnson 1972).
problematic view of 'wilderness' as land uninhabited is considered further in section 3.9). A statement from the United Nations Educational, Scientific and Cultural Organisation (UNESCO) International Biological Programme 'Project Aqua' illustrates this view:

The lake and surrounding area is of immense aesthetic value and the intractable nature of terrain and vegetation makes it a challenging wilderness. Until recent years the whole south-western quarter of Tasmania was uninhabited and mostly unvisited by Man [sic]. It is therefore a unique wilderness of incomparable significance and value. Its impending destruction to provide power production for about half a century must be regarded as the greatest ecological tragedy since European settlement of Tasmania (cited in Johnson 1972: 1).

It is important to note here that massacre by white settlers' guns, policies of forced removal from the island and introduced diseases had a dramatic impact on the Tasmanian Aboriginal population (see Ryan 1996). These acts resulted in the death of the last "full-blood" Tasmanian Aborigine, Truganini, in 1876. Symbolically, a bust of Truganini was set into the sands of Lake Pedder in March 1972 by the conservation group the Lake Pedder Action Committee. The effigy looks west over the lake, facing the encroaching flood waters (Johnson 1972). As the flood waters inundated Lake Pedder, the destruction of Aborigines was conflated with drowned "wilderness" (Read 1996). The inscription on the model reads:

Truganini 1803-1876

When we reflect on the beauty and dignity of Truganini we must deplore the destruction of her people. Let us then reflect on the beauty of this lake, dedicate it to the memory of Truganini and her people, and resolve to keep it unspoiled for the benefit of mankind [sic]" (cited in Johnson 1972: 85).

In 1973, following inundation of Lake Pedder, the Burton Committee was set up by the Federal Government "to suggest what action, if any, might be taken to alleviate, or compensate for, any adverse consequence which may be considered to have arisen from the flooding of Lake Pedder" (Anon 1973: 8). This committee heard evidence in Hobart and Melbourne from a range of witnesses. A significant aspect of this inquiry was the poets and artists who were heard as expert witnesses alongside scientists (Read 1996) and the aesthetic, spiritual and environmental value of the place to individuals and groups was publicly heard. The final report of the Lake Pedder Committee of Enquiry released in April 1974 emphasised the range of meanings attached to the lake. The report noted that:

A great many people spoke deeply and sincerely to the Committee about the aesthetic value of Lake Pedder; it is clear that the lake was a place of outstanding beauty but that little weight was attached to this when the decision to flood it was made...many people placed a high value on Lake Pedder for its aesthetic and recreational qualities, but that their opinions were apparently of little account to the Tasmanian Government or the Hydro-Electric Commission (Lake Pedder Committee of Enquiry 1974: 257).

The case of Lake Pedder highlights the very different values assigned to the lake by the 'conservationists' on the one hand, and the 'developers' on the other. In the battle over the lake the different meanings and values ascribed to the place became polarised as two oppositional views. Clearly, in this case, the developers viewed Lake Pedder as a resource to
be developed and managed for economic return. In contrast, the lake was assigned non-commodity values by the conservationists; it was considered important for its scientific value, its aesthetic beauty and its value as a place for recreation and spiritual renewal. In addition, there was widespread concern over democratic processes; the HEC of Tasmania was an autonomous statutory authority almost completely responsible for its own affairs, as it was neither directed by nor responsible to the state Minister (Lowe 1984, cited in Smith and Handmer 1991).

The dispute over Lake Pedder illustrates the dynamic nature of meanings and values attached to places. The values ascribed to Lake Pedder have changed over the years, as the important place known to many conservationists has been lost with the flooding of the lake for the Hydro-Electric Scheme. The famous pink glacial sands have been covered with water, and tourists can now visit the lake by motorcar. The lake has gained value for those involved with the hydro-electricity industry, becoming a symbol of development and progress in Tasmania, although these values are threatened from time to time by proposals to drain and restore the lake. The lake has also now easily accessed and attracts many tourists and recreationalists. The way in which perceptions of place change with time is a theme evident in many of the cases discussed in this chapter.

The Burton Commonwealth Committee of Enquiry into the Lake Pedder case in 1974 had produced guidelines aimed at encouraging multi-objective planning to take into account both environmental and economic values. The purpose of this was to avoid the sort of conflict which had resulted from the flooding of Lake Pedder (Toyne 1994). Although Lake Pedder was not saved from inundation, the significance of this fight was noted; Lake Pedder was almost saved, and eleven years later the river Gordon-below-Franklin, also in south-western Tasmania was saved from damming. The Franklin Dam did not eventuate due to a massive public campaign and a fortunate alliance of issues and events (Fowler 1984), however the same kind of value positions are evident in this campaign as in the fight for Lake Pedder. The Franklin Dam, perhaps more so than Lake Pedder, has become a landmark in Australian environmental politics (Connolly 1981; McQueen 1983).

The Franklin River flows through south-west Tasmania, one of the world's three largest remaining temperate 'wilderness' areas (Toyne 1994). A major hydro-electric power scheme was proposed, that would flood much of the river. The instigator of the scheme was the HEC of Tasmania, who propagated the idea that "cheap electricity generated from fallen water could attract the industries that smelted the ores and pulped the wood" (Green 1981: 9). As with Lake Pedder, the Franklin River was viewed by the HEC and many politicians as a commodity, a resource to be developed. Opposing the views of the HEC and pro-dam politicians, the green movement pushed for the conservation of the natural and cultural features of the area. The Western Tasmanian Wilderness National Parks, including the Franklin River, were inscribed on the World Heritage list in 1982. This prompted the
release of a statement from the World Heritage Commission, expressing concern that the construction of a dam would destroy "those natural and cultural characteristics which make the property of outstanding universal value..." (Toyne 1994: 40). In stark contrast to views such as this, the Premier of Tasmania at the time, Robin Gray, stated that "for 11 months of the year the Franklin River is nothing but a brown ditch, leech ridden, unattractive to the majority of people" (Hobart Mercury 21/9/1982, cited in Toyne 1994: 40). The value of the place was contested, and the decision not to dam the river was seen as a huge victory for the conservation movement in Australia, as well as a crucial precedent for the Commonwealth Government to wield power over the States in environmental matters.

This kind of debate about the value of a place or resource, has also emerged in other cases of conflict over World Heritage listed areas. (Australia is a party to the 1972 World Heritage Convention, thereby accepting the obligation to identify, protect, conserve and present World Heritage properties, of both universal cultural and natural value, see Purdie et al 1996). Toyne (1994) has emphasised the important role that World Heritage listing has played in many of the prominent environmental and constitutional conflicts in Australia over the past two decades, including the Tasmanian wilderness, the Queensland Wet Tropics, Kakadu, Shark Bay and Fraser Island. He notes that:

all have been controversial, as State or Territory Governments and local communities have objected to the perceived loss of control that flows from the Commonwealth acquiring power and responsibility for Australian nominated or listed properties... The now notorious clashes between Commonwealth and States or Territories have largely related to development activity or resource use which the local parliament wished to facilitate and Canberra believed was incompatible with the protection of the World Heritage values the property contained (Toyne 1994: 35).

These conflicts have occurred over the nature and character of particular places, which has been embodied in the issue of resource use. The conflict that has arisen over resource use can be understood as a conflict over the values ascribed to these places, and over the vision for the place in the future. This was the case in the debate over the World Heritage listing (for both natural and cultural heritage values) of Kakadu National Park in Northern Australia.

The Kakadu and Alligators River Region, 120 kilometres east of Darwin, is situated in the wet-dry tropics of northern Australia and is well known for its spectacular wildlife, wetlands and waterfalls. The first stage of Kakadu National Park was declared in 1979; stage two was added 1984 and stage three was proclaimed in 1987, with additions in 1989 and 1991. A consolidated nomination of the whole of Kakadu National Park was accepted by the World Heritage Committee in 1992 (Press and Lawrence 1995). Controversy has surrounded the creation of the Kakadu National Park and the history of the development of the Park has been characterised by "attempts to reconcile the concurrent and competing interests of conservation, mining and Aboriginal land rights" (Press and Lawrence 1995: 1).
The Kakadu region has been the subject of many controversial issues including uranium mining, Aboriginal land rights and sacred sites, development, as well as Commonwealth/Territory conflict over World Heritage listing and development (Toyne 1994). While these factors are interrelated, the documentation of the conflict over World Heritage listing illustrates the different and competing values ascribed to the place and its resources. As Toyne (1994) explains, this includes conflicting opinions over the natural values of the area. For example, naturalist Harry Butler, at that time an adviser to the Northern Territory Government, described the area of land to be included in the second stage of the Kakadu National Park as being like "a clapped out Holden", with large sections of "mongrel scrub", and undeserving of World Heritage listing (Daily News 1/7/1987, cited in Toyne 1994: 128). Toyne contrasts these with comments from an Australian Conservation Foundation (ACF) briefing document:

Kakadu abounds with rich and varied flora and fauna; from mangrove tidal flats, idyllic billabongs and water courses through open grassland to pockets of eucalypts and rainforest. The wetlands are frequented by very large numbers of waterbirds and the total area provides habitats for approximately one third of Australia’s bird species.

Kadadu’s cultural significance lies in the rich and ancient Aboriginal sites and paintings to be found there. They trace at least 20 000 years of continuous human culture, record extinct animals, and show environmental and social changes in Northern Australia during the last ice age through to the coming of Europeans (cited in Toyne 1994: 128).

This highlights different readings of the same piece of land. Not only was the World Heritage listing contested by the Northern Territory Government, the Kakadu area is also the site of controversial disputes over uranium deposits (at Jabiluka and Koongarra) and uranium mining (at Ranger), and an important site in the struggle for Aboriginal land rights. Toyne points out that:

Different groups were seeing the same country through different eyes. The mining industry and many in government were transfixed by the potential for wealth in the highly mineralised region; conservationists were emotional in their conviction that the area rivalled the rainforests as a storehouse of biological diversity which deserved full protection; and the Aboriginal people - the Gagudju and the Jawoyn whose traditional country it was - saw it as a living expression of their culture and lifestyle, increasingly encroached on by others with other priorities and whose presence had been overwhelming, but recent (1994: 128).

The debate over the mining of Coronation Hill, which lies within stage three of Kakadu National Park, has highlighted the multiplicity of values ascribed to the area and the problem of contested knowledges. This can be seen in the controversy which surrounded the different scientific views of the Park in the vicinity of Coronation Hill, and also in the contestation over the authenticity of Aboriginal claims to the area (see section 3.7 for a discussion of authenticity). Scientific studies assessing the impact of the proposed mine have produced dramatically different results. The biological consultants of the Coronation Hill Joint Venture (of several mining companies) argued that there were no notable or rare
species at the mine site (Toyne 1994). In addition, the Australian Mining Industry Council asserted that the area in the vicinity of Coronation Hill "is scrubby and generally unremarkable by comparison" to the "picturesque and imposing wetlands and the escarpment areas which are attracting tourists and conservationists" to Kakadu National Park (Toyne 1994: 135). In contrast to these views, CSIRO researchers engaged by the Australian National Parks and Wildlife Service reported a very different view. They found the area to have a very high diversity of wildlife species and a high diversity of notable (rare, endangered or restricted) species present (Braithwaite and Woinarski 1990). In short, they judged stage three of the Park, which included the Coronation Hill area, to be an important wildlife area in its own right, and a valuable supplement to the worth of Kakadu. The inclusion of stage three of the park and the decision not to mine Coronation Hill protected the catchment of the South Alligator River system. This case illustrates the way in which scientific knowledge can be used to meet political ends, and it highlights the way in which particular held values can influence the values ascribed to a resource or place, and the meanings imbued in place.

The cases described above have all shown that very different meanings and values can be ascribed to a particular environment, resulting in the legitimation of certain potential or existing uses. They also show the increasing sophistication of the conservation movement as alliances between various interest groups are struck (Smith and Handmer 1991). These themes are also evident in the cases that follow.

3.4 Symbolic Places

Many of the documented cases of conflict over place and environmental management in Australia have been concerned with places considered to be of national significance. These places have been variously described as "an asset to the nation" (ACF 1969, cited in Bowen 1994: 248); a place that "belongs to all Australians' (Northern Territory Government media campaign, cited in Toyne 1994: 55); and as "one of Earth's special places" (Brown 1985: 13, cited in Toyne 1994: 32). Many places, such as the Great Barrier Reef, Uluru and Lake Pedder are seen to be symbolic; to capture the individual and collective imaginations of Australians (and in some cases, the world). For example, Toyne wrote of Uluru "there can be no natural feature in Australia to equal Uluru as an icon and an entrenched part of our national psyche" (1994: 48). Similarly, Bowen has noted the "special mystique" of the Great Barrier Reef and the fact that it "has always exerted a fascination for people that has extended around the globe" (1994: 234). Remarks such as these have emerged from efforts to document and make sense out of key conflicts in the history of Australian environmental politics. A key feature of these debates has been the demonstration of the importance of the place or resource being threatened. This demonstration of significance is seen by commentators to play a very important part in the way conflict is played out. The
controversy over the inundation of Lake Pedder in south-western Tasmania helps to illustrate this point.

An important feature of the conflict over Lake Pedder was the degree to which the place was portrayed as a symbol; a place of importance to all Australians, and perhaps the world. In his discussion of the inundation of Lake Pedder, Read argues that the ability to universalise a place is an important factor influencing the conservation and management of that place (Read 1996). He notes that "since the 1980s, most special places threatened with destruction must, to be saved, be capable of being universalised...A place must not be special to somebody, it must either be representative or a fine example" (Read 1996: 142). In describing the events surrounding the inundation of Lake Pedder, Read notes that "some of the most passionate defenders of Lake Pedder had only been there once or twice. Yet the conservationists' comparative unfamiliarity with the south-west, and their consequent tendency to compare and universalise what many of them saw and felt at Lake Pedder, was not a weakness of the campaign but a strength" (Read 1996: 127). Although the protesters did not win, and Lake Pedder was inundated in 1972, Read notes that the Lake was nearly saved because it was projected as a symbol as well as a precious object (Read 1996). Lake Pedder could be generalised; it was taken to be symbolic of all those threatened 'wild' places world-wide (Read 1996). The messages from the conservation movement fighting for Lake Pedder were understood by many people who had never even set foot in the place.

The way in which Lake Pedder was portrayed in this protest, and the significance of the place to many of the protesters, can be gleaned from the inquiry that took place shortly after inundation of the lake had begun. The transcripts from the hearings reveal the emotional and spiritual attachments that people had formed with the place and the symbolic and universal qualities that almost saved it. As noted in the previous section, artists and poets appeared as expert witnesses alongside scientists. Even the scientists employed as expert witnesses spoke of the aesthetic value of the Lake. In particular, the beauty and religious qualities of the place were mentioned, reminding us of the cultural influence on the way in which we see and relate to places. Here we are reminded of "the environmentalists who depict a theological version of nature in posters" described above by Langton (1998: 18) in relation to the notion of wilderness. Two quotes from the hearing reveal something of the way in which Lake Pedder was perceived as significant by the non-indigenous people who had visited it. Firstly, a quote from Dr Bayly, a zoologist:

...I know of no-one who has visited Lake Pedder who has not spoken freely of the beauty they saw and felt. I have visited Lake Pedder on three occasions to carry out scientific research, and on each occasion I have been deeply moved by the beauty of the area. To me the most compelling reason why Lake Pedder should be saved from destruction is that is was one of the most beautiful and awe-inspiring natural features that I have seen anywhere - to put it in other words, I would regard the destruction of something as beautiful as Lake Pedder as a great tragedy... (Anon 1973: 18).

And a quote from psychologist, Dr Keil:
It is likely that Lake Pedder provided such (spiritual) experiences for many people and perhaps it is this kind of experience more than arguments about scientific and/or potential economic loss, which, in my view, makes the inundation such a tragic event, comparable with the destruction of a world famous church or temple (Lake Pedder Committee of Enquiry 1974: 112).

The evidence that was heard reveals the emotional attachment that many people formed with the lake. The value of the lake as a recreational area, possessing spectacular beauty and spiritual qualities was stressed. Conceived by the conservation movement as a symbol of all threatened 'wild' places, Lake Pedder was generalised and universalised. People in the country and in cities, in both Tasmania and on mainland Australia, were able to grasp the importance of protecting 'wild' places like Lake Pedder. Lake Pedder became symbolic of the destruction that was occurring to the Australian environment in the name of development, as well as being perceived as a symbol of the threat to our spiritual and emotional well-being if all the 'wild' places like Lake Pedder are lost.

The theme of 'wild' places is of paramount importance to the perception and management of the Australian Antarctic Territory, which covers forty-three per cent of the Antarctic continent. As a place with no permanent human inhabitants, no indigenous people, only a few small settlements, very little infrastructure and virtually no pressure for commercial or military developments (Handmer et al 1993), the human-environment relationship is very different from those in other Australian territories. Antarctica has been described as the "last, great wilderness" and "the last 'untouched' continent on Earth (Doyle and Kellow 1995: 240-241). Bowden has noted that "humans do not belong in Antarctica", but that "for those lucky enough to go there, Antarctica becomes a magnificent obsession, drawing them back again and again" (1997: xi).

Australia has a strong Antarctic heritage which has recently been documented by Bowden (1997) in *The silence calling*. This book documents the involvement of Australians in the Antarctic through the history of the Australian National Antarctic Research Expedition. The role of Australians in the expedition and the discovery of the Antarctic and the Australian contribution to scientific research is documented alongside stories of personal experience from those who have lived and worked in the Antarctic.

The Australian government has been actively involved in the Antarctic environment for over a century, and it has been noted that no other international environmental issue has seen the Australian government and non-governmental organisations (NGOs) take such a central role (Doyle and Kellow 1995). As an environmental issue which crosses the boundaries of nation-states (numerous countries have made territorial claims to the Antarctic), the management of the Antarctic environment has been the focus of national policies, international treaties, conventions and protocols (see Doyle and Kellow 1995; Elliott 1994).
Australia's strong Antarctic heritage, together with the close involvement of the Australian government and NGOs, has been an important factor in the emergence of an environmental consciousness towards the Antarctic (Handmer et al 1993). Interest in the Antarctic was dominated by exploration and national competition for territory during the period of rising nationalism at the end of the nineteenth and the early twentieth centuries. However, the Antarctic is now seen as a place which should be excluded from our search for physical resources (Handmer et al 1993). As environmental consequences of development within Australia are gradually being realised, the government and environmental groups have lobbied for the protection of the "last great wilderness". In this way, the Australian relationship to the Antarctic environment has moved from one of exploration, discovery and nation-building, to one of environmental consciousness and the continuation of leading scientific research. As Handmer et al explain:

The relationship between humanity and the Antarctic environment is dynamic, and is closely tied to the type of ignorance or uncertainty surrounding the southern continent. As we have accumulated knowledge of Antarctica, the relationship has gradually shifted from seeing the environment as threatening, if not terrifying, and as beyond the ability of human to endure; to an environment which has molecular contaminants like the rest of the globe, and which now needs protection from humanity (1993: 30).

Perceived as one of the most beautiful and untouched areas still remaining on Earth, the Antarctic has become symbolic of the environmental destruction that has occurred in Australia and the rest of the world. Although few people will ever experience the Antarctic first hand, it has become a symbolic issue about "the destruction of the last, great wilderness on Earth" (Doyle and Kellow 1995: 253).

3.5 Imagined Places

An important factor in many environmental conflicts is the vision that individuals or groups have for the future of a place. In this sense, the development or protection of a place and its resources are linked to a particular idea or possibility for that place in the future. As Harvey has written, "imagined places, the Utopian thoughts and desires of countless peoples, have consequently played a vital role in animating politics" (1996: 306). The case of the Snowy River in southeastern Australia, and the changing sentiments associated with the river and the associated high country1 illustrate this point.

The Snowy River rises on the south-eastern slopes of Australia's highest peak, Mt Kosciuszko in the Australian Alps, flowing 500 kilometres through New South Wales and Victoria (Seddon 1994). It is famous principally because of the legends of the high country epitomised through Banjo Patterson's ballad Man from Snowy River, and because of

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1The definition of the high country is contested; see the discussion in Hancock (1972). In a management context the high country has been institutionalised under the Australian Alps Cooperative Program (1986), which coordinates management under a Memorandum of Understanding between NSW, Victoria and the ACT.
the Snowy Mountains Hydro-Electric Scheme which began in 1949. This Scheme achieved world-wide recognition for its engineering feats. It provided electricity for southeastern Australia, and irrigation for the westward Murray and Murrumbidgee Valleys through complex storage and diversion of the Snowy, upper Murray and upper Murrumbidgee River systems.

The case of the Snowy River is particularly pertinent given the level of symbolism and iconography surrounding the river. Banjo Patterson's *Man from Snowy River* became a symbol of Australian manhood (Hancock 1972), and both the image of the Man from Snowy River and the Snowy Mountains Scheme have played a central role in the construction of Australian identity, celebrating Australian ingenuity, vision and masculinity (Dominy 1997). The Snowy Mountains Hydro-Electric Scheme was a symbol of development in Australia (White 1981; Lines 1991). It was a project that came into fruition in the era of reconstruction and nation-building following the Second World War, promising electricity to southeastern Australia and irrigation the dry areas inland of the Great Dividing Range (Wigmore 1968). Saddler (1981) has noted that from about the 1920s onwards an "ideology of electrification" developed in Australia, as in the rest of the world. This was "the belief that electricity was the agent and harbinger of efficiency, modernity and the good life at home and workplace alike" (Saddler 1981: 51). The Snowy Mountains Scheme became a symbol for modernisation in southeastern Australia. It promised a new, a better and an easier way of life for people in both city and country.

In his book *Search for the Snowy*, Seddon notes that "the Snowy Mountains Scheme is very much a product of industrial capitalism, and of the values which upheld it. Without those values, it is virtually incomprehensible; with them it seems necessary, almost inevitable" (1994: xxv). Although it is unlikely that such works would be permitted today given environmental considerations, it is important to remember that these works took place in a different era, when development was measured by a different set of standards (see Seddon 1994).

Changing values underlie changing opinions about the management of both the Snowy River and the NSW high country (which forms the catchment of the Snowy and other rivers in the region). Cattle grazing in the high country has always been an important part of Australian heritage, being eulogised through the writings of Banjo Patterson among others. However, in the 1940s and 1950s concern over the degradation of the high country escalated with studies of soil cover and vegetation, and the effects of summer grazing in the high country. The emphasis was placed on catchment protection and there were calls for grazing to be limited (see Hancock 1972). The calls for grazing to be limited were furthered by the development of a nature conservation ethic that saw the establishment of the Kosciuszko State Park (later re-named the Kosciuszko National Park). A long and bitter battle took place over grazing in the Park, with conservation values and the notion of a
'primitive area' eventually winning out, and grazing leases being terminated (see Hancock 1972). Graziers lost a place, while bushwalkers, nature lovers and skiers gained a place.

Similarly the response to changes to the Snowy River since the development of the Snowy Mountains Scheme indicate a change in values. The Snowy Scheme was undertaken in an era of nation-building, whereas the development and its consequences are now viewed in light of more recently acquired environmental understandings and values. The view of Max White, the secretary of the Snowy River Improvement Trust indicates something of the change in attitude that has taken place:

No one is saying that the Snowy Mountains Scheme was wrong; ironically, it is an icon of Australia, just as the Snowy River is. What we are saying is that it was a wonderful solution and an awe-inspiring achievement by engineers in an era when no one really thought too much about the environment (Neales 1996a: 11).

This quote indicates the ability of many people to hold more than one set of values regarding a place, in this case the Snowy River. As Seddon explains, "they can be proud of our great engineering achievement, and be thrilled by the grandeur of a wild river" (1994: xxv). However, the Snowy River is no longer grand and neither could it be described as 'wild'. The changes to the Snowy River system since the development of the Hydro-Electric Scheme has been noticeable to local residents. The volume of water now entering the Snowy River below Lake Jindabyne is less than one percent of its original flow (before it was dammed and diverted for the Snowy Mountains Scheme) (Neales 1996a: 11). These observations of change, and the effect of these changes on the lives and livelihoods of communities along the Snowy River have led to local concern over the health of the river and its environs.

An inquiry into the impact of the Snowy Mountains Hydro-Electric Scheme on the Snowy River is currently being conducted by the New South Wales, Victorian and Commonwealth governments. It aims to address the environmental problems of the Snowy River, and is dealing with difficult and unresolved issues in water management such as the allocation and pricing of environmental flows. This inquiry has highlighted conflict amongst water users in south-eastern Australia. Irrigators and communities who benefit from the diversion of water from the Snowy River into the Murray and Murrumbidgee Rivers claim that environmental flows for the Snowy River cannot be taken from Murray and Murrumbidgee River allocations (Woods 1998; O'Kane 1998). Local concern over the health of the Snowy River has arisen from the attachments that people have formed with the river and its environment, but also from the economic importance of the river to downstream irrigators and farmers and local businesses. Alliances have formed between groups that might usually be expected to disagree on issues relating to the environment. A newspaper headline in the Sydney Morning Herald in 1996 reads: "The once-mighty Snowy River is terminally ill and the imminent prospect of its death is bringing together farmers, loggers, Greens and Aborigines" (Neales 1996b: 11). These diverse local groups
have been brought together by the loss of the Snowy River. They are currently working together to claim back some of the water lost from the Snowy River to the Hydro-Electric Scheme and the Snowy Inquiry offers some hope that the Snowy will be returned to something resembling its former state. The sentiments expressed by local communities along the Snowy River are about a place that has been lost, but they also speak of their vision for the future of the Snowy. The inquiry will decide the future of the Snowy and whether environmental values will prevail or whether an attitude of development will continue to dominate water resource management in Australia.

3.6 Belonging Places

The notion of belonging to a place, or of a place belonging to a particular group of people, has been prominent in many disputes over the environment. This theme is particularly important given the history of white settlement in Australia and the resulting dispossession of Aboriginal people from their land. Settler Australians have displayed a limited ability to comprehend and adjust to this place; ideas and images from other places, particularly Britain, continue to dominate the way we see, use and relate to the land (Johnson 1994). As noted in chapter two, settler Australians are beginning to rethink relationships to place. Amidst this Aboriginal Australians have and continue to fight hard for the recognition of rights in relation to the land and resources to which they belong. As the previous chapter has shown, the question of who belongs in particular places and who particular places and resources (actually or symbolically) belong to are of paramount importance for place and resource management.

In contrast to places that have been conceived of as symbolic to Australians, yet rarely visited, there are those places which are of distinct national significance that are visited frequently, or lived in. Uluru-Kata Tjuta National Park in central Australia, provides an example of a place conceived as a national icon (the distinctive red rock is widely used in Australian advertising) that has moved between these categories. Uluru was an inhabited place, lived in and ascribed meaning by the Anangu Aboriginal people prior to white settlement in Australia. Their traditional country and lifestyle was severely disrupted as non-Aboriginal Australians made their way into the centre of Australia (see Layton 1985). In the minds of white Australia, Uluru was perceived as the centre of Australia, empty and uninhabited. Even as recently as 1956 only 100 non-indigenous people visited Uluru (then known as Ayers Rock) (Donovan 1988, cited in Dovers et al 1992: 53). As a symbol or icon of Australia, Uluru has continued to attract attention. Visitor numbers have increased over forty years from 100 in 1956 to 337,018 in 1996 (Uluru-Kata Tjuta Cultural Centre pers comm 1998).

In 1985 Uluru-Kata Tjuta was handed back to the Aboriginal custodians, the Anangu people. Uluru is again a place inhabited by and formally belonging to its traditional
owners, but leased back to and co-managed with the Commonwealth government. It continues to draw large numbers of national and international tourists. Wright, a white woman, explains the transition:

Ayers Rock, Uluru, has now been 'returned' to the Aborigines under our land title, though, for them, it has never belonged to us. But since the growth of the tourist boom in Central Australia, it has become what is oddly known as a 'tourist Mecca', although of course no sacred significance is attached to the term. The Hawke government's decision to grant Aborigines title to the rock has been greeted with rage by the tourist entrepreneurs and operators to whom it represents a source of income. For, the Aborigines who now officially own the rock can control access and direct tourists (with their litter and unmeaning graffiti) away from areas too sacred to be shown (Wright 1985: 32-33).

The handing back of the land prompted much debate between the Northern Territory (NT) and the Commonwealth government, providing yet another example of conflict over the right of the Commonwealth to wield power over the states in environmental matters. The handover of this national icon, facilitated by the Commonwealth government, was perceived as a loss of states' rights and was portrayed by the NT government as a loss of a place to the Australian people. For example, in response to the Federal Government's announcement to handover Uluru to the Anangu people, the NT government launched a national advertising and media campaign which asserted that "the Rock belongs to all Australians" (Toyne 1994: 55).

Uluru-Kata Tjuta National Park is now managed jointly by the Anangu people and Environment Australia2. The title deeds and the lease rest with the traditional owners, who are entitled to live in the park and conduct traditional activities subject to the Plan of Management. A Board of Management, with a majority of Aboriginal people and a chair nominated by the traditional owners, prepares the management plan, makes management decisions, monitors activities in the Park and advises the Minister for the Environment (Toyne 1994). Significantly, the "Aboriginalization of national parks" that has occurred through parks such as Uluru and Kakadu, also in the Northern Territory, challenge the concepts of wilderness, naturalness and pristineness that have dominated the national park culture in Australia (and have been evident in some of the cases discussed above) (De Lacy 1994: 495). These concepts have served to erase indigenous people and their cultures from the natural landscape (see section 3.9).

The question of belonging has plagued place and resource management. The notion of a place belonging to 'all Australians' as was proposed of Uluru, is no better illustrated than through the ongoing management dilemmas facing Australia's most heavily populated environment, the coastal zone. The coastal environment of Australia is a place inhabited by the majority of the Australian population and frequently visited by those who live inland.

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2The future of Federal arrangements for environmental management are uncertain as the Environmental Protection and Biodiversity Conservation Bill is currently before the Australian Parliament, and a Federal Election will be held on October 3, 1998.
"The beach" is celebrated as an important part of Australian identity, representing "Australia's true democracy" (Pilger 1989: 10):

All principal beaches in Australia are public places...there are no proprietal rights on an Australian beach. Instead, there is a shared assumption of tolerance for each other, and a spirit of equality which begins at the promenade steps (Pilger 1989: 12).

Despite the importance of the coast to the Australian identity, or precisely because of this, it has been noted that "Australians risk loving the coast to death" (Faulkner 1995: iii). Degradation of the coastal environment and conflict over its use has prompted much research and many inquiries, going beyond the physical environment, into values and attitudes towards the coast. One of the most significant of these was carried out by the RAC in the early 1990s. The reports of the inquiry highlight the importance of the coast to the lives of Australians. In the final report of the RAC Coastal Zone Inquiry, it states that:

The coastal zone has a special place in the lives of Australians. Most Australians want to live there and if they can't they want to take their holidays there. It contains diverse ecosystems and a high proportion of Australia's industrial activity occurs in the zone. It is a priceless national resource (RAC 1993b: 7).

This quote obviously captured the imagination of the Commonwealth Government, being recast (although not acknowledged), in the 1995 Commonwealth Government's coastal policy, which read:

The coastal zone has a special place in the lives of Australians. Most Australians want to live or take their holidays there. It is a priceless national asset (Department of the Environment, Sport and Territories 1995b: 1).

These statements indicate the perceived national significance of the coastal zone. These arise out of the recognition of the individual and group attachments of so many Australians to the coast. Although the resource-related conflict discussed above surrounding the inundation of Lake Pedder was inspired by the attachments of a relatively small group of individuals, resource-related conflicts over the coastal environment necessarily involve the values and attachments of many more individuals and groups.

The way in which different values associated with a place or resource are negotiated through the process of resource management has implications for the relationship between the individual or group ascribing the values and the place or resource. For example, it is possible that the management of a resource can protect certain values and meanings at the expense of other competing values. Reports commissioned by the RAC for the Coastal Zone Inquiry identified this as an important issue concerning the involvement of Aboriginal and Torres Strait Islander people in the management of the coastal zone. In particular, the 'stakeholder hierarchy' employed by resource management organisations in community consultation programs was identified as a significant factor (Altman et al 1993). Such a hierarchy concerns who is recognised as a stakeholder in resource management, and what
status or role they are given in relation to the management of the resource. This report argues that where there is competition between distinct uses of an area or resource, the prior interests of indigenous groups should be recognised (Altman et al 1993). As shall be seen in the case of the Barmah-Millewa Forest, the Yorta Yorta people have asserted that current forest uses such as logging and cattle grazing are destroying the cultural and environmental values that they ascribe to the forest.

Similarly, another consultancy report commissioned for the Coastal Zone Inquiry identifies that:

The underlying cause of all these [coastal zone] concerns and conflicts relate to inadequate levels of control by Aboriginal and Torres Strait Islander people over what they regard as their traditionally owned domains on land and sea. Inadequate control occurs in several ways, including:

• lack of recognition of traditional ownership;
• inadequate or non-existing joint management arrangements;
• inadequate or non-existing consultation procedures (Smyth 1993: 98).

Smyth found that the concerns and conflicts faced by Aboriginal and Torres Strait Islander people in the coastal zone "reflect the extent to which legislation and/or policies recognise the special relationship and interdependence of indigenous people and their environment; the greater the recognition of that relationship, the fewer concerns and conflicts" (1993: 214). In addition to this, Smyth commented on the north/south divide which exists in Australia. He noted the difference that occurs between northern Australia and southern Australia in relation to the acceptance of Aboriginal identity. Although in northern Australia Aborigines may still be struggling for the recognition of their rights to land, sea, culture and resources, their identity as Aboriginal people is not questioned (Smyth 1993). This is very different to the situation in much of southern Australia, where Aboriginal people are struggling for the recognition of their identity in addition to recognition of their rights in relation to land and resources. This arises from a greater dislocation of people and place, both physically and temporally. Smyth explains that "without the recognition of indigenous identity it is impossible to secure recognition of indigenous rights" (1993: 215). The identity of many Aboriginal groups is at stake in their search for rights to the land and resources to which they belong. This will be evident in the case of the Barmah-Millewa Forest.

Recognition and a greater understanding of individual and group attachments to the environment are essential if conflict and contestation over place and resources are to be avoided. This is particularly important given the cross-cultural nature of associations with the Australian environment.
3.7 Authentic Places

Environmental disputes in Australia frequently involve competing claims of association with the environment. A feature of more recent environmental disputes involving both Aboriginal and non-Aboriginal claims of association with the environment has been the notion of authenticity. This involves a judgement of the trustworthiness or truthfulness of the claim, a theme implicit in many of the cases discussed above.

Along with the contestation of scientific knowledge, a key feature of the debate over Coronation Hill is the contestation of Aboriginal knowledge. Much of the debate about Coronation Hill has been over the authenticity of Aboriginal claims to sacred sites (see for example Gelder 1991; Jacobs 1993). For the Jawoyn (or Djuuun) people, Coronation Hill (Guratba) is one of a number of interconnected sites associated with the Bula religious belief (Jacobs 1993). Coronation Hill is part of what the Jawoyn call "sickness country", and the Jawoyn argue that, if Coronation Hill is disturbed, Bula will "shake up the country", resulting in widespread destruction (Jacobs 1993: 103). Concerns over authenticity have been related to a number of issues, including: 'where' Bula actually resides; whether it is a Jawoyn responsibility to speak about the site and to care for it, and whether Bula is a 'vital' component of Jawoyn cosmology and not 'archaic' (Jacobs 1993: 107).

There have been many, at times contradictory, recordings of the sites associated with Bula and this has added to the controversy surrounding Coronation Hill (Jacobs 1993: 103). In order to come to terms with the threat mining would pose to the sites associated with the Bula Dreaming and the variety of other interests in Coronation Hill and Kakadu National Park more generally, the Federal government employed the help of the recently created (and short-lived) RAC (Jacobs 1993; Toyne 1994). Numerous reports were produced for the RAC, documenting the value of Coronation Hill to the Jawoyn (Keen and Merlan 1990), tourism and recreational values (Wood 1990), the flora and fauna of the area (Woinarski and Braithwaite 1990) and the contribution of mining to the Northern Territory economy (Stanley and Knapman 1990). Having considered all the evidence from the prepared reports, written submissions and hearings, the final report concluded that amongst the Jawoyn there was a great deal of opposition to mining, and that mining would adversely affect the sites associated with the Bula Dreaming (RAC 1991). The RAC reported that the dilemma now facing the Australian Government, regarding whether or not mining should proceed at Coronation Hill, was whether it should set aside the environmental risk and the strong views held by the Aboriginal people responsible for the area, in favour of securing the economic benefits of the project (RAC 1991).

The Commonwealth Government did decide not to mine at Coronation Hill, and there have been various explanations for this decision (see Gelder 1991; Toyne 1994). It is
interesting to note here that the demise of the RAC, the body responsible for eliciting the multiplicity of values and meanings ascribed to places like Kakadu National Park and the Coastal Zone, was understood to be due in part to the exposure of political (ie value-based) decision-making in the Coronation Hill case when the Prime Minister Bob Hawke, over-rode his Cabinet and gave primacy to Aboriginal values (Lowe 1993, cited in Stewart and McColl 1994; see also Economou 1996).

The decision not to mine at Coronation Hill did not end the issue of mining in Kakadu National Park and it did not resolve dispute over the values of the area. As this thesis is being written, a new mining operation looks set to proceed at the proposed Jabiluka Uranium mine, one of the world's largest high-grade uranium deposits, which lies within an excision in stage two of Kakadu National Park (Sweeney 1996). The Commonwealth Government has approved the new mine, ignoring the concerns expressed by environmental and indigenous groups, in favour of economic interests. Only political lobbying and rallying now stands between the preservation of cultural and environment values, and the commencement of mining. Senator Bob Brown, a leading figure in the dispute over the Franklin Dam in south-west Tasmania, told a rally of 5000 protesters that the issue of uranium mining at Jabiluka would cause more controversy than Tasmania's proposed Franklin Dam had in the 1980s. He has said that "having come through the Franklin campaign, where there were 6000 who went to the blockade, 1500 arrested, 500 jailed, I think this is going to be bigger" (cited in Scott and Towers 1998: 5).

In an attempt to raise public awareness of the proposed mine at Jabiluka, Jacqui Katona, the executive officer of the Gundjehmi Aboriginal Corporation in the Northern Territory, travelled to southern Australia with traditional owners of the lands which will be mined if Jabiluka goes ahead. Senior traditional owner of the land, Yvonne Margarula of the Mirrar clan, told the media that "our priority is protecting country and by doing this protecting our people and our future. We say no to mining a Djabulugku" (cited in Winkler 1996: 8). Demonstrating the broader significance of the proposal to mine within Kakadu National Park, Jacqui Katona stressed the importance of the area to the Australian public. She remarked that "there's many thousands of people who have travelled to Kakadu and have had the opportunity to share the beauty of the place" (cited in Winkler 1996: 8); again the universalisation of place is evident. It remains to be seen how the cultural and environmental values ascribed to Jabiluka will be weighed up alongside the economic and utilitarian values of the mining industry.

At times varying opinions from the Gundjehmi Aboriginal Corporation regarding mining at Jabiluka have been reported in the media. This reflects the debate that often exists within Aboriginal communities regarding the economic value of developments such as mining, and it illustrates the differences of opinion that can exist within Aboriginal communities. (This appears to be a generational issue - in the 1970s Aboriginal
communities, under pressure, agreed to mining - current generations tend to disagree.)

These differences of opinion are not well tolerated by white society which often assumes and expects that there will be only one Aboriginal perspective. Further, this diversity within Aboriginal communities is sometimes used as a means to undermine Aboriginal claims (see Gelder 1991 on Coronation Hill), or to undermine resistance to development projects (see Coombs 1980). This highlights the need to understand conflicts over the environment in terms of the broader social, cultural, economic and political contexts which influence the way in which place is constructed. Further there is a need to understand whose meanings and values are being acknowledged or denied and who is making the decisions.

The cases of both Coronation Hill and Jabiluka have seen the alignment of conservation issues with issues of indigenous rights to land and resources. This green/black alliance is not new in Australia (see Burnum Burnum 1987; Murphy 1996). For example, we have increasingly seen Aboriginal lands rights successes being realised through options already established by environmental objectives, particularly in non-urban areas such as Uluru and Kakadu (Jacobs 1996). Whilst this alliance can and has been seen to work for the benefit of both interest groups, the individual needs of Aboriginal people and the environment must remain the focus of such alliances so that it will be clear if and when the needs of one interest group is being compromised for the benefit of the other (see for example Anderson 1994).

3.8 Contextualising Places

Many of the cases considered above relate to places considered to be of national and in some cases even global significance. In these cases, the demonstration of the broader significance of the place or resource has often played an important role in development of the dispute. Read's (1996) view that there needs to be a demonstration of the universal importance of a place in order for it to be saved may account for the fact that conflicts involving places of local or regional significance have received much less public and academic attention. There is very little work that focuses on the values ascribed to places of local or regional significance.

One factor contributing to this focus on places of national or even international significance is seen to be related to the administrative requirements for conserving or protecting places. For example, three out of the four criteria for nomination of a natural environment to UNESCO's World Heritage List include the word 'example' (Read 1996). As Read points out, it is only the fourth criterion, concerning the preservation of threatened plant and animal species which values the particular, and even these species have to be "of outstanding universal value" (1996: 142). This formal requirement helps to determine the academic and public focus on places of universal significance; it may also however, work to give previously local places, global significance. Read contends that environmental
bureaucracy does not respect particularity, that "we have the words and feelings [about a place] but not the rationalist context into which our [local and particular] expressions of meaning can be understood by planners and assessors" (1996: 147). Thus research into the meanings and values ascribed to particular places and place-based resources becomes of both academic and practical import. Read's work in particular demonstrates the intensity of feeling that can surround the local and the unremarkable.

The research that has focused on places of local or regional significance reveals in more depth and detail the multiple and often competing meanings and values ascribed to places and resources. Boyd et al, in their study of the 'cognitive ownership' of four heritage sites in south-eastern Australia, document the distinctive meanings and values different interest groups place upon the sites (Boyd et al 1996). For example, their study of the Beachmere midden complex in Moreton Bay, southeast Queensland reveals "a complex variety of claims to association with and/or cognitive ownership of the Beachmere midden complex" (Boyd et al 1996: 132). Recent landuse developments have presented a threat to the integrity of the middens, and one of the shell middens is located within an area subject to a proposal to extract sand to meet the demands of the local construction industry (Boyd et al 1996). In describing and mapping the various values and meanings ascribed by each of the various groups to the midden, differences and alliances between individuals and groups become clear. The various values assigned to this heritage site are shown to be very different, reflecting influences such as statutory and legal responsibilities, political inclinations, and personal experiences, politics, world views and lifestyles (Boyd et al 1996: 129). Importantly, the interpretation of the case reveals the layers of association with the midden that must be negotiated if effective cultural management is to be achieved. It reveals the power of local economics in enhancing or marginalising the meanings and values ascribed to places. This analysis also contextualises the resource-related conflict, revealing the broader social and political frameworks in which the interested parties view the site.

The case of Lake Victoria in south-western NSW also highlights the importance of understanding the local significance of places and resources. In 1994 the largest documented Aboriginal burial ground in Australia was unexpectedly discovered when Lake Victoria was drained for maintenance work, formally marking the beginning of conflict over the management of the Lake (Ellemor 1994). Lake Victoria is operated as a water storage unit on the Murray River, ensuring adequate water supply to Adelaide and other downstream areas. The discovery of this burial site brought cultural heritage concerns into the arena of resource management, leading to conflict between the cultural, environmental and economic values assigned to the lake. An Environmental Impact Statement has been prepared by the Murray-Darling Basin Commission (MDBC) as part of a proposal for the future management of Lake Victoria. The document acknowledges that "the debate surrounding the future of Lake Victoria is a reflection of the many differing values in the
community", which can be broadly characterised as economic, cultural and environmental (MDBC 1998: 15; see also Ellemor 1994). The report states:

The essential conflict at Lake Victoria is about cultural heritage versus water resource security. Water users are interested primarily in protecting the security of water supply. The local Aboriginal community wants the Lake nurtured and restored, they want to conserve their cultural and social links with the Lake, and they want to see an ongoing role for their people in the future management of the Lake. Within the Aboriginal community, there is also conflict over whether or not burials would be 'desecrated' if they are periodically inundated through the operation of the Lake (MDBC 1998: 17).

A long and complex path involving litigation and negotiation between and amongst stakeholders led to this Environmental Impact Statement. This path has seen the MDBC (the body responsible for the management of the Lake to meet the needs of the various states involved) move from a fundamental concern with economic values associated with the supply of water quantity to the states, to a position which overtly recognises the cultural and environmental values of the resources they manage (Ellemor 1994). Whether this is rhetoric or a real commitment remains to be seen. It does, however, represent a significant move for resource management in Australia. There is increasing pressure for resource managers to recognise cultural and environmental values and to consider them alongside, and in conjunction with, the more traditional economic and utilitarian values ascribed to natural resources.

A closer look at the significance of the coastal environment to individuals and groups reveals the diversity of values assigned to it. The reports from the RAC Coastal Zone Inquiry emphasise (implicitly, if not explicitly) the very heart of the matter; that Australians do have profound and very different attachments to places, and that precisely because of these different attachments, these places are subject to competition and contestation over the use of their resources. The Final Report of the Coastal Zone Inquiry notes that the "growth in the intensity of use of many parts of the coastal zone for residential, recreational and development purposes is indicative of the great value that Australians attach to this part of the country" (RAC 1993b: 34). It notes that increased competition for many coastal resources reflects people's differing views about the values of the resources and their use (RAC 1993b: 34). It found differing views to be held about the functions of development, environmental protection, aesthetic enjoyment, equity and the appropriate role for governments to play in resource management (RAC 1993b).

A study of the far north coast region of NSW has attempted to document coastal landscape and lifestyle values. In this study, Dutton et al have noted that more than three quarters of Australians live within fifty kilometres of the coast, and as they explain:

it is therefore hardly surprising that coastal environments play a significant role in the daily lives of Australians or that coastal environments are under considerable pressure from most development and resource use activities (Dutton et al 1995: 245).
This work highlights the difficulty of accounting for the social significance of coastal environments. It explains that while significant advances have been made in our understanding of the multiple values of coastal resources, "planners and decision-makers find it increasingly difficult to account adequately for what might be termed the 'amenity' (or 'non-use') values of coastal environments" (Dutton et al 1995: 247). In addition, it is noted that "there have been relatively few efforts to document community understanding of those values and even fewer attempts to apply that understanding to the development of coastal policy (Dutton et al 1995: 247). They also emphasise the lack of linkage between an understanding of the social systems at work in a place and the process of natural resource management. They note the current lack of understanding of the values that the public has for natural resources, and the limited institutional capacity to include social values into the decision-making process (Dutton et al 1995). This latter point is important, and will re-emerge in the context of the Barmah-Millewa Forest. With the absence of any understanding of the social values people ascribe to the coast, it is likely that the aspects of people's lifestyles and landscapes that these social values reflect, will be undervalued. This may result in the loss of lifestyles and landscapes that are "fundamental to our cultural identity" (Dutton et al 1995: 247).

The research discussed in this section emphasises the importance of including the social values ascribed to the environment into the process of resource planning and management. In doing so, it illustrates a critical issue currently facing resource management; how to elicit and include the diversity of meanings and values that people ascribe to the places and resources being managed. Many of the cases of environmental disputes reviewed thus far illustrate the importance of describing the context of conflicts over the environment as a first step to the inclusion of social values in the resource management process. Many of the cases reviewed also emphasise the cultural values ascribed to natural resources. The following section will consider the relationship between natural resources and cultural values in more detail.

3.9 Nature and Culture

In Australia, institutions of management have traditionally separated natural resources from cultural resources, with different policies, legislation and government agencies to deal with each of these. This means that resource management has traditionally not had the means to deal with the cultural values that may be ascribed to natural resources (see chapter one). A body of literature has emerged which recognises the connection between the physical environment and human association with it, through the concept of heritage (see Purdie et al 1996):

Australia's natural and cultural heritage is integral to the environment. Our natural heritage is the physical landscape - the biological and physical elements such as plants, animals, mountains, rivers, deserts and oceans. This landscape is also imbued

This literature has largely emerged from research conducted by the AHC. Although the distinction between 'natural' and 'cultural' heritage is still made, the cultural values associated with natural resources are recognised. However, this notion of heritage generally remains separate from the management of land and water resources in policies and institutional arrangements. It is seen as one, often separate, aspect of resource management. For example, the extract cited above from Purdie et al is taken from chapter nine of the 1996 report on the Australian *State of the Environment*. Preceding this chapter on *Cultural and natural heritage*, are chapters entitled *Biodiversity, The atmosphere, Land resources, Inland water, and Estuaries and the sea* (Commonwealth of Australia 1996). The Australian Commonwealth Government's institutional arrangements also emphasise this separation.

Under the umbrella of Environment Australia, the Australian Heritage Commission, which considers issues relating to natural and cultural heritage, operates independently of sections dealing with issues relating to biodiversity and land and water management. In practice this may mean that cultural or heritage aspects of resource management may be left unattended by resource management staff who are not trained to identify or attend to such issues (see Lennon 1998).

Paradoxically, the separation of cultural aspects of resource management can occur at both the purely 'development' end of the management scale, and at the 'green' conservation end of the scale. At the 'development' end of the management scale, cultural values are squeezed out of the decision-making process because resource management operates within the broader governmental economistic paradigm where economic and utilitarian values ascribed to the environment prevail over cultural values. For example, the decision by the Federal Government not to mine at Coronation Hill because of the cultural value of the area to the Jawoyn Aboriginal people, has been viewed by some of the media and industry as "'soft', a sentimental decision which responded to a poorly understood and little known religious cult, rather than the economic imperatives of a nation in recession" (Jacobs 1993: 103, drawing on Gelder 1991). At the 'green' conservation end of the management scale, cultural values can also be excluded as the environment is valued purely for its 'natural' qualities and pristine condition. Griffiths (1991: 29) has noted that "it is part of the 'green' aesthetic to separate, and sometimes eliminate, culture from nature, and 'wilderness' has become one of its simplest and most popular manifestations." Wilderness has been described as "land which is remote from, and undisturbed by, the influences and presence of settled people. The concepts of remoteness and primitiveness (naturalness) are critical to the definition of wilderness" (Hall 1992: 4). The positive values of wilderness have been described as including the preservation of biodiversity, maintaining sources of spiritual renewal, opportunities for recreation, and the maintenance of opportunities for scientific study in natural ecosystems (Robertson et al 1992).
The contentious aspect of the wilderness concept relates to different understandings of the relationship between 'nature' and 'culture'. There has been much criticism that the concept of wilderness ignores the relationship of indigenous peoples to their land (see Langton 1998; Griffiths 1991) (see also section 3.3). Langton has explained that the term "has the effect of denying the existence of Aboriginal biogeography", and has been used as "a device to target Aboriginal land in a form of ecological imperialism" (1998: 18). Bird-Rose explains that the egocentric quality of the standard European and American-derived concepts of wilderness, which have informed the Australian concept of wilderness, involve "the peculiar notion that if one cannot see traces or signs of one's own culture in the land, then the land must be 'natural' or empty of culture" (1996: 17). In more recent wilderness literature and policy, it is now very carefully noted that "Aboriginal custodianship and customary practices have been, and in many places continue to be, a significant factor in creating what non-Aboriginal people describe as wilderness" and that "non-Aboriginal people perceive and value 'naturalness' as the absence of impacts of colonial and modern technological society (Vang and Brown 1992, cited in Hall 1992: 4). However, by emphasising pristineness and remoteness, the concept largely excludes any cultural values associated with non-indigenous practices and remains somewhat contested. The conflict over the high country in NSW (considered earlier in section 3.5) and Victoria illustrates this point.

Work by Griffiths (1991) on the Victorian high country, and Read (1996) on the high country in NSW emphasise the importance of recognising the cultural values of areas of natural significance. Mountain cattlemen have been taking their stock for summer grazing in the high plains of Victoria since the 1830s and 40s (Griffiths 1991). Restrictions on grazing began in 1945, and in 1989 the Victorian Alpine National Park was declared, bringing an end to grazing of the high country. In the campaign that was waged against the National Park, "cattlemen have insisted that they represent a diminishing and valued cultural asset" (Griffiths 1991: 27). The issue at stake has been whether or not the pastoral values of the area should be represented in the mountain landscapes that are set aside as National Park (Griffiths 1991). Dominy has explained that in creating national parks and wilderness areas, nature conservation legislation can be seen to endanger "the survival of alpine rural culture as high country cattlemen lose their value to the national economy" (1997: 238). The declining value of farming products have contributed to the marginalisation of these high country rural communities, their culture and their identity. This presents a complex case, involving competing interpretations of the history of the high country, and competing claims to the economic, environmental and cultural value of a particular area.

Read documents a similar case for the Namadgi National Park in the ACT, where grazing leases were terminated because they were considered to be inconsistent with the philosophy for Australian national parks (1996). Read documents the loss of this country to local landholders whose family history and identity revolves around their association with
the high country. As Lennon has noted, "park management culture tends to eradicate the memory and relics of past European uses in favour of an image of naturalness and primitiveness" (Lennon 1988: 420). Griffiths notes that the modern wilderness movement advocates "the stripping back of layers of history in order to recover an earlier ideal time" (1991: 22). In some cases cattlemen's huts and homesteads have been pulled down or vandalised in the high country, and grazing continues to be banned despite arguments that some areas were "human-created landscapes" (Read 1996: 58). In other arenas, the history and cultural heritage represented by the *Huts of the high country* has been described as "an integral part of our sense of space and place" (Hueneke 1982: viii). The conflicting values of areas such as the high country in NSW and Victoria are difficult to resolve, given that cultural, environmental and economic values are linked to very different notions of the same place. The conflict is based on competing interpretations of the past, which are used in debates over the present and the future of the high country (Massey 1995a).

The important point that these examples highlight is that despite the exclusion of cultural values at both the 'development' and 'green' conservation ends of the management process, cultural values are inherently linked with the both economic and environmental values. The industries driving the economic and utilitarian values ascribed to resources generate their own culture over time, becoming part of the livelihoods and heritage of many families. For example, family firms have played an important part in building the primary industries of Australia (on agriculture see Davidson 1981; on forestry see Dargavel 1995). The indigenous cultural heritage of Australia has been embraced by the conservation movement in Australia, and to a degree the 'wilderness' ethic has evolved to recognise prior indigenous existence. However, the place of non-indigenous cultural heritage remains contested.

In many of the cases considered in this chapter, the distinction between cultural and natural resources has been an important factor. Inherent in this distinction are particular understandings of the relationships between nature and culture. The cases involving indigenous interest or concerns over resource management have particularly highlighted the false distinction between natural and cultural resources. For example, at Kakadu National Park, resource management practices which recognise indigenous cultural heritage values as well as natural heritage values are now in place (Press et al 1995). At Lake Victoria in southwestern NSW, resource management is beginning to take account of the cultural values ascribed to the Lake. The conflict over the high country illustrates the political, ideological and administrative difficulty of considering the cultural values non-indigenous people ascribe to resources.

Both black and white histories and attachments to places are increasingly becoming important considerations for resource management as issues of indigenous land rights and Native Title are played out in Australia. The political process requires Aboriginal
Australians to demonstrate their own (continuous) relationship with place. In response to this, non-Aboriginal Australians are increasingly thinking and talking about their own associations with places and resources. These issues will be considered in more detail in the following chapters through the case of the Barmah-Millewa Forest.

3.10 Conclusions

Building on the theoretical discussion of chapter two, this chapter has discussed some notable environmental disputes in Australia to illustrate the multiplicity of meanings and values ascribed by various interest groups to places and resources. The discussion of environmental disputes has shown that contested meanings and values underlie nominally resource-related conflicts. In exploring the relationship between places, resources and values, this chapter has revealed opportunities for the application of place theory to resource management.

This chapter has revealed some of the important themes emerging from environmental disputes in Australia. The traditional conservation versus development model of dispute has become more sophisticated as the conservation movement has embraced indigenous issues, as notions of heritage have infiltrated the debate, and as the relationship between nature and culture has been rethought. Questions of the authenticity and the relative worth of claims to place and resources have become of paramount importance. This has served to complicate the domain in which resource management operates, calling for new ways of eliciting and including the multiplicity of meanings and values into the resource management process. Above all, this chapter has revealed that a politics of place and identity has been and continues to be associated with conflict over the Australian environment. The themes identified in this chapter will be further explored through the case of the Barmah-Millewa Forest in the following chapters.

This chapter has found that although always implicit, too little attention has been given to the values and meanings ascribed to particular places in the context of resource management. Various values have often been identified, and broad statements of significance made, yet the practical importance of these has rarely been explored. This thesis aims to address this gap through a detailed study of the Barmah-Millewa Forest in southeastern Australia. The methodology employed in this study, including the reasons for choosing the Barmah-Millewa Forest, are considered in the following chapter.
CHAPTER FOUR

METHODOLOGY

4.1 Introduction

An exploration of the connection between place construction and resource management through the case of the Barmah-Millewa Forest requires an understanding of the social and cultural meanings that are ascribed to the forest in the process of place creation. Such an approach recognises that social 'reality' is constructed by individuals and groups as they act in and give meaning to their lives, and that there is therefore not one social 'reality' but a multiplicity of constructions of what is occurring in the social world (see Eyles 1988). Further, the approach taken in this thesis acknowledges that some constructions of 'reality' have come to be seen as more fundamental or 'essential' or 'natural' than others (Jackson and Penrose 1993b). This approach emphasises the political dimensions of the relationship between culture and society, and considers "the extent to which the cultural is political" (Jackson 1989a: 2). In this way, this thesis draws from interpretive approaches adopted in human geography (see Eyles 1988) while recognising that there are not only multiple meanings and multiple constructions of 'reality', but that these meanings are often contested, involving relations of dominance and subordination (Jackson 1989a).

A plethora of qualitative research methods which focus on eliciting and understanding meaning in various social contexts have been developed in the fields of anthropology and sociology, and have been employed in human geography for at least the last fifteen years (see Eyles 1988). These approaches provide the researcher with a range of ideas and techniques which can be employed to gain an understanding of the particular social setting under study (Burgess 1984). The techniques of interviewing, observation and document analysis have been employed in this thesis. These have given an understanding of the meanings assigned to the Barman-Millewa Forest by the various interest groups. They have provided insight into the various constructions of the forest and the cultural politics (Jackson 1989a) generated as meanings are negotiated and contested through the processes of natural resource management and Native Title.

This chapter outlines the methods I have used to explore the case of the Barmah-Millewa Forest. The first section of this chapter outlines the case study approach to research and justifies the choice of the Barmah-Millewa Forest. This is followed by a description of the various qualitative research methods used to collect data. The influence of the Yorta Yorta Native Title Claim on this process is considered as well as issues relating to the credibility and dependability of the research. The following section then outlines the way in which the data has been collated and analysed. The important role the researcher plays
in the research process is discussed, outlining my position as researcher and my relationship with research participants. Issues of confidentiality and reporting are considered. Finally, the initial research questions (presented in chapter one) are posed again, and supplementary questions added to operationalise and guide the case study of the Barmah-Millewa Forest.

4.2 Case Study Approach

The purpose of this research is to explore the connection between place construction and natural resource management. In order to achieve this purpose, I have chosen to explore these phenomenon through a single in-depth case study. Case studies are considered particularly valuable as they ground observations and concepts, allowing an holistic study of complex social contexts (Orum et al 1991).

The nature of case study research within the social sciences has received much attention (see Stake 1994, 1995; Yin 1984, 1993; Feagin et al 1991; Ragin and Becker 1992). The approach has been widely used in many settings, including policy, political science and public administration research; community psychology and sociology; organisational and management studies; city and regional planning research, and it is a popular approach used in dissertations and theses in the social sciences (Yin 1984: 13). The case study approach is also used in a range of geographical research, including human geography where there is a perceived need for "theory informed descriptions of specific places to enhance our understandings and explanations of the world" (Eyles 1988: 3). Perhaps because case studies have been widely used in a variety of settings, some critics claim that the term has been over-used (see Robson 1993) and some debate exists over what constitutes a case study (see Stake 1994).

A case study is generally defined as an inquiry that explores a contemporary phenomenon within its 'real-life' context where the relationship between phenomenon and context is often not clear (Yin 1984: 23). Most importantly "we study a case when it itself is of very special interest. We look for detail of interaction with its contexts. Case study is the study of the particularity and complexity of a single case, coming to understand its activity within important circumstances" (Stake 1995: xi). Much criticism of the case study has been concerned with the representativeness or typicality of the case and hence the degree to which the study of one particular case can be generalised to other cases (see Stake 1995; Yin 1984). However, the value of the case study approach lies in the links it creates between theory and observation by allowing theoretical generalisations to emerge from detailed investigations of selected social settings. In this way, it is more appropriate to judge the interpretations of the case on the strength of the theoretical reasoning rather than on the typicality and representativeness of the case (Eyles 1988).

Three heuristic types of case study have been identified by Stake (1994, 1995). These are intrinsic, instrumental and collective case studies. The collective case study
involves the study of more than one case, and has not been applied to this research. The intrinsic case study is undertaken to gain a better understanding of the particular case, whereas in the instrumental case study a particular case is examined to provide insight into an issue or to refine theory (Stake 1994). Researchers often have several interests in one case, causing the research to operate between the intrinsic and instrumental case study (Stake 1994). This research occupies the "zone of combined purpose" that separates the intrinsic and the instrumental case study (Stake 1994: 237). The Barmah-Millewa Forest has been chosen primarily as an instrumental case study through which to explore the connection between place construction and natural resource management. Substantive resource management issues such as Native Title and indigenous rights to resources, community participation and consultation, and indigenous and non-indigenous attachments to place have been explored through this case. The findings of this case have been generalised to existing theories to enhance our understanding of these substantive issues. However, in exploring these broad issues through the competing interests in the management of the forest, an interest in the case itself has emerged. This has meant that the thesis has also drawn out some implications for the management of the Barmah-Millewa Forest.

Theory, including literature, policy and substantive issues (Yin 1993) has guided and defined this case study. The theoretical literature relating to place and place construction and policy and substantive issues relating to resource management and indigenous rights to resources in Australia have informed the definition of the research topic and the broad research questions to be explored. Key issues appearing in the literature and key policy and substantive issues facing resource management in Australia were also used to select the case to be studied (see Yin 1993). The resulting choice of the Barmah-Millewa Forest has been made to maximise what can be learnt from this single case (Stake 1995). Having been chosen with key policy and substantive issues in mind, the case of the contested interests in the Barmah-Millewa Forest offers insight into some of the challenges currently facing resource managers. The following section will outline the choice of the Barmah-Millewa Forest as a single case study.

Why the Barmah-Millewa Forest?

The Barmah-Millewa Forest (figure 5.1, before chapter five) has been chosen as the case study for this research because it captures the complexity currently being experienced in many resource management issues in Australia. These include substantive resource management issues such as the philosophy of multiple-use on public land, the multiplicity of meanings and values ascribed to places and resources, community consultation and participation, and Native Title and its implications for resource tenure and management.
In this context there are a number of features of the Barmah-Millewa Forest that combine to make it a suitable case study for this research. As public land, the Barmah-Millewa Forest is socially important to a broad range of interest groups and individuals, and ongoing conflict over resource management in the forest is characterised by multiple uses, meanings and histories. In addition to this, the public land of the Barmah-Millewa Forest and the waters of the Murray River which flows through the forest, are currently subject to a Native Title Claim. This has elicited contested meanings and histories of the forest, many of which have not been publicly heard before now. It also raises issues of resource tenure and management that will become increasingly more common in Australia as it struggles with the challenge of Aboriginal and non-Aboriginal reconciliation.

Resource management organisations with jurisdiction over the Barmah-Millewa Forest are currently engaging with the multi-faceted community in an attempt to effectively manage the resources of the area. This process highlights important issues relating to community participation in resource management. As half of the forest is located in NSW and the other half in Victoria, issues relating to the interjurisdictional management of resources are also raised. In addition, the forest ecosystem relies on periodic flooding from the river for its health, highlighting the need for integrated land and water management.

A number of practical considerations must also be taken into account when choosing a field site for research subject to funding and time constraints. Time and access for fieldwork are important considerations when choosing a field site, as are the availability of prospective informants (Stake 1995). The Barmah-Millewa Forest was accessible to Canberra, being approximately six hours drive, and three initial contacts in the community were available.

In qualitative research such as this, the researcher's personality and personal life may provide opportunities or impose constraints on the research (see section 4.5). I grew up in a not dissimilar environment in rural Victoria, and this familiarity helped spark my interest and empathy in the area and the issues. Also, the trajectory of this thesis follows on from my honours research which looked at the inter-jurisdictional management of Lake Victoria in NSW. As with the Barmah-Millewa Forest, Lake Victoria presented complex issues and a fractured community.

The case study approach is a choice of the object to be studied, rather than a methodological choice. The interest in individual cases is the defining feature of the case study, not the methods used to gather information (Stake 1994). The following sections of this chapter will outline the particular methods used to gather information about the Barmah-Millewa Forest.
4.3 Data Collection

A multiple research strategy has been employed in order to understand the complexity of the social context surrounding the management of the Barmah-Millewa Forest. Unstructured and semi-structured interviews, observation and document analysis have been used to collect data. These were chosen because they elicit rich contextual information within a complex social situation (see Burgess 1984). These methods have given insight, at a variety of levels, into the meanings ascribed to the Barmah-Millewa Forest.

A total of 118 days were spent in the field over eleven separate trips from July 1996 to December 1997, including travelling time (see appendix a). Of these, 102 days were spent in the Barmah and Mathoura district conducting interviews and observation. The remaining 16 days were spent in the Federal Court chambers in Melbourne reading the transcripts of and witness statements to the Yorta Yorta Native Title Claim.

4.3.1 Interviewing

Interviews are one of the most important qualitative methods used to gather information in case studies (Yin 1984). The objectives of qualitative interviewing are many. They enable a researcher to learn about things that cannot be observed by other means, to understand a social actor's perspective, to cross-check data obtained from other sources, to answer questions posed by the researcher, to elicit the distinctive language used by social actors in their natural settings, and to achieve some efficiency in collecting data (Lindlof 1995).

Interviewing was the primary technique employed to elicit information. Two phases of interviews were conducted: unstructured interviews in the first phase, and semi-structured interviews in the second phase. These were arranged by telephone prior to the interview and were conducted wherever the interviewee felt most comfortable, often in the interviewee's home (or workplace in the case of government agency employees). Three of the unstructured interviews were conducted as the opportunity arose during field observations. Field trips into the forest with interviewees were made on five occasions. These field trips were very profitable, however they were often difficult to arrange and were time consuming, each lasting between two and eight hours.

Unstructured interviews provide a greater breadth of information than other forms of interviewing (Fontana and Frey 1994). They are often conducted as part of a broader research program, and may be used to obtain details of a situation which the researcher is unfamiliar with, or to gain access to a particular situation (Burgess 1984). I conducted unstructured interviews as my first phase of interviewing to develop an understanding of the management issues surrounding the Barmah-Millewa Forest and the concerns of the people associated with the forest. They also enabled me to establish trust and build rapport with
key stakeholders, which was important given the highly political nature of some of the issues. Given the small size of the community, these interviews also allowed people in the district to become familiar with me and my research.

The first stage of unstructured interviews were conducted with 31 (6 female and 25 male) key stakeholders in the management of the forest. Many of these were community or government representatives on the (now defunct) Community Reference Group (CRG), or the existing Barmah-Millewa Annual Forum. These unstructured interviews usually lasted between one and four hours depending on the time constraints of the participant and the amount of information available to discuss. These interviews were guided by a broad list of topics or themes I wished to cover in the discussion. The use of this guide or check-list ensured that similar topics were covered in all interviews (Burgess 1984). These topics and themes included:

- family association with the forest
- own involvement/association with the forest
- changes noticed to the forest over the years
- forest management issues
- management processes (including CRG/Annual Forum)

Once I had conducted 31 interviews with a range of individuals with different perspectives, common themes and topics began to emerge. I then moved into the second phase of interviewing, in which semi-structured interviews were conducted with some of the interviewees from the first stage and other key people as they arose. From the information gathered in the unstructured interviews I constructed interview guides to be used in semi-structured interviews. In total, 31 (7 female and 24 male) semi-structured interviews were conducted, 11 with people already interviewed in the first stage and 20 with new participants. In addition, two pilot interviews were conducted with local non-Aboriginal people. These have not been included in the data set. Three different groups had been identified from the first stage of interviewing and three different interview guides were developed: one for government agency representatives; one for local non-Aboriginal people; and one for members of the Yorta Yorta community (see appendix b). This was considered important because of the different issues and contexts that were identified for each of these groups from the first stage of interviewing. The questions in the interview guide formed the basis of the second stage of interviewing, however they were not always asked in the same order and were adapted as necessary to suit the situation and circumstances of the interview and the interviewee. This enabled my approach to be responsive to different situations and the different circumstances of participants and to follow up on issues mentioned in previous interviews. These interviews usually lasted between one and two hours.
In addition to this, short structured interviews were conducted with predominantly non-local campers in the forest. An interview guide containing specific questions was also used and questions were asked in order (see appendix b). These interviews usually lasted between 10 and 20 minutes. In total 177 people (85 female and 92 male) were interviewed in 54 separate interviews over the Easter and Anzac Day holidays in 1997. Table 4.1 contains a summary of all interviews conducted.

<table>
<thead>
<tr>
<th>Stakeholder group</th>
<th>Interview type</th>
<th>Unstructured</th>
<th>Semi-structured</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Local</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yorta Yorta</td>
<td>2</td>
<td>9</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>non-indigenous</td>
<td>25</td>
<td>11</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td><strong>Government</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>state government</td>
<td>4</td>
<td>5</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>local government</td>
<td>0</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>river basin</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>tourism board</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>Total number of interviews</strong></td>
<td>31</td>
<td>31</td>
<td><strong>62</strong></td>
<td></td>
</tr>
</tbody>
</table>

*Interviews with visitors were short structured interviews as opposed to the semi-structured in-depth interviews conducted with other stakeholders.

**These included both individual and group interviews. 177 people were interviewed in 54 separate interviews.

Table 4.1 Interviews conducted for the Barmah-Millewa Forest case study

A 'mapping' exercise was carried out in conjunction with the semi-structured interviews conducted with local people. Interviewees were asked to draw a 'map' or 'bird's eye view' of the forest, including in that drawing ten places that were important to them in and around the forest. The purpose of this technique was to provide insight into the meanings individuals attached to the forest. It was hoped that this exercise would elicit stories about people's association with the forest, identifying important or symbolic places and events. The value of this exercise as a data collection technique was seen to be in the process, in the stories told to me about particular places and events in the forest, rather than in the finished product. This helped avoid some of the problems associated with the interpretation of these types of data that have been noted in the literature, such as different graphic representational capabilities amongst the participants and problems associated with the interpretation of these 'maps' (see Golledge 1976). However, problems were experienced with this technique and the results have not been included in the thesis. I found it difficult to get interviewees to participate in this task, often because they believed they could not draw well enough. In addition, the task of drawing a 'map' became politicised in the context of the Native Title Claim, during which there was much discussion about the boundaries of the Claim and their legitimacy. The exercise was abandoned
because of these difficulties and the information I had hoped the exercise would elicit was obtained through the course of interviews. In addition, a discussion and drawing exercise was conducted with 11 and 12 year old school children in the local area. This provided some interesting insights, however the drawings were difficult to interpret in any meaningful way. I will reflect on the use of these techniques in chapter ten.

**Recording process**

In the first stage of unstructured interviews minimal notes were taken. This varied depending on the interviewee and their ease with my notebook and pen. In some cases I found it more important to engage the person in conversation than to write everything down. This aided the process of building rapport. Notes were written up in a field note book as soon as possible after the interview, to minimise loss of information. If I was not able to write these notes up immediately after the interview, the information was recorded on a hand-held tape recorder which was then used to assist the writing up later. This helped to minimise loss of information and it was also a useful debriefing exercise immediately after an interview. Information from these interviews is referred to in the thesis by quoting the field note book and page numbers (eg FN#1: 123).

After conducting the initial phase of unstructured interviews I decided not to tape record the semi-structured interviews because of the sensitive and political nature of some of the issues that were discussed. I also believed that participants would be less self-conscious with me taking notes than they would with a tape recorder. I took notes during the semi-structured interviews. This meant that I could not capture everything that was said, so judgements were made during the interview about which bits of information should be written down verbatim and which could be summarised. To ensure the reliability of these notes each participant was sent a copy of the verbatim information recorded in their interview. This served two purposes. Firstly it allowed me to check that I had recorded the information correctly. Secondly, it allowed me to gain participants' approval to use this information in my thesis. This was important given that the information had been recorded by hand and that many of the issues were politicised in the context of the Native Title Claim. This process was explained to participants at the start of the interview and many participants appeared to be reassured by the process. A letter accompanied two copies of the quotations, and a stamp self-addressed envelope was included so that the interviewees could check and send back one of the copies of quotes. The letter explained the way in which these quotes would be used and informed the participant that I would make use of the information they had given me unless I heard back from them to the contrary. I received 19 responses from a total of 31 interview participants. Of these, there were some minor corrections to be made, one government agency representative re-wrote a number of her responses, one asked that a number of his responses not be included, and one Yorta Yorta person asked that the interview not be included in my thesis. Direct quotations from these
interviews are referred to in this thesis by the use of an interview number; names are not used.

Native Title Claim

The timing of my field work, notably the interviews, was complicated by the hearing of the Federal Court hearing of the Yorta Yorta Native Title Claim. The Claim was lodged in 1994 and the hearing began in October 1996 and continued until November 1997. Final submissions were heard early in 1998. Throughout this time it was not possible to interview a witness (either claimant or respondent) after they had given evidence and before being cross-examined. This was easily avoided by conducting the majority of interviews during adjournments in the court hearings and ensuring that any interviews conducted during the hearing were not conducted at the same time as people were appearing in court. This made sense anyway, as appearing before the court as a witness was often time consuming and emotionally draining.

In addition, the Native Title Claim focused much attention on the area, including the Barmah-Millewa Forest. Much research was conducted to both support and oppose the Native Title Claim and individual researchers were attracted to the area to focus on the Claim. This had important ramifications for my research. Both local people and government agency representatives became wary of researchers; they appeared to become more concerned about being interviewed, and the kinds of questions that I might ask. I was sometimes asked to forward a list of prepared questions to the person, prior to the interview. I also had to demonstrate to these people that although the Native Title Claim was of broad interest to my research, it was not the focus of my work.

The main challenge the Native Title Claim posed for my research was the difficulty I had gaining interviews with Yorta Yorta people. The Native Title Claim was of foremost importance to the Yorta Yorta people, taking large amounts of their time and energy. The preparation and attendance at the hearing was extremely time consuming for those Yorta Yorta people giving evidence. It was particularly difficult for elderly members of the community who were called upon to recount stories and traditions from the past. In this context, finding time to spend with me was not seen as a priority.

The process of gaining access to the Yorta Yorta community was affected by the Native Title Claim. I contacted a spokesperson for the Yorta Yorta (who acted as a 'gatekeeper' for the community) at the Clans Centre in Barmah by letter prior to entering the field. I telephoned the Clans Centre on arrival in the field in July 1996 and I was invited to the Yorta Yorta Clans Centre where I sat in on a meeting and had informal discussions with some Yorta Yorta people about my research and the issues concerning them. During this field trip I also accompanied a cultural site officer on a trip into the forest. I was introduced to Yorta Yorta people; at the same time I talked with them about my research
and issues concerning them. After the hearing of the Native Title Claim began in October 1996, my requests to meet with the 'gatekeeper' of the community yielded no results, for the reasons discussed above. During this time I sent faxes to the Clans Centre to keep the Yorta Yorta community informed about my research and my presence in the field and had some informal discussions with Yorta Yorta people while attending the hearings of the Native Title Claim. After the hearing of the Claim had finished in November 1997, I contacted the Clans Centre again, updating them about my research and requesting to talk with some Yorta Yorta people about the forest. Through the Clans Centre, I was put in contact with eight Yorta Yorta people with whom I conducted interviews. This procedure allowed the Yorta Yorta community to control who I spoke to and when I spoke to them. It also allowed the Yorta Yorta to screen me before allowing me to interview members of the community. Although this process was time consuming, it allowed me access to the Yorta Yorta community which some other researchers were denied.

Although the Native Title Claim imposed limitations on my research, it also offered opportunities. The transcripts of the Claim have provided a valuable source of additional data. The relevance of my research was also considered particularly timely given the issues arising in the context of the Native Title Claim. Although it is difficult to separate my own influence on the situation, thoughts and discussions about the importance of the forest amongst the non-Aboriginal community appeared to accelerate as the hearing progressed. Above all, the Native Title Claim has highlighted the multiplicity of meanings ascribed to the forest and the role resource management plays in protecting and facilitating these meanings.

Sampling

Discussions of sampling are characterised by a range of technical terminologies and distinctions are made between various sampling procedures. The most basic distinction is made between probability and non-probability sampling (Burgess 1984). In probability sampling, it is possible to state the probability that every unit under study will be included in the sample. Non-probability sampling is any sampling plan where it is not possible to do this (Robson 1993). In qualitative research, most sampling techniques depend on non-probability or purposeful sampling or selection (Miles and Huberman 1984; Burgess 1984; Patton 1990; Lindlof 1995). In purposeful sampling, the researcher selects cases that are most information-rich (Patton 1990).

In this research a purposeful sampling technique known as snowball sampling was used to identify people to interview. This involves the researcher identifying one or more individuals from the population and using them as a source for identifying other people from whom information can be generated, who then refer the researcher to other people and so on (Lindlof 1995; Robson 1993; Burgess 1984). I began with three contacts in the field, one from the local non-Aboriginal community, one from a government agency
responsible for land and water management in the area, and one from within the local Aboriginal (Yorta Yorta) community. I arranged to talk with these three contacts and asked each of them who else they thought I should talk to. I then contacted those people to interview and also asked them who else they thought I should talk to, and so on. Throughout this process I mapped the names people suggested I should talk to. From the very beginning of this process, too many names were mentioned for me to interview them all. To cope with this problem I interviewed the people who were most frequently mentioned. This procedure also helped me avoid any bias in the way informants nominated others as informants (Lindlof 1995). This sampling method allowed me to build a sample that reflected the social networks between and amongst the various social communities in the area (Lindlof 1995; see also Burgess 1984). amongst the Yorta Yorta community, the sampling technique was somewhat different. The 'gatekeeper' of the community referred me to all the Yorta Yorta people I interviewed.

Because this research is exploring the range of different constructions of the forest in the context of resource management, it was necessary to ensure that the main interest groups involved with the forest were included in the sample. This was achieved by supplementing the snowball sampling method with a list of community and government agency representatives on the Barmah-Millewa Annual Forum, supplied by the Murray-Darling Basin Commission (MDBC), to help ensure that people from a variety of interest groups were included in the sample. Interviews were also conducted with others with direct interest in the forest, such as representatives of local government and tourism boards that were not identified in the snowball sampling method. This modification of the snowball sampling method allowed me to build a sample to meet the specific needs of the research (Robson 1993: 141-142; see also Lindlof 1995: 127-128). In some cases the availability of people dictated whether or not they were interviewed. I tried to avoid this problem by conducting numerous field trips, at different times of the year. Interestingly, the most useful information was obtained from interviews with people who were identified through the snowball sampling method.

Almost all of the people suggested by the white community for me to talk to were male, the majority being over 50 years of age. This suggests that white local people value the detailed knowledge that these people have built up over their lifetime; being in a place for a considerable time and accumulating detailed knowledge of that place is seen to be an important prerequisite to speak about that place. It also shows a dimension of the gender division that exists in small rural communities such as those that surround the Barmah-Millewa Forest. In this case men appear to be associated more with the public sphere (and in the case of the forest, with public places), and with the kind of highly technical knowledge that is often required to be a community representative on relevant management committees for the forest.
Amongst the Aboriginal community the majority of people put forward were still male, but there was a greater ratio of women to men than in the white community. Generally it still seemed that Aboriginal men had a more detailed knowledge of the forest than the women, spending more time in the forest hunting and caring for sites. This probably reflects the different roles men and women assume in the community and cultural issues relating to who holds what knowledge and who carries out certain activities. However, Yorta Yorta women had assumed some of the important lobbying roles for the group and were also put forward as people I should talk to. I also talked to some younger Yorta Yorta people, as the 'gatekeeper' of the community thought it important that I hear their perspectives.

4.3.2 Observation

Although interviews were the primary method used in this research, observation of key social events also yielded valuable information. Observational evidence is often useful in providing additional information which can assist in our understanding of either the context or the phenomenon being studied (Yin 1984). In qualitative research an offshoot of observation, known as participant observation, has become widely recognised (Adler and Adler 1994). In this method the researcher engages in varying degrees of participation in the daily life of the individual or group being studied in order to experience and observe the meanings participants or insiders attach to social situations (Jorgenson 1989; Burgess 1984).

In participant observation the researcher may assume a variety of roles depending on the degree to which the researcher participates in the lives of the individuals or groups being studied. Distinctions have been made between active and passive roles, open and closed roles, known and unknown participant observers (see Burgess 1984), and between complete, active and peripheral-member-researcher roles (Adler and Adler 1987). A basic typology of researcher roles was devised by Gold (1958), who distinguishes between four main roles: the complete participant, the participant-as-observer, the observer-as-participant and the complete observer (see Burgess 1984; Lindlof 1995). Each of these roles requires the researcher to assume a different relationship with the research participants. While many researchers have primarily used one of these roles, other researchers have found that a researcher can shift between these different roles as the situation and stage of the research dictates (Burgess 1984).

The participant role I assumed when conducting observation was complicated by the diversity of the different communities I worked with and the political context in which this research was conducted. The extent to which I could participate in any social setting was limited by the perceived need to be regarded as an independent researcher, not aligned with any one group. This did not preclude me from participating in certain social settings,
however the degree of my participation was always tempered by a consideration of my position as researcher (see section 4.5). Observations were mostly carried out at public events, such as the hearing of the Native Title Claim in the Federal Court and associated field trips, the Barmah Muster (an annual and celebrated event in the Barmah Forest), the Barmah School reunion, and the Annual General Meeting in the Barmah Forest Preservation League. I was also able to observe a field trip of the Barmah Forest conducted by the Barmah Forest Preservation League for invited local politicians and government agency representatives, and sit in on talks given by Yorta Yorta people to university groups. I was invited to meals by research participants which also allowed me the chance to interact with participants informally. I kept field notes documenting my observations of these events.

Although my role as participant-observer was limited by the nature of the political climate and the diversity of groups I was working with, this approach allowed me to gain a greater understanding of the social contexts in which these groups operate. Many of the research participants did become sufficiently familiar with my research and myself to allow me an understanding of the situation from their perspective. A more participatory role may have allowed me to gain even greater understanding of the insider's perspective, however given the divided political climate this would only have been possible if I had been studying one as opposed to three different interested parties. My access to the three groups was dependant upon the continued perception by the research participants of my impartiality relative to the dispute, my honesty and commitment to studying the different perspectives, and confidentiality regarding the content of each group's private views (see Lofland and Lofland 1995).

4.3.3 Document analysis

Documents of relevance to this study were collected throughout the research. These included management plans and reports, newspaper articles, scientific journal articles and historical works. These documents helped me to become familiar with past and present issues relating to the management of the forest, assisted in sampling by identifying key stakeholders and provided me with some historical and ideological background of the scene (Lindlof 1995).

Two documents in particular provided me with local community perspectives. A document produced by a local group associated with the forest for a tour of the forest by invited politicians and government agency representatives provided valuable insight into the way in which this group represents itself and was related to evidence collected from interviews and observations. The transcripts of the Federal Court hearing of the Yorta Yorta Native Title Claim provided information about the Yorta Yorta perspective and the way in which meanings were being negotiated and contested. These transcripts were vast and the only copies I could gain access to belonged to the Federal Court judge. This meant
spending many hours sifting through pages and pages of proceedings in the Federal Court in Melbourne. This task was assisted by the notes taken whilst sitting in on the hearing and the associated field trips. The information obtained from these transcripts has been used to supplement data from interviews and observations. It has also been compared with information obtained in interviews. These transcripts are an unusual source of perspective, in that they record the statements and thoughts of some of the key stakeholders on their feelings about place - a rare formal, public dialogue on place attachment.

The documents I made use of were all in the public domain. I did not use or request to have access to confidential documents. This was considered important given the context of the Yorta Yorta Native Title Claim. When reviewing the transcripts of the Native Title Claim I made use of materials on the access file in the Federal Court in Melbourne. This file contained several reports prepared for the Yorta Yorta by experts and a policy document which were marked confidential. For reasons of research ethics and confidentiality none of this material was examined or used in the preparation of this thesis.

4.3.4 'Reliability' and 'validity'

Many qualitative research methods texts stress the importance of enhancing the validity and reliability of the data that is collected (see Burgess 1984; Miles and Huberman 1984). Reliability is concerned with the stability of observations; whether the same result can be reproduced. Validity generally refers to the truth of observations; whether the object of interest is being reported accurately (Lindlof 1995: 237). However, these conventional criteria have been criticised as inappropriate for evaluating qualitative research (see Lincoln and Guba 1985; Lindlof 1995). As Lindlof explains:

Because what can be observed of a scene is profoundly contingent on time, and on the individual human-as-researcher-instrument (whose properties change as time in the field increases), little is gained from trying to achieve reliability. Applying the concept of validity to qualitative inquiry is also difficult. A world consisting of multiple, constructed realities does not permit the researcher to identify any single representation as the criterion for accurate measurement. And because the inquirer operates reflexively as a participant, it is doubtful whether the usual way of conceiving internal validity has much relevance. Finally, the qualitative researcher studies social action and cultural sensibility situated in time and place; the move to generalize in the traditional sense is neither warranted nor particularly desirable (1995: 238).

This concern for validity and reliability is viewed by some as a response to positivist scientific methodology (see Lather 1993), yet the question of how qualitative studies are to be evaluated is still important and the subject of much debate in the field of qualitative research (Denzin and Lincoln 1994). Qualitative researchers seek data that is credible and dependable (Lincoln and Guba 1985), that gives readers confidence in the plausibility of the interpretation of the case (Lindlof 1995). One technique which is often used for this is triangulation, which "involves a comparative assessment of more than one form of evidence about an object of inquiry" (Lindlof 1995: 239). This is often used as a method for
verification (see Burgess 1984; Denzin 1970; Robson 1993), but it can also be used to
develop a concept, construct or proposition (Lindlof 1995). Triangulation can be carried
out through the use of multiple sources, multiple methods and multiple investigators.
Triangulation through multiple sources involves collecting evidence from different sources
using the same technique, for example interviews; the use of multiple methods involves
applying different methods, such as interviews and observations, to the same problem; the
use of multiple investigators can help to overcome differences in style or biases, or to
exploit their specific strengths (Lindlof 1995: 239).

In this research triangulation has been used to enhance the credibility and
dependability of the data. Wherever possible, interviews were conducted with multiple
sources within the various interest groups and the information was compared to identify
commonalities and differences. Triangulation was also achieved through the use of
multiple methods. Data obtained in interviews was compared with observational field notes
and information obtained in official documents. This enriched and helped to contextualise
the data obtained in the interviews and provided a more diverse information base from
which to draw interpretations.

Another technique used to improve confidence in the interpretations drawn from data
is member checks (Lincoln and Guba 1985). Member checks are opportunities for the
researcher to test concepts, interpretations or explanations with members of the local culture
being studied (Lindlof 1995). I began this process towards the end of my fieldwork by
testing some of my interpretations and explanations in conversations and interviews with
key stakeholders. This was done on an informal basis, taking advantage of opportunities as
they arose. The problems associated with this technique due to participants having certain
alliances and interests have been noted (see Lindlof 1995; Robson 1993; Guba and Lincoln
1981). Member checks were not conducted in this research on a more formal basis because
of the political nature of the issues under consideration and the disparate views that were
included in the research.

Throughout the research process care was taken to document conversations,
observations and insights and research developments. Unstructured interviews and field
observations were recorded in field note-books, semi-structured interviews were recorded on
individual interview sheets, and a field diary of personal notes, intentions and expectations
was kept during the field work process (see section 4.3.1). When I was not in the field I
kept a separate journal of theoretical, methodological and interpretive notes. Copies of
interview guides, participant lists, raw and coded and sorted data have all been maintained
for future reference. The combination of these research materials provides a 'trail' that
could be followed to confirm the research process (see Lincoln and Guba 1985; also
Robson 1993).
4.4 Making Sense of the Data

The analysis of qualitative data involves making sense of large amounts of information, structuring and sorting the information, identifying patterns, and communicating the essence of what the data reveals (Patton 1990). Data is ordered and sorted so that interpretations can be made (Coffey and Atkinson 1996). Wolcott (1994) refers to the transformation of qualitative data which can be undertaken through the use of *description*, where the story of the data is told in as descriptive way as possible; *analysis*, where systematic procedures are used to identify themes and patterns in the data; and *interpretation* which involves the researcher moving beyond the data and analysis to provide some understanding or explanation of what is going on. All three of these can be employed, in different formations, to explore and interpret qualitative data.

The analysis of the data in this research has been largely inductive (Patton 1990; see also Lindlof 1995). The patterns, themes and categories that have been generated have largely emerged out of the data, rather than being imposed prior to data collection and analysis. This exploratory, inductive style of inquiry suited the nature of the research questions posed; these questions arose from the consideration of an area of theory and practice described by an open, evolving and inconclusive literature. Data has been read and re-read, and sorted and organised by applying codes to each item of information. Codes are labels that classify items of information as pertinent and allow items of data to be labelled and retrieved (Lofland and Lofland 1995). The coding system developed to analyse this data has produced categories and concepts which have been used to organise the presentation of particular themes. I have used existing theories to help explain the themes and issues that have emerged from the data. These existing theories help to explain the complex relationships and competing interests in the management of the Barmah-Millewa Forest.

Although largely inductive, a certain amount of organisation has, of course, been imposed on the research by the literatures I have read (Lindlof 1995). Three separate, though interrelated approaches have been employed to aid in the description, analysis and interpretation of the data. These are: value categorisation, the description of the 'cognitive context' of interested parties, and the interpretation of various constructions of the forest. The categorisation of values is an approach increasingly used in cultural heritage and resource management processes to account for the range of perspectives involved with particular places (see RAC 1993a; Packard and Dunnett 1994; Johnston 1994; Coakes 1998). The description of the 'cognitive context' of interested parties has been developed as a way of eliciting and contextualising the multiplicity of meanings ascribed to places for input into the cultural heritage management process (Boyd et al 1996; Boyd and Cotter 1996). The consideration of various place constructions, an approach which is informed by
the place literature, offers further insight into competing and contested interests in the resource management process.

Reports of how data analysis is conducted often make the process sound straightforward and linear. However, the process is often described as being cyclical (see Lindlof 1995) and reflexive (Coffey and Atkinson 1996), requiring not only great amounts of time and discipline, but also a certain amount of flexibility and creativity (see Coffey and Atkinson 1996; Patton 1990). As Lindlof (1995: 243) explains, "analysis becomes a matter of hearing the voices of the other and deciding which voices should be included and how these voices are to be stitched together." The following discussion documents the way in which the data was managed in the search for themes and patterns.

4.4.1 Unstructured interviews, observation and research diary

The unstructured interviews and observations were recorded in field note books and personal reflections and methodological insights were recorded in a research diary. While conducting fieldwork I indexed the notes from the unstructured interviews in a filing card system. Each interview was summarised on a card which was filed alphabetically by the interviewee's name. This enabled information from each interview to be easily accessed by referring to the person's card which referred back to the appropriate note-book and page numbers. During fieldwork important themes and issues were noted in field note books. This helped to develop themes and issues to be explored in the semi-structured interviews. The field note books, including notes from unstructured interviews and observations and the research diary were all coded and sorted into themes after data collection had been completed.

4.4.2 Semi-structured interviews

The semi-structured interviews were sorted into three main groups: Yorta Yorta people (1), local non-Aboriginal people (2) and government agency representatives (3). Some overlap occurred between categories 1 and 3 and 2 and 3, however interviewees were assigned one group depending on the role that was dominant and the context of the interview. As explained earlier, different versions of the interview guide were used for each of these groups to accommodate the different issues and contexts. Quotations from interviews have been given a number according to the group (1, 2 or 3) and the number of the interview within that group, eg the second interview I conducted with a government agency representative is numbered 3.2.

The notes that were taken during the semi-structured interviews were typed into a table using a word processing package. When data collection had been completed these quotes were coded. This allowed me to sort the data by person or code, or to search for key words. The codes used were the same as those used to code the unstructured interviews,
which were developed throughout the research process and refined after data collection had been completed. There were thirteen codes which were based on themes that had emerged throughout the research: economic attachment, emotional attachment, local knowledge, indigenous knowledge, scientific knowledge, environmental change, institutional management issues, physical management issues, sustainability, stewardship, use value, Native Title, and methodological issues.

The short semi-structured interviews I conducted with visitors to the forest were sorted by question. The data obtained for each question was usually quite short, often only a few sentences, or a few short comments from each person in the case of group interviews. I sifted through the responses to each question and wrote a summary of important points and insights. This information was then used as an adjunct to the interviews conducted with local people and government agency representatives.

4.5 Role as researcher

In qualitative inquiry, where the researcher is an integral part of the research process, it is important to reflect on the impact of the researcher on the research setting and the research process (see Edwards 1993). Given the political nature of this research, it has been especially important for me to consider my role in conducting this research. The political and contested nature of the issues currently surrounding the Barmah-Millewa Forest meant that there were a diversity of opinions relating to the management of the forest. There was not one 'community' that could be consulted, but rather a number of separate communities with varying historical, cultural, social and economic backgrounds and experiences. Given the lack of community cohesion or any forum successfully bringing together representatives from each of these communities, it was considered appropriate to conduct this research independent of any one community, gaining 'access' to the field area through groups and individuals as appropriate. Although this meant that the research was conducted by an outsider researcher rather than being community driven, I went into the field with a broad and flexible project outline so that the research could take on the issues expressed by local people. As noted in section 4.3, my access to the various interest groups was dependent upon the continued perception by the research participants of my impartiality relative to the dispute, my honesty and commitment to studying the different perspectives, and confidentiality regarding the content of each group's private views (Lofland and Lofland 1995).

More recent writings on the politics and ethics of conducting qualitative research have discussed how certain features of the researcher can impact on the research, particularly the fieldwork component (Punch 1986, 1994; Burgess 1984; Edwards 1993). As Lindlof (1995: 19) notes, "the researcher cannot claim a privileged position separate from the phenomena being studied"; factors such as the personality, gender, age, experience,
ethnicity and class of the researcher can influence the research process in a number of different ways. Ultimately, these factors will influence the interpretations that are drawn from the data and the way in which participants are portrayed through the writing process. As Jackson and Penrose explain, it is important to acknowledge my own position as researcher in relation to the participants of this research:

One strategy for confronting this problematic positioning of self and Other has been a determined effort to throw off the cloak of scientific objectivity and to explore the consequences of our partiality: to accept that knowledge is situated and to take responsibility for our own positioning with respect to the various Others about whom we write (Jackson and Penrose 1993b: 14).

Researcher background / experience

The selection of research topics, the intellectual approach taken, and ability in the field can be influenced by the personality and experience of the researcher (Punch 1994; see also Burgess 1984). As noted in earlier in this chapter, I grew up in a rural area downstream of the Barmah-Millewa Forest on the Murray River. This familiarity with the general area and the issues surrounding the management of these environments promoted my interest and empathy in the competing interests in the management of the Barmah-Millewa Forest. This background, together with my undergraduate training in geography, helped to nurture my intellectual and personal interest in the broader theme of this research: the complex relationship between people, places and institutions of resource management, particularly in rural areas where resource management plays an important role in the lives of diverse communities.

I found my rural background helped me to connect with local participants in my research. Presenting myself as a student from the Australian National University in Canberra, but who had grown up in a town downstream from the forest, appeared to be far more beneficial in establishing relationships than being 'just another researcher from the city'. My rural background compensated for my position as an educated outsider, and helped me to establish trust and rapport with participants. In interviews with some government agency representatives the combination of my university education and my rural background seemed to give me credibility. This alliance appeared to be more relevant in establishing relationships of trust with research participants than any differences in class.

Gender

Much has been written about the influence of gender on the questions posed, the data collected and the role assumed by researchers doing field research (see Burgess 1984; Punch 1994 and references therein). Although the majority of participants in this research were male, I did not find that being female was a significant problem in establishing rapport and trust. In some circumstances it may have been an advantage as I was perhaps perceived as less threatening than a male counterpart.
Being female and relatively young (see below), did have implications for some of the situations I found myself in whilst in the field. The majority of local participants were male, and many interviews were conducted in participants' homes in small towns or out on farms. I conducted fieldwork alone and I often stayed in the Barmah caravan park and some local people expressed concern about my personal safety. My gender sometimes posed a challenge when conducting interviews with campers in the forest over the Easter and Anzac Day long weekends. A number of the groups I approached were sitting around the campfire drinking alcohol. On a couple of occasions sexist comments were directed towards me during interviews with all, or predominantly, male groups. As a safety measure I concentrated most of my time interviewing campers in the more populated camping grounds.

Age

I had anticipated that being female and relatively young (twenty-four at the commencement of this research) may pose some difficulties for my credibility in the field, particularly considering I was younger than most of the participants in the research. However, my age did not appear to provide significant barriers to this research and in some cases it acted as an advantage. Punch (1994: 87) has noted that a young student "may be perceived as non-threatening and may even elicit a considerable measure of sympathy from respondents." Lofland and Lofland (1995) have commented that young and female researchers may be granted easy entry to research settings because they are perceived as non-threatening. Whether a function of my age or gender or some other factor, both local and government agency participants appeared to perceive me as non-threatening. In addition I found that my relative youth actually facilitated my job of asking questions. Many older local participants were especially pleased to be able to share their knowledge with me.

Ethnicity

An important component of this research was the relationship between the local Aboriginal community, the Yorta Yorta, and the forest, and their interest and involvement in forest management. In order to gain an understanding of these, it was necessary for me to spend time talking with Yorta Yorta people about the forest. This raised the issue of cross-cultural study; of a white descendent of settler Australians researching and ultimately representing Aboriginal Australians through text. This is an issue that has recently received attention in the writings of white Australian academics reflecting on the problem of non-Aboriginal academics speaking on or about Aborigines (Anderson and Jacobs 1997; see also Jacobs 1996; Huggins et al 1995; Gelder and Jacobs 1995). Although I felt (and continue to feel) uneasy about this researcher/researched relationship, I felt that the inclusion of the perspectives of Yorta Yorta people was critical if I was to achieve what my research was advocating: the consideration of the multiple and sometimes unheard meanings ascribed to places, to better inform more sustainable and equitable management processes.
Working through a 'gatekeeper' I negotiated interviews with Yorta Yorta people (see 4.3.1). This required patience and commitment and significant cultural and political sensitivity on my part. Although I was able to sit in on a couple of meetings and was invited to dinner on one occasion, my non-Aboriginality and the political climate surrounding the Native Title Claim meant that I was perceived as an outsider. My commitment to include the perspectives of Yorta Yorta people in my research and my willingness to listen and to learn about past and present issues affecting the relationship between Yorta Yorta people and their country helped me to gain access to the Yorta Yorta community and to gain some insight into the perspectives of Yorta Yorta people.

4.6 Confidentiality and Reporting

The importance of maintaining the confidentiality of research participants is stressed in the literature (see Punch 1994, 1986; Burgess 1984; Lindlof 1995). I was committed to maintaining the confidentiality of participants throughout the research process. This was particularly important given the diversity of people participating in the research and the political context of the Native Title Claim. Confidentiality has been maintained in a number of ways. Firstly, I made sure that I was the only person with access to the data and that this was stored safely in filing cabinets in my office at university. Secondly, I was sometimes asked what other participants had told me, so I had to devise ways of getting around these questions without giving away any information. Thirdly, I did not write down things that people told me were "off the record".

In addition to these measures, all care has been made to protect the identity of participants in the writing of this thesis. Instead of using participants' names, each semi-structured interview has been assigned a number, and this appears after the quotations used in later chapters. Unstructured interviews are referred to by quoting the field note book number and pages, and the name of the interviewee is not used. Even without using names, the small size of the community has made it difficult to ensure the identity of participants has been adequately protected. For this reason, any descriptions of participants have been kept to a minimum.

All of the direct quotes which appear in the text have been checked with the participant. Quotes from the interview were typed up and sent back to the participant for them to check that it was recorded correctly. This process gave interviewees the opportunity to make changes to the quotes. Two copies of the quotes were sent to the participants: one copy for them to keep and one copy to make any necessary amendments and return to me in the stamp self-addressed envelope provided.
4.7 Conclusions

This research employs a case study approach to explore the connection between place construction and natural resource management. Qualitative research methods, such as interviews, observation and document analysis were employed to explore the competing interests in and attachments to the Barmah-Millewa Forest. My position as a relatively young female researcher with a rural upbringing allowed me to position myself somewhere between insider and outsider to gain a greater understanding of the complex relationships between local people, the forest and the institutions of resource management.

A number of difficulties were encountered in conducting this research. The research was complicated and delayed by the Federal Court hearing of the Yorta Yorta Native Title Claim. The Claim made it difficult for me to obtain interviews with Yorta Yorta people and caused local non-Aboriginal people to be wary of researchers and careful about what they told me. Working between and amongst a diversity of interest groups also proved difficult given the political meaning that associations with the forest and the management of the forest assumed in the context of the Native Title Claim.

The methodologies employed in this research allow the data to be linked with theory by generalising the case to the existing theoretical literature. This adds insight into substantive resource management issues. Before turning to the case of the Barmah-Millewa Forest, the research questions posed in chapter one will be reconsidered. Supplementary research questions are added to operationalise and guide the inquiry.

4.8 Research Questions Reconsidered

The primary research questions of this thesis were outlined in chapter one. Having considered the theory and applied research relevant to this study, and the particular research methodology, this section outlines the way in which the research questions will be applied to the Barmah-Millewa Forest. Here the primary research questions are posed again, supported by supplementary questions which ground the research questions in the case of the Barmah-Millewa Forest. These supplementary questions flow from the prospect of exploring the questions in a specific context. They operationalise the research questions, and have guided the collection and analysis of information regarding the Barmah-Millewa Forest. This set of research questions remains broad and forms the basis of the inquiry. The questions in italics are those which the thesis has already considered.

Research Aim: To explore constructions of place and the way in which they may relate to the process of natural resource management.
Review

1. Does place theory have any current or potential contribution to make to the process of natural resource management? (Chapter two)

2. What role have aspects of place played in conflicts over natural resource management in Australia? (Chapter three)

3. How useful are current approaches which seek to include meanings and values into the process of natural resource management?

Application

4. How do constructions of place differ amongst local communities, and between local communities and the institutions responsible for the management of natural resources?
   a) Who are the interested parties associated with the Barmah-Millewa Forest?
   b) What organisations and institutions are involved in the management of the forest?
   c) What meanings and values do these groups ascribe to the forest?
   d) How do these groups construct the forest as a place?
   e) To what extent are different constructions of the forest given expression in the public arena?

5. How do different constructions of place relate to different resource uses, differing opinions on resource management, and different forms of knowledge?
   a) Is there a difference in the way the different groups know and experience the forest?
   b) What are the different opinions on the management of the forest?

6. What capacity do resource management institutions have to include multiple constructions of place in the process of natural resource management?
   a) What knowledge is valued by resource management institutions?
   b) What mechanisms are there for local knowledge to be conveyed and discussed?
   c) What fora have there been for the discussion of different representations of place?

Contribution

7. Can this style of research contribute to the theory and practice of cultural geography and natural resource management?

This interrelated and more detailed set of questions guide information-gathering and analysis. The questions that can be 'answered' or explored, will emerge from the analysis. This allows an open inquiry that is not unnecessarily constrained. The context and setting of the Barmah-Millewa Forest are outlined in the next chapter.
Map of Barmah-Millewa Forest

Figure 5.1 Location of the Barmah-Millewa Forest
CHAPTER FIVE

SETTING AND CONTEXT OF THE BARMAH-MILLEWA FOREST

5.1 Introduction

The Barmah-Millewa Forest has a complex physical and social environment which offers challenges for natural resource managers. This chapter will outline the physical, historical and institutional settings of the forest, giving the reader some insight into the complexity associated with managing a system which is characterised by change, both natural and human induced. This chapter sets the context for the following chapters on the Barmah-Millewa Forest.

The first part of this chapter briefly describes the physical environment of the forest. Natural changes to the environment resulting in the formation of the present course of the Murray River and the Barmah-Millewa Forest are described through both scientific and indigenous understandings. Changes to the forest and river system as a result of the human manipulation of the system following white invasion of the area are also described, and management implications are considered.

Chapters two and three have established that history shapes contemporary constructions of place. This chapter presents a brief history of human occupation and use of the forest in order to highlight the very different ways in which the forest has been experienced by both Aboriginal and settler Australians. The importance of the forest to Aboriginal people prior to white occupation is discussed. This is followed by a brief discussion of the white settler history of the forest, in which the development and various past and present uses of the forest are considered. The experience of local Aboriginal people following white settlement of the area is then briefly outlined, emphasising the change and continuity that has occurred since that time. This culminates in a brief discussion of the history of Aboriginal land claims to the area and the current Native Title Claim to both the forest and the river. Having highlighted the multiple histories and uses of the forest, some implications for forest management are discussed.

These sections draw on public scientific and historical sources of information to illustrate the complexity underlying the management of the physical environment and the historical basis of current associations with the forest. By relying on secondary sources of information, this chapter is constrained by the information available on the public record. These existing representations of the 'history' and 'science' of the forest are presented here as a means of familiarising the reader with the particular characteristics of the forest. However, they also illustrate some of the different ways in which the forest has been known
and experienced and how this has been represented in public information sources. Where it is appropriate, the limitations of the existing sources have been recognised. Some of the scientific information presented in this chapter is contested, as are the interpretations of history. This highlights the issue of contested knowledges which will be discussed in more detail in chapter eight.

The management of the Barmah-Millewa Forest is characterised by numerous institutional instruments and government and non-government organisations, at the international, federal, river-basin, state and local levels. In order to clarify this situation, the institutional setting is represented diagrammatically in figure 5.2. While not exhaustive, this diagram distinguishes the key institutional players and clarifies the framework governing the management of the Barmah-Millewa Forest.

5.2 The Physical Setting

5.2.1 Location

The Barmah-Millewa Forest is Australia's largest river red gum (*Eucalyptus camaldulensis*) forest. It covers approximately 70,000 ha of the Murray and Edwards River floodplain, between Tocumwal, Deniliquin and Echuca (which is approximately 225 kilometres north of Melbourne) (see figure 5.1, before this chapter). The forest straddles the Murray River, with half of the forest located in New South Wales (the Millewa, Moira and Gulpa Island State Forests) and the other half located in Victoria (the Barmah State Forest and State Park). The Barmah-Millewa Forest is surrounded by an extensive area of agricultural land, and is located in Australia's largest river basin, the Murray-Darling Basin.

The population of the townships bordering the forest are: Mathoura 653, Barmah less than 200, and Picola less than 200 (population census data are unpublished for localities with a population less than 200). Larger centres located approximately 30 km from the forest are: Echuca-Moama 12,483, and Deniliquin 7,816 km (Australian Bureau of Statistics 1996).

5.2.2 Climate

The climate of the area is classified as 'temperate hot summer' with typically hot summers and mild winters (LCC 1983). Climate data is taken from the Mathoura weather station which borders the Milawa group of state forests in NSW. Mean annual rainfall for the area is 457 mm with seasonal averages of 93 mm for summer, 113 mm for autumn, 127 mm for winter and 124 mm for spring (Bureau of Meteorology 1998). Winter rainfall is generally of low intensity, while summer rainfall usually occurs during irregular thunderstorms with intense rain. As is common in many areas in Australia, annual precipitation varies considerably from year to year, and periodic droughts are common (LCC 1983).
The warmest months extend from November until March, with January being the hottest month. Mean daily maximum and minimum temperatures in January are 31° and 16° C. The coldest month of the year is July, with mean daily maximum and minimum temperatures of 13° and 3° C (Bureau of Meteorology 1998).

Annual evaporation for the region is approximately 1400 mm which greatly exceeds annual precipitation. Almost half of this occurs between December and February, two thirds between November and March (DCFL 1990). Severe frosts are limited to a period of eight weeks in June, July and August. The average frost-free period lasts about 7 months from late October to mid May (LCC 1983).

5.2.3 Geomorphology

The Barmah-Millewa Forest is situated on a floodplain known as the Riverine Plain. The riverine plain is bordered by the Great Dividing Range in the east and comprises sedimentary material that has been deposited over millions of years by rivers, including the Murray River, which rise in the mountains of the Great Divide and flow west through southern NSW and northern Victoria (Butler et al 1973). These streams and their ancient ancestors have deposited sediments eroded from the highlands to the east, creating the riverine plain (Eastburn 1990a).

The geomorphic history of the riverine plain has been described by many scientists (listed in Rutherford 1990). This work has identified and described various phases of stream deposition and erosion for the riverine plain. Four streams phases have been identified: prior streams (Butler 1950), and three distinct phases of ancestral rivers, including the modern rivers (Pels 1964; Bowler 1978; see also Currey and Dole 1978, and Bowler 1986 for a comprehensive discussion). These different phases of river channel evolution are characterised by differences in age and form. They indicate climatic change over the last 50 000 years, and hence dramatic changes in the hydrology and vegetation of the area.

The Barmah-Millewa Forest and the surrounding region has been an important site for the description of the geomorphic history of the riverine plain. Much of this description centres around the Cadell Fault, which runs north-south along the western edge of the Barmah-Millewa Forest. The ancestral channels of the modern Murray River and the current complex system of streams in the Barmah-Millewa Forest have been identified and related to the displacement that occurred along the Cadell Fault around 25 000 years ago (Bowler 1986). A combination of tectonic, climatic and hydrologic changes have shaped the present landscape of the forest.

Descriptions and interpretations of these changes exist in both scientific and indigenous traditions. Correlation of stories from both sources provides evidence of a
dynamic physical landscape. The Yorta Yorta people, whose traditional country encompasses the Barmah-Millewa Forest, have a story of the creation of the Murray River. This legend was recorded in the memoirs of A J Matthews, who ran the Maloga Mission in the area and was quoted by Nancy Cato in her account of the Maloga Mission:

This great river Ton-ga-la ...had been created when Baiami sent his old lubra down out of the high country, with her yam-stick and her dogs to journey across the flat waterless plain.

Baiami had sent his giant snake after her to keep an eye on her. She had walked for many weary miles, drawing a line in the sand with her stick, and behind her came the snake, following in and out all-about, making the curves of the river and lightning flashed above the high rock that was his place. Rain fell, and water came flowing down the track the old woman and the snake had made. After many moons she came to the sea, and went to sleep in a cave; while her dogs ran off and kicked up the sandhills about the river mouth (Cato 1976: 4).

An account of this creation story was given by a Yorta Yorta witness in the proceedings of the Yorta Yorta Native Title Claim before the Federal Court of Australia:

...the [creation] story goes back to this time during the Dreaming when Biami sent his woman down to travel across the country. She travelled and dragged her digging stick behind her across the country. She travelled and dragged her digging stick behind her in search of food. As she got further away, Biami spoke in a loud voice from up in the high lands and created the thunder and the rain. The water came down and followed the track across the course of the Yorta Yorta tribal lands (Auscript 21.11.1996: 1964).

Scientists have described the changes to the area in the vicinity of the Barmah-Millewa Forest through the geomorphic and hydrologic history. They have attributed the current flood flow paths through the forest to the land forms established before and after displacement occurred along the Cadell Fault (Currey and Dole 1978). The uplift tilted the Cadell Block to the west, and raised the eastern edge between 8 and 12 metres, influencing the hydrology and vegetation of the region (Rutherford 1990).

Prior to the uplift along the Cadell Fault, the Murray River flowed in a different channel. The uplift obstructed the flow of the Murray River, forcing it to erode a new course around the uplifted land. Changes in climate and sediment loads in the river caused further changes to the channel of the Murray River. Eventually the Murray River eroded a new course through large sandhills to create the present course of the Murray River. This occurred approximately 8 000 years ago. The Barmah-Millewa Forest has formed on a low-lying area of floodplain that developed on the downthrown side of the Cadell Fault (see Currey 1978 and Bowler 1986 for a detailed discussion of these events).

The reason for the creation of the new course of the Murray River has puzzled scientists. Currey notes that it is possible that banked up flood water behind the Bama sandhill could have filtered through along the base of the sand until eventually the dune was breached (1978). Rutherford asks: "Why did the Murray suddenly 'avulse' to the south to form the modern course?" (1990: 25). By way of a response to this question, he recounts
the legend of the great flood told by the Yorta Yorta Aboriginal people who lived at that time in the Barmah-Millewa Forest. This legend tells of a great flood, which was backed up against the land uplifted by the Cadell fault, and the large Bama sandhill that had formed on the eastern edge of Lake Kanyapella. The floods forced the Yorta Yorta people onto the sandhill, so the tribal elders used their digging sticks to dig a new channel for the floodwaters. This digging created the present course of the Murray River (Rutherford 1990:25; see also Lyons 1989a).

The correlation between the Yorta Yorta legend and the findings of white scientists has been used by both groups to reinforce their position. This has been particularly important for Aboriginal groups required to provide evidence of continued association with the claimed land. The great flood story and its correlation with the interpretations of white scientists was heard during the proceedings of the Yorta Yorta Native Title Claim before the Federal Court of Australia:

...that (story) related to the time when the river course has changed...this was the original west-ward, west section of the Murray River...And that was cut off about 20,000 years ago, according to, you know, the evidence that has been recorded by geologists. And then that created another phase of the river system, where it redirected it north, up through the Edwards system and then the last stage was where it banked up and the legend is, the old people then, who were forced out of the forest, obviously and were camped on that high section of sandhill, decided to go down and release it and let it go. And that was the legend known as the great flood, as told to me by [name of Elder]... (Auscript 28.11.1996: 2452-4).

5.2.4 Hydrology

The Barmah-Millewa Forest is located in the middle reaches of the Murray River, downstream of Tocumwal and upstream of Echuca. The Murray River flows west from its headwaters in the Great Dividing Range through the riverine plains and mallee lands of southwestern NSW and northern Victoria, to South Australia where it meets the sea. The water resources of the Murray have been harnessed to support some of the most productive agricultural areas in Australia (Mackay 1990). The river's water resources have been extensively developed and are almost totally committed (see Pigram 1986; Crabb 1997), providing domestic, agricultural and industrial water to extensive areas of NSW, Victoria and South Australia (Jacobs 1990). The river has become highly regulated by the provision of dams and weirs which have ameliorated water shortages during drought and improved the use of the river for both navigation and water supply purposes. This was considered essential for the development of inland areas and for securing a food source for a growing nation (Jacobs 1990). However, river regulation has resulted in changes to the natural flow of the Murray River. This has affected the ecology of the river and the ecosystems which have evolved relying on the river's natural flooding and drying cycles, such as the Barmah-Millewa Forest.
The flow in the Murray River governs the regularity, extent, duration and season of flooding in the Barmah-Millewa Forest (Leslie and Harris 1996). Under natural conditions high flows would occur in the Murray River in the winter and spring months of most years as a result of rainfall and snow melt in the upper reaches of the Murray catchment. This would alternate with low flows and dry conditions during the summer and autumn months (Dexter et al 1986; Chesterfield 1986; Ward et al 1994) (see figure 5.2). In the Barmah-Millewa Forest, substantial areas would flood naturally in winter and spring when flows in the Murray River were highest, and would dry during summer and autumn when river flows were at their lowest (Ward et al 1994).

![Natural versus current Murray River flows downstream of Yarrawonga](Source Ward et al 1994)

Water from the Murray River enters the Barmah-Millewa Forest through a complex system of effluent creeks (Leslie and Harris 1996). The section of the Murray River which flows between the Barmah and Millewa Forests has a small channel capacity, which is known as the Barmah Choke. This restriction accentuates flooding by causing water to back up during periods of high flow and spill into the forest (Maunsell 1992). The pattern of flood flow in the forest differs between Victoria and New South Wales. In New South Wales, most of the water passes into the Edward and Wakool Rivers, before re-entering the Murray River at the Wakool Junction, approximately 480 km downstream. In Victoria, the Barmah Forest acts as a natural flood retardation basin as water from the Murray River flows through the
Barmah Forest, re-entering the river at the Barmah Lakes (Maunsell 1992). In both the Barmah and Millewa Forests water passes over the forest floor as sheet flow during large flood events, and mostly as creek flow during smaller flood events. The terrain of the forest is flat, so relatively small changes in topography affect the distribution and depth of flooding (Leslie and Harris 1996). The pattern of flow is constantly changing as silt is deposited on flooded areas, and natural log and earth barriers alter in height and position (Maunsell 1992).

River regulation has altered the natural flood patterns of the Murray River, and has changed the natural flooding regime of the Barmah-Millewa Forest. The general pattern of winter and spring flooding and dry summer and autumn conditions no longer prevails. The construction of the Hume Reservoir in 1934 with improvements in 1961, and the Dartmouth Reservoir in 1979 (both in the upper reaches of the Murray catchment), have altered the timing, frequency, duration and depth of flooding in the Barmah-Millewa Forest (Ward et al 1994). Winter and spring flows are now stored in reservoirs in the upper reaches of the Murray catchment, and released in summer and autumn to meet downstream irrigation demands (see figure 5.2). As a result, the forests now generally receive less frequent flooding events than prior to river regulation and these flooding events are generally of a smaller extent, and occur later in the season than prior to regulation. In addition, while summer flooding was an uncommon event prior to regulation of the river, it is now a regular occurrence (Ward et al 1994). For the Barmah Forest alone, it is estimated that prior to river regulation 70% of the forest was flooded for an average of 2.9 months in 78% of years. Since regulation of Murray River flows, this level of flooding only occurs for an average of 1.3 months in 37% of the years (Environment Australia 1997). River red gum is reliant upon this periodic flooding for germination and tree health.

In response to concerns over the detrimental impact of river regulation on the health of the Barmah-Millewa Forest, an annual environmental water allocation of 100 GL was approved by the Murray-Darling Basin Ministerial Council (MDBMC) in 1993. Environmental water allocations are gaining increasing attention. This involves a shift in the traditional water management emphasis from the needs of consumptive users and economic imperatives, to include environmental imperatives (Allan and Lovett 1997). It is understood that the environmental water provision for the Barmah-Millewa Forest could be used to supplement existing flows for the benefit of forest and wetland ecosystems. However, the allocation continues to be stored in Hume Dam and has yet to be released to the forests. This is a contentious issue. Despite a range of opinions on the subject, Allan and Lovett (1997) explain that there are two main reasons why the allocation has yet to be released; first, the 'environmental value' of releasing the allocation has yet to be determined and second, the measurement of the allocation and the development of operating rules have yet to be finalised by New South Wales and Victoria.
The changes to the natural flooding regime in the Barmah-Millewa Forest and the impact on the ecology and water quality of the river have been observed by local people (see chapter eight). They have also been well documented in scientific literature where river regulation has been described as one of the principal causes of ecological change in the Barmah-Millewa Forest (see Leslie 1995; Leslie and Harris 1996; Ward et al 1994; Ward 1991). The following section will briefly describe the forest environment and consider the changes that have occurred as a result of river regulation and forest use.

5.2.5 Vegetation

The Barmah-Millewa Forest is the largest river red gum (*Eucalyptus camaldulensis*) forest in the world (Maunsell 1992). The ecosystems in the forest include swamps and marshes, rushlands, grasslands, open waters, billabongs, streams, and red gum and box forest. The area is called a forest because of the predominance of red gums, however it could equally be classified as a wetland because of the frequency of flooding and the numerous open water bodies, swamps and marshes.

The ecosystems of the forest have all evolved on the periodic flooding and recession of the Murray River (Ward et al 1994; Leslie and Harris 1996). Annual rainfall is not sufficient to maintain tree health, so the health of the forest is reliant upon flooding from the Murray River (Dexter et al 1986). The surface flooding of the forest sustains large areas of wetland habitat and restores the soil moisture necessary for tree growth (Leslie and Harris 1996). The changes to the natural streamflow patterns of the Murray River documented above, have resulted in extensive vegetation changes including a decline in tree health, due to both the lack of water on some sites and prolonged inundation on other sites, and a reduction in the diversity and abundance of fauna species (Leslie and Harris 1996). In addition, grazing by rabbits and stock and reduction in the frequency of forest burning with Aboriginal displacement have contributed to the alteration of the forest's vegetation communities since white settlement (Chesterfield 1986; Ward 1991). Logging and silvicultural practices carried out in the forest since the 1860s have also impacted upon the forest. Many of the large old and deformed trees have been culled to promote the growth of 'merchantable timber' and the forest is now much younger than when white people first arrived. It is also more heavily stocked due to the absence of natural fire regimes, changed watering regimes and silvicultural practices (Donovan 1997).

The open forests and woodlands of the Barmah-Millewa Forest are remnants of the once extensive vegetation types of the floodplain of the Murray-Darling Basin (AHC Undated). The area supports a high diversity of plant species. The flora of the Barmah Forest consists of more than 550 species, of which approximately 30% are exotics (DCFL 1990). In the Millewa Forest 419 species of flora have been recorded (Forestry Commission of NSW 1985). Many rare and vulnerable species have been recorded in the forests (AHC Undated).
Red gum is the dominant overstorey species of the Barmah-Millewa Forests (Leslie and Harris 1996; Ward et al 1994). It usually forms a pure stand and only occurs with other eucalypt species on sites which are less frequently flooded and this is not common (Leslie and Harris 1996). It has been noted that tree height and diameter are related to the availability of moisture, and that the better quality forest occurs on sites that receive regular flooding or on sites with access to shallow watertables (Leslie and Harris 1996; Dexter 1978; see also Maunsell 1992).

Box woodlands, including species such as grey box (*Eucalyptus microcarpa*), yellow box (*Eucalyptus melliodora*) and white cypress pine (*Callitris glaucophylla*) occur above the flood-plain, on lighter textured soils and sandhills (Leslie and Harris 1996). Black box (*Eucalyptus largiflorens*) occurs on flood prone areas where flooding is of lower frequency and duration than on sites on which red gum will occur (Leslie and Harris 1996).

Throughout the forest there are very few woody species found as an understorey. Those that do occur are most common on the river banks and on less frequently flooded areas adjacent to and on the sandhills (Leslie and Harris 1996). The ground cover of frequently flooded areas is dominated by native perennial sedges and rushes. On the wetter sites Moira grass (*Pseudoraphis spinescens*) occurs as a unique botanical species (Ward 1991; Leslie and Harris 1996). It occurs on floodplain devoid of shrubs and trees, persisting as a turf when most other herbs are dormant and grows rapidly on surface waters following flood inundation (Ward 1991). The ground cover of infrequently flooded areas is dominated by naturalised aliens, especially annual grasses and clovers (Leslie and Harris 1996).

### 5.2.6 Fauna

The Barmah-Millewa Forest is considered to be of special value for its genetic and ecological diversity because of its size, the variety of communities and its high productivity (given the maintenance of flooding) (ANCA Undated). The forest supports a high diversity of bird species, with 206 species recorded. The wetlands of the forest provide important waterfowl breeding areas, supporting large breeding colonies of sacred ibis, straw-necked ibis, and smaller colonies of white egret and yellow spoonbill (AHC Undated). The wetlands of the Barmah Forest in Victoria are designated as wetlands of international significance under the Ramsar Treaty (see section 5.4). A number of discrete wetlands in the New South Wales section of the forest have also been nominated for inclusion as wetlands of international significance under the Ramsar Treaty (Leslie and Harris 1996).

The area also supports 30 mammal species, 12 bat species, 26 reptile species, 10 amphibian species and 24 fish species (AHC Undated). Numerous rare, threatened and
endangered species inhabit the forest, including the platypus (*Ornithorhynchis anatinus*); the superb parrot (*Polytelis swainsonii*), the plains wanderer (*Pedionanus torquatus*) and the freckled duck (*Strixtonetta naevosa*); the Murray cod (*Maccullochella peeli*) and the Macquarie perch (*Macquaria australasica*) (AHC Undated). Since white settlement of the area there has been a marked decline in the abundance and diversity of many bird, reptile and fish species which is largely attributed to the alteration of the natural flooding regimes of the Murray River, the forest and its wetlands (see Leslie 1995). Channel dredging and enlargement, now strictly controlled by environmental considerations, was once a common practice which has also had a dramatic effect on fish populations. Extensive commercial fishing have also reduced fish populations (see Harris and Gehrke 1997). The degradation of the Murray River system and its associated wetlands, and the question of how to adequately manage these areas are the source of much research and public debate.

5.2.7 Management implications

The multiple direct uses of the Barmah-Millewa Forest, such as logging, grazing and tourism have an impact on the forest and river environment. The AHC Register of the National Estate official statement of significance for the Barmah-Millewa Forests notes that "the integrity of the forests has been diminished by fire, logging, grazing and recreational use" (AHC Undated: 4). The Australian Nature Conservation Agency (ANCA) directory of important wetlands in Australia notes that "many of the recreational activities and the high visitor numbers, have detrimental side-effects for nature conservation" (ANCA Undated: 9-8). The impacts of these uses are often contentious and scientific information has been used to both support and deny the range of different forest uses. The most frequently documented and agreed upon cause of degradation is river regulation.

Recognition of the impact of river regulation on the Barmah-Millewa Forest environment has lead to much research and discussion about how the river can be managed in such a way as to maintain the health of the forest. In the recent water management plan for the Millewa Forests, Leslie and Harris (1996) note that measures to actively manage water in the Barmah-Millewa Forest commenced in the mid 1930s, soon after the construction of the Hume Reservoir. Since that time, awareness of the need to counter the adverse impacts of river regulation on the forest has developed in response to an increased understanding of environmental water requirements and a growing awareness of environmental values (Leslie and Harris 1996). For the Barmah-Millewa Forest a process of community consultation and participation has been underway since 1992 (see section 5.4.3). Importantly, Leslie and Harris explain that "the complexity of forest management problems resulting from river management has meant that many issues have not been satisfactorily resolved. Few projects have proceeded beyond conceptual planning stages due to insufficient State and Commonwealth funding support for investigations and capital development" (1996: 2).
The complex physical environment of the area is overlain by a multiplicity of forest uses and values which are the product of the history of Aboriginal association and white invasion of the area. The multiplicity of meanings produced through very different experiences of the place provide yet another layer of complexity for river and forest managers.

5.3 The Historical Setting

The role of history was briefly discussed in the chapter two, where it was noted that the past of a place can be interpreted in very different ways. Further, these multiple interpretations of history can be used to justify claims to the present character of a place and also in debates over the future of a place (Massey 1995a). As the following chapters show, claims and counter claims to the present and future character of the Barmah-Millewa Forest are based on different interpretations and experiences of the forest's past.

5.3.1 Whose history?

Writing this account of the historical setting of the Barmah-Millewa Forest has not been as easy as it first seemed. Contemplating this task, it did not take long to realise that there were two stories to tell; one well documented in the diaries of the early settlers, and the historical records kept since European settlement, and the other just beginning to be publicly heard, as oral histories are recorded by Aboriginal people and as the Australian courts of law hear evidence of continued associations with country. As Goodall has noted, "Aboriginal people were not wiped out, and they drew on their cultural, social and economic knowledge to negotiate the directions for their varied futures...The multi-faceted role of land in Aboriginal culture meant that there were possibilities for continuity as well and the discontinuities which the invasion caused in south-eastern Australia" (1996: 1).

The history of white settlement and activity in the area has been extensively documented in works by Fahey (1988), Hibbins (1991) and Donovan (1997). However, the history of the Yorta Yorta Aboriginal people who lived in the forest at the time of white settlement, is largely undocumented. Historical records for example, provide much information, but have been written by white settler Australians from their own perspectives as colonisers of the land (Atkinson and Berryman 1983). The writings of these white colonisers were strongly shaped by their assumptions and judgements of Aboriginal people (Goodall 1996). Some oral history has been undertaken by Atkinson (1981, cited in Atkinson and Berryman 1983), a member of the Yorta Yorta community, but much more of this work remains to be done. This section draws on existing public sources of information. As such, it is limited by the availability of information and my speaking position as a settler Australian.
While history is not the focus of this research, this account seeks to make the most of the public histories available, to convey something of the contested histories that continue today in the Barmah-Millewa Forest. Importantly, this section emphasises both continuity and change in Aboriginal culture (see Goodall 1996; Atkinson and Berryman 1983).

5.3.2 Pre-settlement forest use

Our understanding of the nature and history of the Aboriginal association with the Barmah-Millewa Forest has been pieced together from a variety of information sources. These include archaeological evidence, anthropological studies, historical records and recent oral histories (Atkinson and Berryman 1983). Each of these sources of information has its limitations, resulting in an incomplete understanding of Aboriginal association with the forest prior to and directly after European settlement of the area. The recent emphasis on oral history is seeking to fill some of these gaps (Atkinson and Berryman 1983).

The Barmah-Millewa Forest has been occupied by Aboriginal people for many thousands of years. The exact date of Aboriginal occupation of the forest is not known, however archaeological work from Kow Swamp, downstream from the Barmah-Millewa Forest, dates occupation at approximately 13 000 years before present (bp) (Fahey 1988). Evidence from the Willandra Lakes region suggests that Aboriginal people have been in the region for at least approximately 40 000 years (see Bowler 1971). As indicated earlier in this chapter, the Barmah-Millewa Forest has undergone many physical changes, particularly prior to the last 10 000 years, before the present course of the Murray River formed. Since the stabilisation of the present river system at around 10 000 bp it seems likely that woodland plains, savannah lands, tree-less plains and seasonally flooded forests were features of the Murray Valley (Butler et al 1973).

Information about the names of the tribal groups occupying the Barmah-Millewa Forest has largely been drawn from early accounts of white contact with Aboriginal people in the area. This information indicates that specific areas were inhabited by particular groups, although the distinctions between groups and their area of influence is confusing (Donovan 1997). Atkinson and Berryman's (1993) unpublished report to the Victorian Land Conservation Council and Donovan's (1997) history of the Millewa forest provide a useful summary of this information. A tribal map produced by Tindale notes that the main tribes occupying territories within the Murray Valley include the Pangerang, Joti Jota and Kwat Kwat tribes (1974, discussed in Atkinson and Berryman). The squatter Edward Curre referred to these collectively as the Bangerang (cited in Atkinson and Berryman 1983). On the northern banks of the Murray River (in NSW), Curr identified two groups, the Mooitheriban who lived in the vicinity of the Edward River, and the Ngarrimowra whose territory extended to the east (Donovan 1997). It has been suggested that the Murray River was not a political boundary between Aboriginal groups (Lyons 1988a; Auscript 18.11.1996: 1631).
Contemporary local Aboriginal people refer to themselves as Yorta Yorta. This is a community name which encompasses various local descent groups, including the Bangerang (Australian Broadcasting Corporation 1997). Atkinson and Berryman explain that present day Aboriginal descendants of these groups use the spelling Yorta Yorta as it is pronounced rather than the linguistic spelling (Joti Jota) used by anthropologists such as Tindale, and for uniformity they use Curr's spelling of Bangerang (rather than Pangerang) (Atkinson and Berryman 1983: 14).

The Aborigines of the Murray Valley, including the Barmah-Millewa Forest, followed the general Aboriginal Australian pattern of group congregation when food was plentiful and group dispersal during times of food scarcity (Atkinson and Berryman 1983). The riverine environment offered a relative abundance of food, and supported relatively larger and more sedentary populations than inland areas of Australia (Atkinson and Berryman 1983; Goodall 1996). It is evident from Aboriginal middens in the forest that the river and forest areas provided permanent water and access to food sources in most seasons (Lyons 1988a; Donovan 1997).

Estimates of Aboriginal populations prior to European settlement are also largely based on the accounts of white observers, such as early squatters, overlanders and government officials (Fahey 1988). These sources suggest that epidemics of smallpox drastically reduced Aboriginal populations along the Murray River long before Europeans arrived in the region (Butlin 1982, cited in Atkinson and Berryman 1983). The sedentary nature of the lifestyles of Aboriginal populations along the Murray River made them vulnerable to the diseases introduced by white people (Goodall 1996). It has been noted that the central Murray region could have been one of the most densely populated in Australia before white invasion (see Atkinson and Berryman 1983; Lyons 1988b).

Aboriginal occupation is evident in the scarred trees which can be found throughout the forest, middens which are usually found along the major rivers, oven mounds which are found on high ground adjacent to streams and rivers, burial sites which are commonly found in the sandhills throughout the forest, and fish weirs (Lyons 1988b; Donovan 1997). Drawing on the work of others, Lyons (1998a) has documented the plant foods which would have been available to Aboriginal populations in the Barmah-Millewa Forest.

Early historical accounts of the Barmah-Millewa Forest make reference to the frequent use of fire by the Aboriginal inhabitants of the forest. The squatter Edward Curr and explorers Sturt and Hawdon noted the frequent use of fire for clearing tracks through reed beds, for hunting purposes and for dissuading Europeans from venturing into Aboriginal territory (Atkinson and Berryman 1983). Curr observed that Aboriginal people in the area set fire to the grass and trees both accidentally and systematically for hunting purposes as frequently as every five years (cited in Lyons 1988b). This may have resulted in the 'parkland' appearance of the forest reported by white settlers and explorers.
The frequency, distribution and impact of Aboriginal burning regimes is a matter of ongoing research and considerable contestation. Different contemporary attitudes towards fire will be considered in chapter nine.

5.3.3 Forest settlement and development

Joseph Hawdon and Charles Bonney were the first Europeans to visit the Barmah Forest in 1838, as they were overlanding sheep and cattle to drought-stricken Adelaide (Fahey 1988). Four months later, Charles Sturt, also overlanding cattle to Adelaide, passed through the area as he followed the Murray from Albury to South Australia (Fahey 1988). He followed the northern bank of the river from Albury to the Edward River where he crossed to the south side, and so was the first to record descriptions of the Millewa red gum forests on the NSW side of the river (Donovan 1997).

Not long after this, squatters seeking good grazing land came to the area. Augustus Morris travelled to the region in 1842 seeking new country on behalf of Benjamin Boyd and the Royal Bank. He took up the Deniliquin run which took in extensive red gum forests, extending north from the Gulpa Creek for 150 km on both sides of the Edwards River. The first squatters in Victoria (or the Port Philip District as the area was then known) was Edward Curr and his brother William, who arrived soon afterwards seeking country on which to graze their cattle during the dry summer months. The Curr's took up the lower Moira run, which included part of the Barmah red gum forest (Fahey 1988). They also took up a block on the NSW side of the river (Donovan 1997).

Soon after this other pastoralists arrived and by the mid 1840s the red gum forests were hemmed in by pastoral runs on both sides of the river (Fahey 1988; see also Donovan 1997). Widespread European settlement in the vicinity of the Barmah-Millewa Forest did not occur until the second half of the 1860s, with the passing of the Victorian Grant Act of 1865 and the Free Selection Act in 1869 (Fahey 1988). Until then the Barmah Forest and the grazing land adjoining it were occupied by "a mere handful of graziers" (Fahey 1988: 29). Within a decade of the passing of the 'free selection' Act, large parts of the original pastoral runs adjoining the Barmah Forest had been selected, and clearing for cultivation or grazing had begun (Fahey 1988). In NSW the original pastoral runs were not made available for selection and continued to operate as large pastoral properties. This different history of settlement is still evident with larger pastoral properties bordering the forest in NSW and many more smaller properties bordering the forest in Victoria. This has given rise to the different systems of cattle grazing in NSW and Victorian forests.

The squatters and selectors and their flocks of sheep and herds of cattle displaced local Aboriginal groups from their country. Historical accounts of the settlement process record some of the conflict that occurred between Aboriginal people and the white settlers. Writing on the history of the forest on the Victorian side of the river, Fahey notes that the
conflict between white and black inhabitants of the forest "was the first battle for the lush Barmah Forest; it was not to be the last. In the next 150 years bitter arguments were to rage over how the forest should be managed, and, more importantly, who should use its resources" (1988:i).

The abundance of food and water resources that sustained the relatively large Aboriginal populations of the area also attracted the white settlers. The lush Moira grass provided excellent grazing for cattle and sheep and the water supply was relatively abundant. In addition, the hard termite-resistant red gum of the forests became highly sought after for building construction, and a thriving timber industry grew up in the red-gum forests bordering the Murray River in both NSW and Victoria. Grazing commenced in the forests as early as the 1840s and the forests have been logged since the 1860s (Fahey 1988; Donovan 1997). With the discovery of gold in Victoria in the 1850s, both the red gum and grazing industries boomed in the Barmah-Millewa area, supplying timber and stock to the Victorian gold fields (Fahey 1988; Donovan 1997).

Logging was largely uncontrolled in the Millewa group of forests in the 1860s and 1870s. During this time large areas of forest along the Murray River were virtually clear felled and forests in the vicinity of sawmills and townships were also heavily logged (Donovan 1997). Concern about the state of the red-gum forests led to changes in land tenure and increasing levels of control over the timber industry. The Millewa Forest was declared a forest reserve in the 1870s and gazetted as a State Forest in 1916. Traditional management practices which were aimed at ensuring the maximum sustained yield of timber production became increasingly more regulated, and continued until the 1970s (Donovan 1997). Since this time, timber quotas have been reduced to conform with the calculated sustainable yield of the forest, and management objectives have shifted from a primary focus on timber production, to also consider recreation, wildlife protection and nature conservation along with the maintenance of native forests (Donovan 1997). Cattle grazing has continued in the forests since the first white settlers took up pastoral runs in the district in the 1840s. Grazing is currently managed under the terms of Occupation permits, which cover upwards of 95 percent of the Millewa Group of forests. This permit system ensures that grazing is controlled and carried out on a seasonal basis (Donovan 1997).

In Victoria the red gum industry continued unregulated until the late 1860s when concern began to be voiced about the state of the red gum forests (Fahey 1988). In response, a large area of red gum was proclaimed State Forest in 1870, however the primary focus on timber production remained. As in the Millewa forest, the timber industry has become increasingly more regulated as timber quotas have been reduced to meet sustainable yield levels and as environmental issues have gained importance (see Fahey 1988). Grazing in the Barmah Forest took a different path to that in the Millewa Forest. The 'free selection' Act had brought greater numbers of people to the area, who took up
relatively small selections, many of which bordered the Barmah Forest. With a greater number of farmers, some with blocks too small to make a living, there was increasing pressure for land on which to graze their horses and cattle. The Barmah Forest was subsequently proclaimed a Common (in the late 1870s), after petitioning by the selectors to the Minister of Lands (Fahey 1988). Rules were developed that enabled selectors within 5 miles of the common, who could demonstrate that they had cultivated 10 per cent of their selections, to graze their sheep, cattle and horses on the common (Fahey 1988). These 'rules' can be seen today in the current common grazing system of the Barmah Forest (see also 6.2.1).

In the early 1980s the Victorian Land Conservation Council (LCC) undertook an extensive study of Victoria's public land, producing a descriptive report and recommendations for the management of seventeen study areas (Fahey 1988). One of the study areas was the Murray Valley, which encompassed the Barmah Forest. The LCC acknowledged both the conservation and commercial values of the forest. It recommended that an area of the Barmah Forest be gazetted as State Park and that grazing and logging be phased out over a period of three years in the Barmah State Park (see figure 5.1, before chapter five). Local graziers and timber workers were outraged by these recommendations, emphasising that grazing had been carried out in the region for 150 years and might be part of the region's 'human' as opposed to 'natural' heritage (Fahey 1988: 58). The Barmah Forest Preservation League was established to lobby for grazing and logging to continue in the State Park. The State Park was gazetted in 1987, however grazing and logging continue in these areas.

In recent years, increasing awareness of environmental issues, greater understanding of natural systems and human-induced changes, and an increasing awareness of issues of cultural heritage have had an impact on the way in which the Barmah-Millewa Forest is managed. The timber and grazing industries remain an important aspect of forest management, however, the management of wildlife habitats, particularly wetlands and the maintenance of the multiple use of the forest are increasingly important (Donovan 1997). For this multiple-use philosophy to be truly 'multiple-use' it must recognise the prior and existing use of the forest by the Yorta Yorta people.

5.3.4 Post-settlement change and continuity

The traditional life of the Aborigines associated with the Barmah-Millewa Forest is described by Atkinson and Berryman as "a complex and finely tuned system of economic, social and religious behaviour that ensured mutual relationships with each other and the land" (1983: 46). This, they note "was altered dramatically when rapidly increasing numbers of Europeans, with opposing ideas about land use, forcibly acquired the land and control over its original inhabitants" (1983: 46). However, despite all these changes "the
Aboriginal descendants of the Murray Valley area today still retain a strong link and special relationship with their traditional and historic homelands" (Atkinson and Berryman 1983: 46). As Goodall explains, "beyond the invasion violence, land continued to be deeply important for Aboriginal people, just as it had been beforehand" (1996: 23). This section briefly describes the dispossession of Aboriginal people that has occurred since white settlement (for more detail see Atkinson and Berryman 1983; Fahey 1988; Goodall 1996). It concludes with a discussion of the past land claims and current Native Title Claim by the Yorta Yorta people to their traditional lands.

As noted above, one of the first major impacts on the Aboriginal population was a decline in population numbers. This has been documented in the writings of the squatter Edward Curr, and in the journals of explorers such as Charles Sturt. This population decline has been attributed largely to diseases such as smallpox which were passed onto Aboriginal communities by white people, often ahead of the first physical contact. However, Fahey contends that the decline in population must also be attributed to Aboriginal people's dispossession from traditional hunting grounds by Curr and his fellow squatters (Fahey 1988). Such actions were given official sanction by the colonial administration through the establishment of 'protectorates' (Fahey 1988) and the various policies of 'relocation' (read 'removal').

The first protectorate in the area was established in Murchison and between 1838 and 1848 a large number of Yorta Yorta people were taken from the forest and relocated at Murchison (Fahey 1988). Between 1862 and the 1870s the enforcement of various policies of 'relocation' removed Yorta Yorta people from their homelands (Fahey 1988). In the absence of an Aboriginal reserve in the area, the government had the power to remove Aboriginal people from their lands and place them in central locations, such as Corranderk Station (Atkinson and Berryman 1983). In 1874 the Maloga Mission was established by a missionary, Daniel Matthews on the selection owned by himself and his brother a short distance from the town of Barmah on the New South Wales side of the Murray River (Fahey 1988). The mission did not grant the Aboriginal people independence and played its own part in the eradication of Aboriginal culture in favour of European ways and beliefs. As one Yorta Yorta man told the Federal Court in the proceedings of the Native Title Claim:

Well, what they done was, you know, as I said, I'm a spiritual man; I'm not a religious man. I don't believe in religion because it's wrecked us, so we were strong in our spiritual beliefs, but they were taken there by Mr Mathews...collected right away from along the river in a horse and buggy and taken to them places and that's where our Missions, if you want to call them that, or places started off with Aboriginal people. They had no say; they were just bundled in and taken to them places by force (Auscript 18.11.1996: 1596).

The Muloga Mission did however, enable the Aboriginal people of the central Murray area to remain closer to their homelands and Muloga Mission became a temporary home for remaining tribes of the area (Atkinson and Berryman 1983). The mission suffered
from lack of funds and in 1883 the New South Wales Government established an Aboriginal reserve on 1800 acres adjoining Maloga. The Muloga residents and buildings were moved to this new reserve which became officially known as Cummeragunja (which means 'my home') (Atkinson and Berryman 1983; Fahey 1988).

Following intense lobbying from the Yorta Yorta people, Cummeragunja was augmented by farm blocks of varying sizes between 1896 and 1907. However, these blocks were repossessed in 1908 and the dispossessed block holders had to accept wages from the manager in lieu of independence (Fahey 1988). From 1908 the Aboriginal Protection Board commenced a policy of 'assimilation' which involved the removal of 'half caste' children from Cummeragunja. The population at Cummeragunja declined again as children were taken away for placement in domestic service training institutions and others escaped the New South Wales police and camped in bag huts on the Victorian side of the Murray River, or moved to Victorian towns nearby where employment was available (Fahey 1988). The National Inquiry into the separation of Aboriginal and Torres Strait Islander children from their families (launched by the Federal Attorney General in 1995) has concluded that throughout Australia, between one in three and one in ten indigenous children were forcibly removed from their families and communities between 1910 and 1970. These policies were found to have affected every indigenous family in Australia (Human Rights and Equal Opportunity Commission 1997).

In 1939 the residents at Cummeragunja decided to go on strike over a number of issues, including poor living conditions, the leasing of 2 000 acres of the reserve to a white farmer, inadequate rations, and an antagonistic manager (Atkinson and Berryman 1983). This strike lasted for nine months and saw 300 residents cross the river into Victoria and set up camp near Barmah (see Goodall 1996). It highlighted the massive deficiencies and neglect in the government's treatment of Aborigines and marked a new era of resistance and lobbying. As Atkinson (1997; 1998) has noted, Cummeragunja provided a base for the development of the Aboriginal political movement in the 1930s. A small group of Yorta Yorta people helped establish the first Aboriginal organisations, such as the Aborigines Progressive Association in Sydney in 1937 and the Australian Aborigines League in Melbourne in 1932 (Atkinson 1997; 1998; see also Goodall 1996 for a comprehensive analysis of the Cummeragunja walkout in Aboriginal politics). Cummeragunja remains the home and meeting place for many Yorta Yorta people. It is located on the New South Wales side of the river, a couple of kilometres from the township of Barmah.

The Yorta Yorta have made numerous attempts to claim back their traditional lands and to be granted compensation for their losses. Goodall notes that:

the clearest example of Aborigines demanding land directly is that of Cummeragunja...where their requests [for land] were made, they argued, as compensation because 'all the land within our tribal boundaries has been taken possession of by the Government and white settlers' (1996: 77).
The history of formal moves for compensation and land rights can be traced to 1860 when members of the Yorta Yorta sought compensation from Victorian authorities for the destruction of natural fishing stock by paddle steamers. The claim was for a tax of £10 ($20) to be imposed on each paddle steamer. The revenue raised would be used to buy food to replace the fish which the Yorta Yorta believed had been driven away by the river trade (Atkinson 1997, 1998; Robertson 1993).

Atkinson (1997; 1998) notes that there have been seventeen separate attempts between 1860 and 1993 by the Yorta Yorta people to obtain land and compensation. These have included a claim prepared by the Yorta Yorta Tribal Council (now known as the Yorta Yorta Murray-Goulburn River Clans Inc.) in 1984. This claim sought the return of the Barmah Forest to its traditional owners and compensation for its past use and the destruction of traditional culture. A prior unsuccessful claim to the same area, including the Moira Forest, had been made to the Victorian Government by the Aborigines Advancement League (Atkinson 1997; Robertson 1993).

The most recent attempt by the Yorta Yorta to reclaim land and compensation is currently before the Federal Court of Australia. The Yorta Yorta Native Title Claim covers pockets of Crown land, including the Barmah-Millewa Forest, and waters of the Murray, Goulburn and Campaspe and Ovens Rivers. The Claim reflects the Yorta Yorta belief that "their rights to the land in the Murray-Goulburn region are inherent, rights that have been handed down to them by their ancestors" (Atkinson 1998: 4). The very identity of the Yorta Yorta has been challenged by over five hundred parties (known as respondents) who are opposing the Native Title Claim. This includes the state governments of Victoria and NSW. By challenging the Claim, the history of Aboriginal association with the forest is being questioned.

5.4 Institutions of Resource Management

A range of agreements, policy and law govern the management of the Barmah-Millewa Forest. These reflect the various uses of the forest. For the purposes of this research, the term institution is broadly understood as "an established order comprising rule-bound and standardized behaviour patterns" (Jary and Jary 1995: 324). In this sense, institutions include both the instruments and organisations "that prescribe behavioural roles, constrain activity, and shape expectations" (Keohane 1989: 163). This includes the agreements, policies and laws which govern the management of the Barmah-Millewa Forest and the organisations which administer these.

The plethora of formal institutions (both agreements, policy, legislation and the organisations administering these) creates a complex situation which is poorly understood by those associated with the forest. This provides a barrier to communication between the various scales of management. One prominent aspect of this barrier is the inter-
jurisdictional situation created by the location of the Millewa Forest in New South Wales and
the Barmah Forest in Victoria.

The management of the Barmah-Millewa Forest is characterised by numerous
institutional instruments and government and non-government organisations, at the
international, federal, river-basin, state and local levels. In order to clarify this situation,
figure 5.3 (located after this chapter) illustrates the institutional setting. This is an abridged
version designed to distinguish the key institutional players for the purposes of this thesis.
A brief discussion of each scale of management represented in figure 5.3 will highlight the
salient features of the institutional setting.

5.4.1 International conventions

The Barmah Forest has been declared a wetland of international significance under the
Ramsar convention. Australia is a signatory to the convention which provides for the
conservation of wetlands, establishment of wetland reserves, and international cooperation
on wetland issues, especially with respect to migratory waterfowl (DC&E 1992). A number
of discrete wetlands in the Millewa Group of forests in NSW have also been nominated for
designation as Wetlands of International Significance under the Ramsar convention (Leslie
and Harris 1996).

Eight species of migratory birds, which are summer visitors to the Barmah-Millewa
Forest, are protected under international treaties, the Japan-Australia Migratory Birds
Agreement (JAMBA), signed in 1974, and the China-Australia Migratory Birds Agreement
(CAMBA) which was signed in 1986. The aim of these agreements is to ensure that the
governments involved recognise the value of migratory birds by protecting those birds that
migrate between Australia, Japan and China and their habitats (Schlusser 1997).

These international treaties and agreements have demonstrated the environmental
significance of the Barmah-Millewa Forest. This has influenced management practices and
perceptions of the forest from the local scale through to the involvement of federal
government agencies. This information has added to, and sometimes challenged local
understandings of the forest.

5.4.2 Federal involvement

The Barmah-Millewa Forest was registered on the Australian Heritage Commission's
Register of the National Estate in 1992 (AHC Undated). This places it in the domain of the
Australian Natural Heritage Charter, administered by the Australian Heritage Commission,
which outlines standards and principles for the conservation of places of natural heritage
significance, and the Burra Charter which deals with places of cultural heritage significance.
In 1992 the High Court handed down its Mabo decision, and in 1993, the Federal Government passed the *Native Title Act* which was subsequently amended in 1998, both of which have shaped the nature of land claims since that time (see chapter one). In 1994 the Yorta Yorta people lodged a claim to both land and water along the Murray and Goulburn Rivers in Victoria and New South Wales. They were the first Victorian Aboriginal group to lodge a land rights claim following the 1992 Mabo decision (Robertson 1993), and this was the first claim to reach the Federal Court under the *Native Title Act*, for a full hearing (Hagen 1996). In addition, this is the first Australian claim to inland water resources. It is therefore seen as a test case, even more so since the passing of amendments to the *Native Title Act* effectively prohibit claims to water by protecting the rights of current water users (Atkinson 1998).

At the time of writing, the Yorta Yorta Native Title Claim is awaiting a decision from the Federal Court. While the outcomes of this case are uncertain, the role of the Federal Government in facilitating Aboriginal reconciliation is equally uncertain. The consequences of the amended *Native Title Act* have yet to be fully determined.

5.4.3 River basin management

The Barmah-Millewa Forest is located in the Murray-Darling Basin, Australia's largest river basin, which encompasses part of the states of NSW, Victoria, South Australia, Queensland and the Australian Capital Territory. The basin has been extensively developed for agriculture and is commonly referred to as the 'food bowl' of the nation. In order to support these agricultural practices the water resources of the Murray River have been extensively developed for irrigation. The waters of the Murray River are managed by the Murray-Darling Basin Commission (MDBC) on behalf of the states of NSW, Victoria, South Australia and Queensland. Formal arrangements concerning the sharing of the Murray River waters between the three states began in 1914. Since then an innovative institutional framework has evolved (see Crabb 1988; 1991; Eastburn 1990b; Kellow 1992).

Currently, the Murray-Darling Basin Agreement (MDBA) (signed in 1987) governs the management of the waters of the Murray River. The purpose of this agreement is to "promote and co-ordinate effective planning and management for the equitable, efficient and sustainable use of the water, land and environmental resources of the Murray-Darling Basin" (River Murray Waters Amendment Bill Schedule 1A, cited in Crabb 1991: 150). The Murray-Darling Basin Ministerial Council was established in order to meet the objectives of the MDBA. The council comprises ministers for water, land and the environment from the four major governments (Victoria, New South Wales, South Australia and the Commonwealth). The MDBC, a bureaucratic body, replaced the River Murray Commission, to advise the Ministerial Council on the management of water, land and environmental resources within the Basin. A Community Advisory Committee (CAC) was also established.
to provide a formal avenue for communication between the people of the Basin and the Ministerial Council (see Crabb 1991).

Water management is coordinated by the MDBC on behalf of the states. Specific water management plans for the Barmah-Millewa Forest have been formulated by NSW (Leslie and Harris 1996) and Victoria (Ward et al 1994), and an overall water management strategy is being compiled by the MDBC (MDBC 1997). As part of this process, a local Barmah-Millewa Forest group comprising community, local government, state government agencies and MDBC representatives has been established. This group is known as the Annual Forum which superseded the Community Reference Group (CRG) (first convened by the MDBC in 1992), to provide community comment on forest-environment watering and water management (CRG 1994). Community interest groups were identified through a public meeting and consultation process that began in 1992. Each recognised broad interest group has two representatives on the Annual Forum; these include timber and non-timber (grazing) groups, the Yorta Yorta community, irrigation and water boards, shire councils, environmental groups. State government agencies also attend these meetings. The Annual Forum and the Technical Advisory Committee (which is comprised of members of the Annual Forum) is currently the main formal process through which community consultation occurs in relation to water management in the Barmah-Millewa Forest.

5.4.4 State involvement

In both Victoria and NSW, different government agencies deal with different aspects of managing the environment. For example, in Victoria, the Barmah State Forest and State Park are managed by the Department of Natural Resources and Environment (DNRE) and Parks Victoria. DNRE are responsible for forestry and water management, while Parks Victoria assume responsibility for park management and recreation. These departments share an office in Nathalia, with larger offices in Shepparton and Benalla. In NSW, the Millewa Group of State Forests are managed by State Forests, who are responsible for forestry, park management and recreation. The Department of Land and Water Conservation (DLWC) assume responsibility for water management and planning, although State Forests are also concerned with habitat protection and maintenance, and wetland rehabilitation. Both departments have offices in Deniliquin. The protection and management of cultural heritage sites is primarily the responsibility of the NSW National Parks and Wildlife Service (NPWS), which has offices in Buronga and Dubbo.

In practice, the separation of land and water and cultural heritage management issues may mean that certain values may not be identified or adequately incorporated into management plans. For example, non-timber values may become a problem for forest management planners, especially where the identification, assessment and protection processes are external to the forest management agency (DNRE or State Forests) (Lennon 1998).
These state government agencies manage the forests and the water resources in accordance with the relevant legislation, strategies and policies of each state. These legislations cover conservation, wildlife protection, park management, tourism and recreation, aboriginal cultural heritage management, economic development, and weed and fire management.

5.4.5 Local involvement

There are a large number of informal organisations concerned with the management of the Barmah-Millewa Forest. Those represented in figure 5.2 are those most closely associated with the management process. These groups assert a set of values ascribed to the forest and a set of informal or formal rules or codes may govern membership and behaviour. Particular forest uses and management opinions are also asserted by many of these groups and these often conflict with current management practices and values asserted by the government agencies and instruments at other scales. For example, the Yorta Yorta Murray Goulburn River Clans Inc (Yorta Yorta clans group for short) has developed a policy statement regarding the management of the forest which outlines the changes that they believe need to be made to the current management regime. Opinions on management and use of the forest have often been asserted in reaction to those held and asserted by the government agencies and instruments at the state or federal level. For example, the Barmah Forest Preservation League (BFPL) was established in 1984 in response to the recommendations of the Victorian LCC (now superseded by the Environment Conservation Council) to phase out logging and grazing in the Barmah State Park. This group gained considerable lobbying power through local Members of Parliament and was successful in achieving amendments allowing logging and grazing to continue in the State Park. This will be discussed in more detail in the following chapters.

In addition to this there is a significant amount of overlap amongst the membership of these groups. For example, the Barmah Cattlemen's Association is comprised of Victorian graziers with licences to graze cattle in the Barmah Forest. Many of these cattlemen are also members of the Barmah Forest Preservation League, which advocates 'multiple-use', including grazing of the forest. In addition, a member of these two groups might also be a shire councillor and a representative of any one of these organisations on the Barmah-Millewa Annual Forum. Overlap between the local and state levels of management also occurs as some members of local groups work as rangers or forest supervisors for State Forests and DNRE.

5.5 Concluding Comments

This chapter has outlined the complex nature of the physical environment of the Barmah-Millewa Forest, the contested histories associated with the forest, and the institutional structures which are involved in management of the forest. It has introduced the reader to
the physical characteristics of the place and the associated management issues. It has also outlined the very different ways in which the forest has been experienced by Aboriginal people and settler Australians. The issue of contested knowledges has been highlighted by description of both the 'science' and the 'history' of the forest. This will be considered further in chapter eight.

A theme of change has been evident throughout this chapter, portrayed through the natural and human-induced change to the physical landscape and through the history of human association with the forest. In addition, the institutional setting which governs the management of the forest is complex and constantly changing as instruments and government agencies are reconfigured by political processes, and as priorities and alliances shift across all scales of management. The Native Title Claim imposes another possible dimension of change to the values and uses supported by the forest's management regimes. As the following chapters illustrate, even before a decision has been handed down, the Native Title Claim has already changed the way people are thinking and talking about the forest.

The different stories of the creation of the Barmah-Millewa Forest described at the start of this chapter illustrate something of the physical landscape, however they also tell of the different meanings that this place encapsulates for different people. This thesis seeks to elicit some of these different meanings. This chapter has also hinted at the different values that underlie the various perceptions of the environmental impact of forest uses. The following chapter will outline the different values ascribed to the forest. Chapters seven, eight and nine will further explore the different ways in which the forest is constructed and known.
Figure 5.3 Institutional setting of the Barmah-Millewa Forest
CHAPTER SIX

THE 'VALUE' OF THE BARMAH-MILLEWA FOREST

6.1 Introduction

The description of the range of values ascribed to a place or resource is a common practice in cultural heritage and natural resource management. In particular, there has been a recent focus in cultural heritage management on the social and cultural values ascribed to places. The Barmah-Millewa Forest is an important place for a diversity of user groups, who ascribe different values to the forest, the wetlands and the river system. Considering the complex and contested nature of the management and history of the Barmah-Millewa Forest (as outlined in chapter five), it is useful to examine the range of existing values ascribed to the forest. Drawing on cultural heritage and biodiversity policy and literature, this chapter develops a categorisation of values to facilitate the discussion of forest values.

The use of this categorisation allows the range of forest values to be described; however it does not adequately describe the overlap that exists between the different sets of values. Having established the range of values that people ascribe to the forest, the complexity and overlap of these values is considered in more detail. Six characterisations of association with the forest are described through the use of a heuristic diagram (introduced in figure 6.1) to illustrate the complexity and multi-layering of the values and meanings that people give to the forest.

This chapter draws on both primary and secondary sources of information, focusing on information collected from interviews conducted with a range of individuals associated with the forest. Excerpts from these interviews are used to illustrate the discussion.

6.2 Forest Values

It was noted in chapter three that the identification of the range of values ascribed to resources and particular environments has become a common approach in resource and cultural heritage management. This reflects the need for managers to accommodate the multiplicity of values that are currently being expressed in relation to resource and cultural heritage management. Indeed, the Resource Assessment Commission has defined the present era as "a challenging one of considerable plurality, and sometimes conflict, of values and associated beliefs" (RAC 1993a: 7). It has emphasised the complexity associated with the identification and description of the values that people hold, such as beliefs about the need for economic development or for conservation, and the values people assign to things such as resources (for example aesthetic value). They explain that:
...there are many social factors making for considerable disparity, conflict and change in the values adhered to by groups and individuals. People do not have a completely ordered set of values, but tend to articulate and clarify their values in response to particular situations. People's articulation of values will be influenced by the context, the information available and the method used to ascertain them. (RAC 1993a: 8).

In response to these challenges, recent literature and policy from biodiversity and cultural and natural heritage management has developed various ways of categorising values relating to the environment. They have identified categories such as economic, environmental, aesthetic, cultural and social values (see AHC 1996; Marquis-Kyle and Walker 1992; Dovers 1996: 179-180; Noss and Cooperrider 1994). In particular, the cultural heritage management literature and policy focuses on notions of social and cultural value and significance, defining these as embracing the aesthetic, historic, scientific, spiritual, religious or educational qualities of a place (see Johnston 1994).

For the purposes of this discussion I have adapted a set of values described by Dovers for biodiversity (1996:178-180; see also Noss and Cooperrider 1994; Norton 1987; Wilson 1992). This adapted set of values combines the focus on the use and 'non-use' values of the natural environment reflected in the biodiversity and natural resource management literature and policy (Dovers 1996; Dutton et al 1995; AHC 1996), with the strong anthropocentric focus in current cultural heritage management policy and literature (Marquis-Kyle and Walker 1992; Commonwealth of Australia 1994; see also Pearson and Sullivan 1995). These categories provide a useful framework in which various resource values can be described and resource-related conflicts understood. They also provide a useful way of understanding the range of values that are assigned to a particular place. These categories include:

- direct utilitarian value (the value of a resource or place in a direct or consumptive sense, eg grazing or logging of public land);
- indirect utilitarian value (the value of a resource or place in a material, but indirect way, eg wetlands which act as a natural filter for a river system);
- scientific and educational value (eg the value of the area for the study of floodplain hydrology, or for the education of Yorta Yorta children);
- cultural heritage value (the cultural and historic value of a place or resource, eg Aboriginal burial grounds, canoe trees and middens);
- aesthetic and recreational value (eg forest drives and walks); and
- intrinsic, spiritual and ethical value (eg the right of other species to exist; the spiritual significance of certain plant and animal species to Aboriginal people; the perceived spiritual and therapeutic qualities of the forest).

It is worth noting that a number of alternative ways of valuing the environment have been developed in recent times (see Department of Environment Sport and Territories 1995a; Jacobs 1991). One of these methods is contingent valuation (CV), which determines the value of an entity to a particular group, expressed in monetary terms. This approach has been applied to the Barmah Forest in Victoria. A pilot study using the CV method
placed the value of the Barmah Forest to the Victorian population between $76.9 and $97.5 million (LWRRDC 1998). This is not an exchange value (for a discussion of the problems with CV see Common 1995). A contingent valuation survey was carried out for the RAC as part of the Kakadu Conservation Zone Inquiry. The criticisms and commentaries on this technique and its application have been documented (Hamilton 1991).

One striking feature of the descriptions that follow is the diversity of the values ascribed by the various user groups to the forest. In general, local people interviewed about their attachment to the forest identified values that would fit into a number of the different categories. This shows the complexity of people's attachments to the forest. In addition to this, one forest use may fall into more than one category of values. One example of this is tourism, which ascribes a direct utilitarian value of the forest, as well as a range of other values including scientific and educational value, heritage, aesthetic and recreational value. The complexity of the values people ascribe to the forest, and the overlap that occurs between the different categories will be discussed in more detail in section 6.3.

6.2.1 Direct utilitarian value

This category refers to the value of the forest in a direct or consumptive sense. The ascription of these values encompass forest uses such as logging, cattle grazing, as well as aspects of tourism and recreational uses such as fishing, hunting and camping.

As described in chapter five, the forest has been selectively logged for the red-gum timber industry since the latter half of the 1800s. The red-gum timber is said to be among the most versatile hardwood timbers in the world; it is a hard and durable timber which is rarely subject to attack by termites. With these characteristics, it is highly sought after for furniture making, fencing, housing, boat building and heavy construction. It is estimated that over 90% of the railway sleepers in use in Victoria are red-gum and many of these have come from the Barmah Forest (Fahey 1988). The logging industry has undergone many changes and increasing regulation since the late 1800s; however, it continues to be an important component of the multiple-use philosophy that governs the current management of the forest. The logging activities undertaken in the forest have played an important part in the history and livelihood of many individuals, families and the surrounding townships such as Barmah, Picola, Nathalia and Mathoura. A number of other forest values such as aesthetic, recreational, heritage and spirituals values have been derived from these direct utilitarian values. These are discussed below under the relevant sub-headings.

Historically, the forest has served an important economic function for the local communities. It has been a major source of employment for people living in the towns of Mathoura, Barmah, Picola and Nathalia. Although the forest is still an important source of employment and industry in the area, local employment in the timber industry has declined. This can be attributed to a number of structural changes experienced in the Australian
timber industry, such as industry mechanisation, a reduction in timber quotas to achieve a long-term sustainable yield and the centralisation of sawmilling (Dargavel 1995). Timber is now often largely transported to mills out of the local area, rather than being processed locally (see Fahey 1988 for a discussion of the history of timber production and associated employment in the Barmah Forest). Overall, declining terms of trade and declining employment in the forestry and agriculture sectors have contributed to the decline of small rural communities (see Dargavel 1995 on forestry; Lawrence et al on agriculture). The reduction in the local employment base provided by the forest was frequently mentioned by local people who had been employed in the timber industry or grazed cattle in the forest. The following quotes indicate this concern:

[There were] 37 sleeper cutters in the forest at one time and now we've got four and we had quite a few saw mills around the place and now we've got the ridiculous situation where we don't have a local sawmill and have to take wood one hundred miles to [a] saw mill (Interview 2.4).

The timber workers' population has diminished - the sawmill is no longer there. Timber workers live in surrounding towns [now] and operate out of them. With technical advances in industry, the number of timber workers has shrunk... (Interview 2.2).

Royalties from logging are collected by the relevant state government agencies (State Forests in NSW and DNRE in Victoria). Figures communicated from the Department of Conservation and Natural Resources (DCNR, which is now DNRE) to the Barmah Forest Preservation League, estimate the 1994/95 revenue base from logging for the Barmah State Forest and State Park of $125 780 (DCNR 1994). This is divided between: a sawlog allocation of 3 803 m$^3$ producing $6 734 license fees, $122 392 sawlog royalty and $6 280 residual log royalty; 14 000 sleepers producing a $77 000 royalty; 4 500 m$^3$ of firewood producing $28 000 in royalties, and approximately 400 m$^3$ of bush sawn and minor products producing $14 500 in royalties. Figures for NSW are not included in government agency annual reports and were difficult to obtain.

The Barmah-Millewa Forest is also grazed by cattle. As described in chapter five, the value of the forest for grazing on the lush Moira grass which appears after flooding, attracted the first settler Australians to the area. In Victoria the forest is grazed as a common. The seasonal (summer and winter) number of cattle to be grazed in the forest are distributed amongst approximately forty-six cattle owners. Quotas are determined by conditions in the forest and the type of season being experienced. Figures communicated from DCNR (1994, as above) estimate cattle numbers at approximately 800 in winter and 2000 in summer, with an annual royalty of $35 000. As noted in chapter five, this system of grazing has evolved to allow farmers in the district to supplement the number of cattle they are able to carry on their farms, many of which are relatively small in size by Australian standards. The ability to graze cattle in the forest is viewed by these farmers to be important for their economic livelihood, as other forms of agistment are much more
expensive. A consultants' report commissioned by the LCC estimated that the removal of grazing would reduce the economic viability of some farms, however, at the regional level they argued that the removal of grazing from the forest would have minimal impact (Fahey 1988). In 1984 the average income from forest grazing was calculated to be $4.5 000 per farm, or 10 to 12% of gross margins. Overall this represented $100 000 to $300 000 income to the region (ACIL 1984, cited in Department of Conservation and Environment 1992: 51).

Many of the graziers with cattle in the Barmah Forest have had family connections with grazing in the forest for up to five generations and many have farms adjoining or close to the forest. To graze cattle in the forest one must be a member of the Barmah Cattlemen's Association, must own land and be a bona fide farmer in a specified area. The annual general meeting of the Barmah Cattlemen's Association can decide whether or not to admit an individual as a member (Auscript: 9299). The nature of grazing rights in the Barmah Forest is viewed by these graziers as a continuation of way the forest was grazed and managed since the early 1900s (Auscript: 9316). The forest is viewed as a part of these graziers' backyards, a source of income, but also a source of community, family and individual identity.

In NSW, cattle are grazed in the Millewa group of State Forests under agistment. Individuals or companies hold a lease over a certain area of the forest, rather than the common system of management in the Barmah forest. An annual rental fee is charged on these leases. Under this system it is rare that a grazier with an agistment of cattle in the forest will have a farm adjoining the forest. The sampling method did not identify any NSW graziers to interview, which may indicate a different level of involvement and attachment to the forest. Certainly, graziers in Victoria displayed a greater level of involvement in the management process and appear to have substantial lobbying power. A government agency employee in NSW commented that:

*The [degree of] involvement over there [in Victoria] is because most of those people are graziers and [also] adjoining landholders and so [they have] developed a strong attachment [to the forest] because of [their] commercial involvement. [In] NSW there are] rare examples of landholders [who are] graziers with [a] farm that adjoins [the forest]. It's really grazing interests that have cultivated individual attachments to the Barmah [Forest] (Interview 3.5).*

The forests are also used for activities such as charcoal burning and bee keeping. Figures communicated by DCNR (1994, as above) show that in 1994/95 $3 700 was collected in annual royalties from bee keepers in the Barmah State Forest and State Park.

Despite the decline in employment in the timber industry, the forest is still viewed by many local people as an important source of employment and income. The following two quotes are indicative of comments from the local white community regarding the importance of the forest to the local community:
There's the sleeper cutters, the stock owners, the loggers, the sawmillers, the guys employed by the department; it's terribly important to employment in the area (Interview 2.5).

Well, it's a major source of income [for the local community]...they're not so reliant on it now as they used to be...[but] it's still the major income for the town...and also the tourist side of it is increasing as well, so that's important too (Interview 2.9).

Tourism is another major use that attributes direct utilitarian values to the forest. The forest is a popular recreation and tourist destination for both locals and visitors to the area. The township of Barmah borders the Barmah Forest in Victoria, while Mathoura borders the Millewa group of forests in NSW. The forest is approximately 225 km north of Melbourne, and is close to and accessible from regional centres such as Nathalia, Numurkah, Tocumwal, Echuca, Shepparton and Deniliquin.

The estimated number of camper nights spent in the Barmah State Park and State Forest was 108,715 for the 1996/97 financial year. Figures for NSW were not readily accessible. The months of December through to May are the busiest months for camping, particularly over Christmas, Easter and long weekends. At these times, the more accessible camping areas are transformed into tent villages.

In Victoria, the Barmah Muster has become an institution in the forest, attracting hundreds of riders from all over Victoria who participate in the annual mustering of cattle from the Barmah Forest at the changeover of the summer and winter grazing seasons (a one to two week period in Autumn). A bushdance and other competitions and festivities accompany the annual muster. This event is run by the Barmah Cattlemen's Association as a fundraiser and celebration of cattleman culture. In NSW individual agistees muster their own cattle as the forest is not grazed as a common and they have grazing rights over certain areas.

Tourism to the forest can be attributed a range of values, depending on the activities undertaken. The forest supports activities as diverse as bushwalking, fishing, bird watching, trail bike riding, four wheel driving, water skiing, camping, canoeing, and horse riding. A number of accommodation lodges and local businesses rely on the forest and the river to attract visitors, as do the local tourist operations offering wetland cruises, horse trail rides, forest products (wood turning and art), and canoe hire. A tourist brochure for the NSW town of Mathoura advertises the area as a "river forest funland", a place to camp, fish, canoe and bushwalk in the forest (whilst being close to the town's poker-machines or "pokies", motels and bowling greens). A tourist brochure advertising the Barmah Forest in Victoria encourages people to "enjoy the timeless natural beauty of the Barmah Forest and Wetlands".

Although the forest, the river and the wetlands are important to local tourist operators and businesses in a direct economic sense, other forest values such as the ecological
(indirect utilitarian value), heritage, aesthetic and recreational values play an essential part in attracting visitors to the area. For example, tourism to the forest has increased as more people have become aware of the environmental and heritage values of the forest. A tourist brochure for wetland cruises of the Barmah Lakes and State Park advertises the forest's listing as a Wetland of International Importance, and as the "Largest Red Gum Forest in the World". It advertises the chance to see the wildlife of the area, and to "discover the myths and legends of romantic river boat days". Other brochures encourage tourists to "breathe some history of early white settlers and view the arts of the Koorie culture", and to "let the natural beauty of the Barmah Forest touch all your senses". A representative of the Moira Shire expressed the range of different aspects of the forest that are represented through tourism:

"Talking from a tourism point of view - we promote the 500 year old red-gum, the unique vegetation, the opportunity to see trees of that age and size. Also the camping opportunity and the naturalness of it. We also promote the Dharnya [Centre] and the Aboriginal heritage and culture. There's [also] a lot of European history there. The forest is the attraction, but there's a history and stories behind it too (Interview 3.8)."

These aspects will be considered below under the relevant sub-headings.

The Yorta Yorta people continue to use the forest to hunt traditional food sources such as emu and kangaroo, and to collect plants used for medicinal purposes. These are direct utilitarian uses, although they are also embedded in the cultural and spiritual values the Yorta Yorta associate with the forest, which are discussed below. As well as providing a continuation of cultural tradition, these traditional Aboriginal uses of the forest have also contributed to the physical survival of the Yorta Yorta people, by providing supplementary food sources when western food was scarce or mission rations insufficient.

6.2.2 Indirect utilitarian value

This refers to the forest being valued in a material sense, but in an indirect way. In the biodiversity literature this refers to the role of biodiversity in maintaining 'ecosystem services', for example water catchments and soil conservation and health. In the case of the values ascribed to the Barmah-Millewa Forest, it includes the role of the forest and the wetlands in maintaining the health of the river system.

The forest and its associated wetlands are considered to be a vital part of the ecosystem of the Murray river floodplain. The red gum forest and wetland communities depend upon the river for replenishment, and the riverine biota relies on wetlands for food, refuge and breeding (Thoms 1995). In addition, the wetland complexes have historically provided an important natural filtering system for the waters of the river Murray. Yorta Yorta people variously describe the forest as the "lungs of the area" (Interview 1.2), and the
Barmah and Moira Lakes as the "kidneys", purifying the river water (Auscript 18.11.1996: 1641).

More recently, there has been increasing recognition of the environmental importance of the Barmah-Millewa Forest and its associated wetlands to the total health and functioning of the Murray River system. This recognition comes as scientific communities increase their understanding of wetland processes, forest ecology and hydrology and realise the extent of the degradation that has occurred to these river systems since white settlement (see Leslie 1995; EPA 1997; Harris and Gehrke 1997). Instead of referring simply to the 'watering' of the forest, which implies an irrigation perspective, forest managers are beginning to talk about the critical times for the wetting and drying of the forest, informed by an ecological understanding of the forest and river system. One government agency representative described the change in perspective:

I think with the dying of the forest with inundation [of flood waters], it's got people thinking more about wetting and drying, not just wetting. It's got people thinking about the critical times for wetting as opposed to just wetting the forests in [an] irrigation mentality (Interview 3.4).

The forest is valued as an essential part of the Murray River system. The forest is understood to play an essential role in maintaining the water quality of the Murray River for downstream users (including extensive irrigation developments and townships in Victoria, NSW and South Australia, including Adelaide). It is also valued for its role in maintaining biodiversity, supporting a diversity of flora and fauna, including many rare and endangered species.

6.2.3 Scientific and educational value

Scientific research on forest and floodplain ecology and hydrology is undertaken in the Barmah-Millewa Forest. This research aims to extend our limited understanding in order to prevent or minimise further degradation which is occurring as a result of river regulation and forest uses such as logging and grazing (these will be considered in more detail in chapters eight and nine). Some of this research attempts to understand the systems better so that utilitarian values can be met whilst minimising impact. For example, research into vegetation changes provides information on how both grazing and logging can be managed more sustainably. In this way, scientific values are often closely related to utilitarian values (Dovers 1996).

As described in chapter 5.2.3, the landforms of the area indicate a history of importance to both geomorphologists (scientists concerned with landforms and the history of these) and the Yorta Yorta people. For geomorphologists, the landforms of the area have been important for the interpretation of geomorphology of the riverine plain. The landforms of the area provide important evidence of climatic and tectonic changes in the
region. Evidence from the forest has contributed to a geomorphological history of inland south-eastern Australia (see Currey and Dole 1978; Bowler 1986).

Yorta Yorta stories passed down through the oral tradition, have been correlated with scientific explanations of how the present course of the Murray River and the forest were formed (see chapter 5.2.3). Stories of this kind are passed down from generation to generation and are a central part of the 'education' of Yorta Yorta children. The survival of these stories illustrates their importance to Yorta Yorta cultural heritage. Educational excursions and cultural camps are held in the forest by the Yorta Yorta community, to teach the young people about their cultural heritage and identity (Atkinson and Berryman 1983: 61). This includes traditional knowledge and uses of plant and animal species in the forest. The purpose of these camps is, as explained in the Federal Court:

*to show the little ones or the young ones their land and what it should mean to them and what it will mean to them and tell them stories about where our ancestors roamed and how they treated the forest and the river system and wetlands and all that. And any scarred trees we come across, we tell them that's what their ancestors done...* (Auscript 18.11.1996: 1657).

The forest itself is viewed as an educational resource by the Yorta Yorta people. One Yorta Yorta man described the educational value of the forest to the Federal Court:

*...Aboriginal people, we got our degrees out here; not in four walls; our degrees were out here [pointing out to the bush] (Auscript 18.11.1996: 1567).*

The Dhamya Centre, an interpretation and display centre in the Barmah Forest, was opened in 1985. It provides a focus in the forest for visitors, interpreting the natural and cultural heritage of the forest. Many school groups visit the centre to learn about the cultural and natural heritage of the forest. The nature of the displays and the interpretation of the forest history that is presented is contentious. Some local white people believe too little white history of the forest is presented, while Yorta Yorta people would like to have more input into the running of the centre, which is currently the domain of DNRE.

### 6.2.4 Cultural heritage value

The cultural heritage management literature and policy emphasises the cultural and social significance of places, which include a broad range of qualities such as the heritage, aesthetic, spiritual, and educational qualities of places (see section 6.2). The term cultural heritage value is used here to include the cultural and historic values ascribed to the forest. In the Barmah-Millewa Forest, this includes the cultural and historical significance of the forest and the river to both the Yorta Yorta people, and the settler Australians who have become associated with the forest through the timber and grazing industries.

The Barmah-Millewa Forest is listed on the Register of the National Estate. In this listing the Australian Heritage Commission's official statement of significance notes that the
"forests contain a cultural landscape which has resulted from both Aboriginal and European activities in the area" (AHC Undated). The listing on the National Estate Register notes the diversity and unusual richness of Aboriginal cultural features present in the area. These include occupation sites, burial grounds, canoe trees, shell middens and mound sites. Although the dates of Aboriginal occupation in the forest are not known, occupation of south-eastern Australia has been dated to 40 000 years before present at the Willandra Lakes (Bowler 1971).

Despite attempts to sever Yorta Yorta connection with the area (see chapter five for a summary; see also Atkinson and Berryman 1983), the Yorta Yorta people have maintained a close relationship with the forest. Atkinson and Berryman note that the Barmah/Moira Forest area "has special significance to the present day Aboriginal descendants who see this area as a living aspect of their cultural heritage" (1983: 60). They explain that "Aboriginal people today feel very strongly the need to maintain this attachment and ensure the continuity of their cultural heritage so that it can be passed on and appreciated by all Australians" (Atkinson and Berryman 1983: 62). The following quote illustrates something of the significance of the forest to Yorta Yorta people today:

[The forest] is home, I've grown up in it. We used to live down the other side of the township, on the Murray [River], and it's just me I guess - I'm part of the forest you could say. I know that it was the home of all my ancestors. We still had aunties and uncles that lived all along the rivers and creeks that we used to visit when we were growing up (Interview 1.4).

As mentioned in 6.2.3, the Yorta Yorta community holds cultural heritage camps in the forest which focus on the "Aboriginal aspect of the forest" (Atkinson and Berryman 1983: 61; Auscript 18.11.1996: 1657). The recent Native Title Claim by the Yorta Yorta people to both land and water resources in the region includes the Barmah-Millewa Forest and is indicative of the significance of the forest to the heritage and culture of the Yorta Yorta people.

Settler Australians, particularly those associated with the forest through the timber and grazing industries also see the forest as an important part of their heritage. Some families have had family members working in the forest for up to five generations. The forest has provided employment and income as well as being a source of recreation and pleasure for these families:

[The forest] has been part of the district's happening. Possibly with our previous links and my maternal grandfather, he had the Bunyip sawmill and my mother used to tell me stories about the sawmill and the forest, the bullock teams, and the early days in the forest, [so] the forest became something we liked to know about... (Interview 2.2).

Well, yeah, the cattlemen for example, the majority of cattlemen, their families have had cattle out in the forest for years - it's a tradition, like in the high country... (Interview 3.9).
Just taking our family, or any family, particularly for people who've been involved in the forest, it provided people's livelihood. Cattlemen also look upon it as their heritage as well as to bolster their cattle industry. The timber workers and a vast amount of ordinary people who go in there - it's at their back door. The fact that it's there and so very close for recreation is vastly important (Interview 2.2).

Historic post-European settlement sites in the forest are seen to reflect a number of different phases of European activity in the area. For example, the grazing land-use phase is represented by the maintained parkland landscape of trees and grasslands; the remains of barges, wharves and punts represent the red gum trading phase; the forest management phase is represented by the recultivated forests; and the recreation and educational amenities represent the recreation phase (AHC Undated). As mentioned in 6.2.3 there has been recent concern that the European history of the forest is not well displayed or interpreted. The Dhamya Centre is seen by some local people to portray more of the Aboriginal heritage of the forest, and there have been suggestions that a 'Barmah Forest Legends Hall of Fame' should be built to celebrate the history of the forest since white settlement (BFPL 1997). This highlights the different histories that are ascribed to the forest by settler Australians and Aboriginal Australians, and the lack of a shared history. This will be considered in more detail in the following chapters.

6.2.5 Aesthetic and recreational value

Aesthetically, the Barmah-Millewa Forest is of great importance given that it is surrounded by agricultural land, much of which has been cleared. When travelling through the region, the red gum forests delineate the course of the river, contrasting with the cleared land that surrounds them.

The forest has become an important recreational area for both locals and visitors. The aesthetic value of the forest and the river system plays a large part in attracting recreational users. Visitors to the forest interviewed as part of this study frequently mentioned the aesthetics of the forest and the river, although for a small number of visitors the visible signs of the multiple-use State Forest (selective logging and grazing) were not considered to be aesthetically pleasing. The river was considered particularly attractive. One camper explained "the river's an amazing thing - you look at how dry the country [around it] is and then you see the river..." (VS20). In a recent consultancy which developed an eco-tourism plan for the Central Murray Region (encompassing the Barmah-Millewa Forest), the natural asset most cited by participants was the Murray River, although many people were "unable to elaborate further than to reiterate that the region included 'the largest River redgum forest in the world' " (Munro 1996: 11).

An important point to note here is that people have different definitions of what is aesthetically pleasing. Local people with a timber industry association would talk of the beauty of stands of timber that had been thinned to produce good mill logs, while others
may prefer shady spreading trees that are not suitable for milling. One retired timber worker described these shady, spreading red gum trees as "artists' trees". Another local man described how different people see things differently:

> Depending on the eye of the beholder, different people see different things. I look for big solid trees - [it] must be my saw-milling background - but others pick out big spreading trees and those gnarly old trees with big burls (Interview 2.2).

This illustrates contrasting views of beauty and the way in which a person's personal experience can influence the way they view the world. This will be discussed in more detail in chapter seven.

The different values ascribed to the forest are highlighted in the various recreational uses of the forest. These include bushwalking, bird watching, trail bike riding, water skiing, speed boating, four wheel driving, fishing, hunting, camping and canoeing. These variously reflect other values described above and below. Often a certain value ascribed to the forest is combined with other values to attract visitors and recreationalists. For example, aesthetic and recreational values are often combined with direct utilitarian values to attract recreationalists to fish, hunt and camp in the forest. The range of reasons for going fishing have been noted in the recreational fishing literature and include meat-gathering, experience of natural environments, companionship, solitude, pursuit of outdoor exercise, the exercise of stalking and hunting skills, and competitive sporting aspects (Dovers 1994). The 'non-catch' components associated with fishing are reflected in the national recreational fishing policy (National Recreational Fisheries Working Group 1994) and the 'recreational fishing ethic' defined by the Recreational Fishing Advisory Committee of Western Australia as:

> To aim to catch a feed for oneself and family and, for a variety of personal reasons, to enjoy the experience along the way (1991: 1).

Even amongst one user-group, such as recreational fishers, there is a complex array of motivations and, one can posit, related values. The diversity of values ascribed to the forest and the diversity of uses through which these values are expressed, mean that some forest uses may conflict with others. This is noticeable in the recreational use of the forest as it reflects a combination of different ascribed values. The diversity of values can result in incompatible substantive experiences, such as bird watching and trail bike riding.

### 6.2.6 Intrinsic, spiritual and ethical value

In the five sets of values applied by Dovers (1996) to biodiversity, intrinsic, spiritual and ethical values incorporate the values that some cultural and religious systems ascribe to natural life or its components. The Yorta Yorta people ascribe spiritual values to the natural environment of the Barmah-Millewa Forest. To quote from Atkinson and Berryman:
...Aboriginal people saw their world around them from a completely different perspective to that of Western man [sic]. The landscape's features were monuments to the activities of specific ancestral beings and, like our religious monuments, were 'sacred sites'. Man [sic] did not seek to alter these features, as to do so would bring disaster. The local descent group had the responsibility of caring for the land and its sacred sites, which included spirit centres. Natural species were linked to Aboriginal people through totemic relationships and were classified with people into moieties. People ensured food supplies both through supernatural increase ceremonies, and through the practical system of food tabus. Again people's actions did not impose change on species but rather sought to perpetuate their natural cycles. Aboriginal survival then depended not on tilling the soil and herding animals but on the very opposite - keeping things going just as they had been created by the ancestral beings (1983:45).

Today, the Yorta Yorta continue their association with the forest. Although their culture has adapted over the years to changing situations, an important element of continuity has remained. Atkinson and Berryman note that although many attempts were made to sever the continuous link Aboriginal people have had with this area, "the special relationship Aboriginal descendants have with this unique area still remains as strong as ever" (1983: 62).

In addition, the Barmah-Millewa Forest has become an important site in the struggle for Aboriginal land rights and social justice. As noted in chapter five, Cummeragunja (which borders the forest) provided a base for the development of the Aboriginal political movement in the 1930s (see Atkinson 1997; 1998; Goodall 1996). Aboriginal claims for land and compensation the forest can be traced to 1860 when the Yorta Yorta lobbied for a levy to be put on riverboats to compensate for the loss of food sources from the Murray River. Since that time the Yorta Yorta have made numerous attempts to obtain land and compensation, culminating in the current Native Title Claim.

The spiritual qualities of forests for non-indigenous people have also been discussed in the literature (see Lamb and Morris 1997). These were evident in the way some non-Aboriginal people spoke about their attachment to the Barmah-Millewa Forest. The forest was seen as a place to go and think, and a place to go when feeling sick or sad. One retired timber worker described the therapeutic value of the forest to him:

*Oh, when I go through into the forest over the ramp, my health improves out of sight. There's no other way to explain it, that's just it. It's a pretty important place to me. If I couldn't go out there, well there wouldn't be much point in me living really* (Interview 2.8).

Even after he had retired from working in the forest, this man continued to spend many hours in the forest for relaxation and a sense of wellbeing. This is considered again in chapter 7.5.3.

The biodiversity literature also notes "the ethical position that all life has intrinsic value and a right to exist independent of any value to humans" (Dovers 1996: 180). In this sense, biodiversity becomes important for reasons other than scientific value. As noted in
the official statement of significance on the Register of the National Estate, the forest, wetland and river environments support large and diverse flora and fauna populations. This includes many rare and endangered species (AHC Undated). Surrounded by agricultural land, the forest provides an important habitat for these flora and fauna species. The listing of the Barmah Forest and the proposal to include the Millewa Forest as wetlands of international significance under the Ramsar Convention is recognition of the ecological and the intrinsic values of the forest.

6.3 Complexity and Overlap

The value classification employed above has facilitated the description of the different values ascribed to the forest. It has also revealed the diversity of these values. However, this approach has been able to illustrate only a limited amount of the complexity and overlap that characterises the values that individuals and groups ascribe to the forest. As noted earlier, people's articulation of values will be influenced by the context and the information available (RAC 1993a). This means that values ascribed to the forest will change over time, in response to changing social and political contexts. Whilst it is useful to describe the range of values attributed to the forest, it is also necessary to understand these values within the social contexts in which they are formed. This is difficult to achieve through the description that is possible with the value classification approach.

The discussion above shows that individuals and groups closely associated with the forest ascribe values that fit into a number of the different categories described above. This is indicative of the complexity of the relationships that individuals and groups have formed with the forest, based on different experiences, different forms of knowledge and different attitudes and beliefs. As a way of further illustrating and contextualising this complexity, six characterisations of association with the forest have been written, drawing from interview data. By describing individual relationships with the forest in light of forest uses and the broader interest groups they represent, the complexity of individual and group associations with the forest can be better understood.

The characterisation of associations with the forest below are accompanied by an heuristic diagram which fits the range of values ascribed to the Barmah-Millewa Forest into three groupings: instrumental, cultural, and environmental (figure 6.1). This representation further illustrates the overlap that exists between these three basic value types. Instrumental value includes both economic and non-economic value. It includes previously described direct utilitarian value associated with uses such as logging and grazing, firewood collection and aspects of tourism. It also includes aspects of scientific value, given that scientific research is often used to help meet utilitarian needs. Aboriginal use of the forest for the purposes of food and medicine, although these uses are not economic in the western sense of economy, also assign instrumental value to the forest and the river. Many recreational
uses, such as camping, fishing, boating, water-skiing, four-wheel driving and trail bike riding also assign instrumental value to the forest and the river. Cultural value includes the previously described cultural heritage value ascribed to the forest. It also includes the spiritual and ethical values which were described above, as well as aspects of educational value. Elements of intrinsic, spiritual and ethical value and also aesthetic value are also included as they are often culturally formed. Environmental values includes the indirect utilitarian value described previously, such as the role of the forest and the wetlands in maintaining the health of the river system. It also includes aspects of scientific and educational value previously described, as well as elements of the aesthetic and intrinsic value.

![Figure 6.1 Heuristic representation of values ascribed to the Barmah-Millewa Forest](image)

6.3.1 Characterisation of association

The information gathered for this research indicates that people cannot be typecast. This is a crucial point, to be explored further as we proceed. Interviewees rarely ascribed values to the forest that were limited to any one of the value categories described above. Rather, the data gathered were characterised by the diversity of the values ascribed to the forest by any one individual. In order to provide some insight into the variety of values held by individuals associated with the forest, characterisations of different associations with the forest are described below. These characterisations are based on interview data. However they are not based on any particular individuals and are not exhaustive of the associations that people have with the forest. Rather, they provide a way of representing the information.
gathered in the field, and of illustrating the complexity of people's associations with the forest. The range of values ascribed by each characterisation are located on the heuristic diagram to illustrate the complexity of associations with the forest.

**Box 6.1**

*Characterisation A*

This characterisation of association with the forest is of a Yorta Yorta person for whom the forest is the homeland of their ancestors. The ancestors of this person have lived in the forest for many thousands of years, and the forest contains many important sites such as burial grounds, middens and scarred trees. The cultural value of the forest is seen to be inherently linked to environmental values, as the degradation of important and sacred areas is seen to threaten both the integrity of these sites and the social fabric of indigenous people. In order to support themselves and their families in a western economic system, this person's father and uncles were employed at various times to cut timber and firewood in the forest. This person is very concerned about the changes to the forest and river environment. This person collects plants from the forest which are used for medicinal purposes, eats fish from the river and emu and kangaroo which her uncle hunts in the forest.
Box 6.2

Characterisation B

This characterisation is of a non-indigenous person, a settler Australian and fourth generation grazier with cattle in the forest. This person's property adjoins the forest, which has provided a source of income through grazing. This person's family has also had a long involvement with the timber industry, with grandfather, father, uncles and brother working as sleeper cutters in the forest. The forest and the river are an important place for recreation. Family history is also tied to the forest, and the association with the forest through the timber and grazing industries defines this person's and their family's way of life. This person has observed dramatic changes to the forest and river. Spending many hours in the forest for work and recreation, they have also developed an appreciation of the flora and fauna of the forest.

Box 6.3

Characterisation C

This characterisation is of a government agency representative responsible for land and water management. This government agency has in the past taken a primarily instrumental view of the forest and the river, regulating of forest use and water supply and use. In more recent years environmental considerations have become increasingly important. The agency manages these by implementing industry regulations (on the timber, grazing and irrigation industries) and through research into environmental parameters. The recognition and preservation of Aboriginal cultural heritage has also necessitated changes to management practice. This government agency representative is trained as a scientist and has been living in the area for six years. Personally they are very committed to the consideration of environmental issues, however they must work within the constraints of the government agency they represent. This person also spends recreation time in the forest, often camping and fishing.
Box 6.4
Characterisation D
This characterisation is of a person who ascribes environmental values to the forest as an important habitat for the numerous flora and fauna species that frequent the forest, the river and the wetlands. This person lives in the district, and visits many areas including the Barmah-Millewa Forest, to document plant and animal species. This person combines some scientific knowledge with local knowledge to record information about the ecology of the forest. This person has friends within the district who are involved with various aspects of the forest, including the grazing and timber industries. This influences this person’s attitude towards existing forest uses and their environmental impact.

Box 6.5
Characterisation E
This characterisation is of a visitor to the forest from the nearest capital city, Melbourne, which is 225 km away. The river is the main attraction for this visitor, who enjoys the Australian tradition of getting away from the city, camping and drinking around a campfire in the ‘Australian bush’ with few or no amenities. This visitor likes to water ski, swim and do a bit of fishing with family and friends. Drinking and socialising amongst their own group are an important aspect of the visit to the forest. This person is concerned for the general aesthetics of the camping place, snags in the river, poor water quality, the presence of the introduced, nuisance carp and the lack of more desirable native fish species.
This characterisation is of a tourist operator in the area, who conducts guided bushwalks in the forest. Her livelihood is dependent on tourism to the forest. This tourist operator been living in the area for twenty years and have noticed significant changes to the river and forest environment during that time. In particular this person is concerned about the impact of grazing and logging on the health of the river, forest and wetland environments. This person has friends who graze cattle in the forest and work in the timber industry, which makes it difficult to talk about the effects of these uses on the forest environment.

6.3.2 Multiple values

These characterisations illustrate the diversity and complexity of people's associations with the forest. They also illustrate that a full understanding of the range and complexity of values can only be gained through an understanding of the individuals and groups associated with the forest.

Locating each characterisation within the heuristic diagram has shown that an individual often assigns more than one set of values to the forest and emphasises overlap as much as difference. It also illustrates the lack of extremes. For example, in characterisation B cultural values have grown out of the instrumental (largely economic) value that initially attracted the logging and grazing industries to the forest. The value of the forest for grazing and later for timber attracted these industries and so began the association of many settler Australian families with the forest. The forest has become not only important for employment and economic livelihood, but also an integral part of the history and heritage of many local families and the grazing and timber industries that have shaped their lives. Recreational and aesthetic value has also flowed from the initial instrumental value, as the forest has become an important place for relaxation and enjoyment. The following quote from a fourth generation grazier and forest worker illustrates the change in the way the forest is viewed. He thought aloud about the importance of the forest to the local community:
[The importance of the forest to the local community has] changed from being totally commercial, to what do you call those other values? - aesthetical values have become more important, and historical value - that's more important with the Native Title Claim. And that historical value is close to being lost [for both Aboriginal and non-Aboriginal people]. [The history's] pretty important, I guess it's all that sense of ownership, of belonging. It certainly gets more important as you get older. The Aboriginal people have certainly lost a lot of their culture...[and] my parents, both my mother and father were born in the forest and there's nothing to mark them (Interview 2.10a).

This quote also illustrates the perceived role of the Native Title Claim in encouraging the local white community to think more about the historical importance of the forest, and the nature of their attachments to it. This will be considered in the following chapters.

The characterisation of a Yorta Yorta person (box 6.1) revealed that cultural values ascribed to the forest incorporate both environmental and instrumental values. The way in which these values inform one another is integral to an understanding of the Yorta Yorta relationship with the forest. Cultural values cannot be separated from environmental values as one sustains the other. Instrumental values which are ascribed to the forest through hunting, fishing and camping are also embedded in the cultural and spiritual values the Yorta Yorta people ascribe to the forest.

Recreational uses of the forest such as fishing can lead to environmental values being (sometimes inadvertently) ascribed to the forest and the river as detrimental environmental changes are noticed (see box 6.2 and 6.5). Water quality, the absence of native more edible fish species, silting of the river and wetlands, and a decline in the abundance of wildlife are examples of the changes that many local people from a range of different groups have noticed over their lifetimes (see chapter 8). The use of the forest and the river often helped to define the kind of changes people had noticed. For example, duck hunters had noticed a change in the depth of wetlands that they waded through, as more and more silt was deposited in the wetlands as a result of changed hydrological regimes in the Murray River. Similarly anyone who had ever cast a fishing line in the river could report the dramatic decline in native fish species and the overabundance of introduced carp. This suggests that observations of change in the physical environment require use or a relationship with the area over time. This will be considered in chapter eight.

6.3.3 Context

An important observation of this research is that local people with a close association with the forest are likely to ascribe multiple values to the forest. This may be related to the range of experiences that these people have had in, or associated with, the forest. Many local people have been associated with the forest throughout their lives and have accumulated a variety of experiences in the forest, as their activities and uses of the forest have changed throughout their lifetime. For example, one retired timber worker, who had followed in the footsteps of his father and spent all of his working life in the forest, expressed the
importance of the forest to him now as a place to visit if he is feeling "down". The forest is no longer a work place, but has become a place that has therapeutic qualities. These are meanings that go beyond the value of the forest as an important site for this man's family history. Inherent in this, is the understanding that people's relationships with a place are not static, but constantly adjusting to changes in the broader social, economic and political context. The following chapter will explore this in more detail.

There is variation in the values people ascribe to the forest both within and between each of the broad groups identified by these characterisations. This reflects different influences such as personal experiences, politics, world views, lifestyles and statutory and legal responsibilities (Boyd et al 1996). These different influences underpin the meanings and values ascribed to the forest. It therefore seems important that the broader context in which these values are ascribed to the forest are understood. This involves understanding the various interest groups associated with the forest and the social and political context in which they view the forest. It will also require a more detailed exploration of the meanings ascribed to the forest. When viewed in the broader context, values ascribed to the forest can be understood as meanings.

The description of values ascribed by individuals as representatives of interest groups to the forest in this chapter provides a useful, yet limited picture of the importance of the Barmah-Millewa Forest. It provides information about the worth, desirability and utility of the forest, and some insight into the different groups associated with it. However, the description of values puts the focus on the forest and its inherent qualities rather than on the individuals and groups who ascribe these values (Boyd et al 1996). In attempting to explicate the complexity of values ascribed to the forest, it has become clear that an approach that is able to contextualise the difference that occurs between individuals and groups is necessary. Chapter seven will work towards this end, by considering the social and political context in which these values have been ascribed and by further explicating the meanings given to the forest.

6.4 Conclusion

This chapter has described the range of values that are ascribed to the Barmah-Millewa Forest. The use of the value classification has illustrated that these values are diverse and are given expression through uses such as logging, grazing, horseriding, fishing, bird watching, scientific research, educational camps and tours, water skiing and trailbike riding. These descriptions highlighted the multiplicity of values ascribed to the forest and noted the overlap that occurs between different sets of values.

An heuristic diagram and six characterisations of attachments to place were employed to further illustrate the complexity and overlap that occurs between different sets of values. This demonstrated that local people who had spent a lot of time in, or had a long association
with the forest, ascribed a multiplicity of values to the forest. Personal experiences in the forest helped to produce individualised relationships to the forest. However, these personal experiences operate within broader cultural, political and economic contexts which shape the way individuals and groups experience and talk about place. The following chapter will explore the way in which the broader social context influences people's relationships with the forest. It will do this by exploring the 'cognitive context' in which the interested parties view the forest and the different constructions of the Barmah-Millewa Forest as a place.
CHAPTER SEVEN
CONTEXT AND CONSTRUCTION:
PLACE AND IDENTITY IN THE FOREST

7.1 Introduction

The discussion of the complexity and overlap between the different sets of values in chapter six has emphasised the importance of understanding the social and political contexts in which forest values are ascribed. A consideration of the people ascribing the values and meanings is required in order that the values and meanings can themselves be understood. The first section of this chapter (7.2) describes the 'cognitive context' in which interested parties view the forest. This identifies the main groups associated with the forest and their claims of association with the forest. The following section (7.3) explores constructions of the forest perpetuated by three main groups; the Yorta Yorta people, the timber and grazing communities and government agency representatives. The way in which the Yorta Yorta and timber and grazing groups have constructed their identity around the forest is explored in light of the current political context of the Native Title Claim. The role of government agency representatives and their own construction of the forest is discussed.

These discussions illustrate that history plays an important role in defining the way in which the forest is constructed. The different interpretations of history and their role in asserting a particular identity of the forest are explored through the Native Title Claim (section 7.3). This leads into a discussion in section 7.4 of some of the key issues that have emerged from fieldwork and through the Native Title Claim, concerning how people talk about place and their attachments to it. This returns to issues considered in the review of place theory in chapter two.

7.2 'Cognitive Context'

Earlier in this thesis, chapter two outlined the importance of identifying the diversity of constituencies and their interest in the environment/place/resource, as a first step towards including multiple meanings in the process of resource management. A value classification approach was adopted in chapter six. This approach identified the range of values ascribed to the forest and together with chapter five it has provided some insight into the diversity of constituencies and the range of attachments to the forest. However, the discussion of complexity and overlap in the value classification revealed the need to contextualise the values ascribed to the forest in the social and political settings in which they are formed. This requires a consideration of the groups or interested parties who ascribe these values, and their claims of association with the forest. This section will build on the information provided in previous chapters, by considering the 'cognitive context' (Boyd et al 1996) in
which interested parties view the Barmah-Millewa Forest. By doing so, the range of
interested parties will be clearly described, and the meanings the forest has for them will be
further explicated.

Writing in the field of cultural heritage management, Boyd and Cotter (1996; Boyd et
al 1996) demonstrate the advantage of identifying the interested parties associated with
particular heritage sites and describing the interest in, or claim of association with the site.
As discussed in chapter 2.3, they have developed the concept of 'cognitive ownership' which
recognises that for each individual or group, a site or place is defined by some constructed
meaning. It is used to denote "some form of intellectual, conceptual or spiritual meaning
that a group or individual attaches to the site" (Boyd et al 1996: 125).

Importantly, cognitive ownership differs from other concepts of social or cultural
significance, such as the value approach adopted in chapter six. Rather than focusing on
the site or place and its inherent qualities, the concept of cognitive ownership shifts the
focus to the people who are associated with the place or site and the meanings they
construct (Boyd et al 1996). This enables an individual or group association with a site or
place to be viewed within the broader social context and facilitates a greater understanding
of the meanings constructed around the site or place and the significance of them. This
allows the full range of claims to a site or place to be acknowledged.

The notion of cognitive ownership provides contextual input into the management
process and does not judge the value of the meanings held by each group (Boyd et al
1996). Rather than looking at a place/resource/site and asking what values are ascribed (as
chapter six has done), this approach looks more toward the subject to explore why. This is
important from a longer-term policy and management perspective, partially because it is
more dynamic, recognising that associations with a place and the meanings and values
ascribed can change over time. This approach recognises the range of associations with a
place and the different contexts in which the place is viewed. In doing so, it opens up the
opportunity to explore the power relationships that emerge as place/resource/site meanings
are contested and negotiated through processes of place construction and resource and
cultural heritage management.

The notion of cognitive ownership has been applied to the context of cultural heritage
management, however it may also be usefully applied to natural resource management.
Boyd et al (1996) have used cognitive ownership to counteract the traditional cultural
heritage management approach which focuses on individual heritage sites and to overcome
the difficulty it has including multiple meanings in the management process (Boyd et al
1996). It has provided a tool through which to link individual heritage sites with the
broader social landscapes in which they are viewed. Traditionally natural resource
management has viewed individual resources (such as land and water) separately, often
having different government agencies and policies governing the management of each
resource. Such an approach views resources primarily as commodities, separate from the cultural practices and traditions which define their use and meaning (see chapter one). The notion of cognitive ownership may help to embed resources back in the places of which they are an essential part. In addition, both cultural heritage management and natural resource management are characterised by multiple socially constructed meanings (see chapter 2.3). Cognitive ownership offers a way of acknowledging and interpreting the multiple meanings ascribed to places/sites/resources in the management process.

In order to summarise and further illustrate the complexity of interest in the Barmah-Millewa Forest, table 7.1 lists the interested parties and describes the cognitive context in which they view the forest. This illustrates some of the complexity of the different tangible and intangible meanings the interested parties attach to the Barmah-Millewa Forest. This approach contextualises the values described in chapter six, emphasising that this multiple-use environment translates into an environment with multiple meanings. The information in this table is drawn from interviews with individuals associated with the forest and observation conducted in the field.

The term cognition is used here to refer to the way in which the forest is known and understood. The description of the cognitive ownership of the Barmah-Millewa Forest illustrates that both reason and emotion inform the context in which the forest is known. An understanding of both will be important for successful natural resource management.
<table>
<thead>
<tr>
<th>Interested Party</th>
<th>Cognitive Context</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Aboriginal community (Yorta Yorta and Murray Goulburn Rivers Clans Inc)</td>
<td>The forest is viewed as an integral part of the cultural heritage of the Yorta Yorta people and an integral part of Yorta Yorta identity. The forest and part of the river system is one of the pockets of Crown land included in the Yorta Yorta Native Title Claim which is currently being heard before the Federal Court. It is one of the first Native Title Claims to be heard and the first claim to inland waters in Australia. The forest is a very important part of Yorta Yorta country and there has been a long history of claims by the Yorta Yorta for land and compensation. As such, the forest has become a symbolic place in the struggle for indigenous rights to land and resources and social justice. As public land, Yorta Yorta people have maintained access to the area.</td>
</tr>
<tr>
<td>Local residents (with timber industry association)</td>
<td>Local forest workers have an economic reliance on the forest. They value the forest as a source of employment and income, but also for the 'white' history that the forest represents. Many of these families have been in the area for four or five generations. The history of many white families in the area are tied to the forest and the culture associated with the timber industry helps to define the identity of many individuals and families. The forest is also an important source of recreation and enjoyment for these people. Some families have connections with both the timber and grazing industries, especially in Victoria. There have been many changes over the years that have been construed as threats to the logging industry, including structural changes to the industry, and the introduction of sustainable logging quotas. Threats to logging in certain areas of the Barmah Forest in the 1980s focused attention on the heritage aspects of the logging industry.</td>
</tr>
<tr>
<td>Local residents (with connections to grazing in the forest)</td>
<td>Local residents who graze cattle in the forest have some economic dependence on the forest. As with the forest workers, the graziers have a culture and heritage which is tied to the forest. The forest is also an important area for recreation and enjoyment for these people. Many local residents have family connections to both the logging and grazing industries, as these industries have been the main source of employment in the area. The forest is often viewed as part of these people's backyards. As with the timber workers, many of these families have been in the area for four or five generations. Threats to grazing in some areas of the Barmah Forest in the 1980s heightened claims to the cultural heritage aspect of grazing in the forest.</td>
</tr>
<tr>
<td>Local residents (with no direct connections with logging or grazing)</td>
<td>This group is most likely to consist of people who have not been in the area for more than one or two generations as many longer term local residents will have some family connection with either the logging or grazing industries. These residents value the general importance of the forest to the local community, usually in terms of its multiple uses, such as logging, grazing, recreation and tourism. The forest provides an important source of recreation for these people. It also provides a good source of firewood. The forest is viewed as an important part of the local economy and as a local and regional environmental asset.</td>
</tr>
<tr>
<td>Local businesses</td>
<td>Local businesses rely on the multiple-use of the forest for the survival of their businesses. Tourists and recreational users are an important source of income. These businesses also rely variously on local residents, such as timber workers, graziers, and local Aboriginal people for business.</td>
</tr>
<tr>
<td>Interested Parties</td>
<td>Cognitive Context</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Local tourist operators</strong></td>
<td>Local tourist operators advertise the environmental value of the forest, the wetlands and the flora and fauna, as well as the peace and tranquillity of the forest and the river. Some also convey, to various extents, the Aboriginal and non-Aboriginal histories of the forest. The forest is viewed as an important part of the region.</td>
</tr>
<tr>
<td><strong>Local recreationalists</strong></td>
<td>Local recreationalists come from all of the local groups described in this table, including local government agency representatives. The context in which this group views the forest varies as recreational uses vary considerably. Above all the aesthetics, peacefulness and tranquillity of the area are valued. Having the forest so close and accessible is considered to be very important.</td>
</tr>
<tr>
<td><strong>Non-local tourists and recreationalists</strong></td>
<td>As with local recreationalists, the context in which tourists and visiting recreationalists view the forest varies considerably depending on the activities they undertake. Often, the aesthetics and the peacefulness of the forest and the river is valued, in contrast to the city environments that most visitors are accustomed to. Some non-local recreationalists appreciate the environmental and cultural heritage of the area. Others are attracted to the area to waterski.</td>
</tr>
<tr>
<td><strong>Local conservation groups</strong></td>
<td>The importance of the forest and wetlands locally, regionally, nationally and internationally is recognised. The forest fits into the broader scheme of biodiversity and habitat conservation and the groups monitor the forest and wetland ecosystems. The forest provides a source of interest, education and recreation for members of these groups. Given the size of the forest and the diversity of ecosystems, the forest one of the key conservation areas for the district. These groups are often associated with other environment groups at the state and/or federal level.</td>
</tr>
<tr>
<td><strong>Barmah Forest Preservation League (Victoria)</strong></td>
<td>Most members of this Victorian group are or have been timber workers, cattle graziers, or tourist operators in the forest. Members of this group see the forest as a resource (for logging, grazing, tourism, recreation, history etc) for the region. Their philosophy is multiple-use, and they lobby for the continuation of grazing and logging in the forest and on issues of water management. Many members of the group have family histories tied to the forest.</td>
</tr>
<tr>
<td><strong>Forest Protection Society (NSW)</strong></td>
<td>This statewide group has a branch located in Mathoura. Membership of the group is largely people associated with the timber industry. They are concerned with the continuation of the logging industry and are associated with the state Forest Protection Society and other industry groups.</td>
</tr>
<tr>
<td><strong>Government agencies: local, state, federal + Murray-Darling Basin Commission</strong></td>
<td>These government agencies and the Murray Darling Basin Commission have various responsibilities for forest and water management, and cultural heritage management (see chapter 5.4 for more detail). The responsibilities of these agencies have historically been very different, however they are converging as environmental issues become increasingly important.</td>
</tr>
<tr>
<td><strong>Academic researchers</strong></td>
<td>The forest is an important site for the study of environmental history, the effect of river regulation on forest and wetland ecosystems, ‘white’ history and Aboriginal cultural heritage. Much historical and anthropological research has been carried out in conjunction with the Native Title Claim.</td>
</tr>
</tbody>
</table>

Table 7.1 Cognitive context of interested parties, Barmah-Millewa Forest.
The interest groups defined above each have their own claims of association with the forest. Each group views the forest within its own personal or professional context, and as described in chapter six, each group places different values on the forest. Some overlap exists between these groups, for example a government agency representative may be a member of a local environment group, many graziers and timber workers may be members of the Barmah Forest Preservation League, and all are likely to be recreational users.

The description of values and the cognitive ownership of the forest have illustrated, to varying degrees, the multiplicity of meanings attached to the forest. In addition the description of the cognitive context in which the forest is viewed by the interested parties has highlighted the way in which these meanings and values can change according to the situation. However, this approach has not adequately illustrated the relationships of power that emerge as meanings of place are negotiated and contested. The following section will consider some of the different ways in which the forest is constructed as a place. Each of these constructions ascribe different meanings to the forest and each has developed its own culture, its own politics and history. The description of these different identities of the forest further contextualise and explicate the meanings and values ascribed to the forest. In addition, this approach highlights the relationships of power that occur between the interested parties as meanings are contested and negotiated through the process of place construction.

7.3 Constructions of the Barmah-Millewa Forest

Chapter two has reviewed recent work concerned with the social constructedness of place. This discussion illustrated that places are increasingly understood as social constructs which draw on particular interpretations of history and can be used for political purposes. It is increasingly acknowledged that constructions of place are bound up with the identities of the individuals and groups associated with them. Places are ascribed multiple meanings or identities and these are frequently contested. This is reflected in the cultural politics which surrounds place construction, in which meanings are negotiated and relationships of power are defined and contested (Jackson 1989a).

The different meanings and values ascribed to the Barmah-Millewa Forest point to different constructions of the forest. The following chapters illustrate that conflicts over the management of the Barmah-Millewa Forest are underlain by these different constructions of the same place. For now, it is useful to consider three different constructions of the forest. These have emerged from interviews and observation as the most engaged and influential constructions in the management of the forest. They correspond with the three broad groups most engaged with the forest; the Yorta Yorta people, families associated with the timber and grazing industries, and government agency representatives responsible for forest and river management (however as I will reflect, the danger is that these three groups are an
artifice of the three groups identified and differently treated in interviews). The description of these constructions further contextualises the main groups associated with the forest and the meanings and values they ascribe. It also provides a basic structure through which to discuss the findings of the research in the following chapters.

The three groupings identified have been influenced by the current process of Native Title. This research was conducted in the period leading up to, during and immediately after the hearings of the Native Title Claim, and a judgement has still not been handed down as this thesis is being written. In the context of the Native Title Claim, meanings ascribed to the forest have been contested. Two of these groupings, the Yorta Yorta Aboriginal people and the white people associated with the timber and grazing industries have fixed their identities in place. The third grouping, forest managers, have asserted their own construction of the forest which is framed by both professional and personal contexts.

Paradoxically, these heuristic groupings reveal the limitations of any system of classification. These broad groups were initially defined after the first stage of interviewing (see chapter four). As field work and later interpretation and analysis progressed, it became clear that these three groupings asserted the three constructions of the forest which were most engaged and currently or potentially the most influential in terms of the management of the area. However, the risk is that in writing and representing these groupings, they are reified and perpetuated. This is particularly problematic given that I have identified a politics of identity that is structured around race (see also chapter 9.3). The arguably dominant construction of the forest is perpetuated by the white families associated with the timber and grazing industries, while the arguably historically marginalised construction is held by the Yorta Yorta Aboriginal people. Although variation exists within these groupings, the Native Title Claim has appeared to unite opinions allowing a common cause to be voiced. In this context these three distinct constructions were presented to me, and I have sought to represent them through this thesis. Rather than merely represent them (which would serve to perpetuate the categorisations), I have sought to illustrate the way in which these constructs are perpetuated, contested or legitimised through the use of different forms of knowledge and the appropriation of the concept of environment (see chapters eight and nine). I have also reflected on the role the Native Title Claim has played in defining these constructions of place. And, later, I will focus on commonalities as well as differences within these constructions.

This thesis has focused on the construction of place in the context of natural resource management. As chapter two has shown, any consideration of place necessarily involves examining notions of identity, such as gender, class or race, which are played out through place construction. The Native Title Claim over the Barmah-Millewa Forest has influenced both the process of resource management and the construction of place and identity. The identities of interest groups have been fixed in the forest. In so doing, issues of resource
management have become central to the identities of these groups and their particular construction of the forest. A politics of identity which is structured around race has been produced and is being played out over issues of Native Title and resource management. This has masked other issues of difference such as differences between graziers or timber workers and downstream irrigators, or between graziers and environmentalists. The current Native Title Claim has sought to mobilise constructions of place around the issue of race as various white constructions of the forest have rallied together to oppose the Native Title Claim, and as the local Aboriginal people have sought to mask internal differences to present a united claim (see chapter 9.3). Differences that occur within Aboriginal communities are not well tolerated by white society which often expects that there is one Aboriginal perspective and one Aboriginal community associated with each place. Frequently differences between and amongst Aboriginal groups are used as a way of questioning the authenticity of Aboriginal groups and their claims to land and resources (see also chapter 3.7). Whilst differences have been reported amongst the local Aboriginal community and were frequently mentioned to me by local white people, the Yorta Yorta have presented a unified claim to the forest in the hearings before the Federal Court. Similar views were expressed to me in interviews.

It is therefore likely that the timing of my research has influenced these findings. Had I conducted this research before the Native Title Claim, or after the Claim has been settled, it is possible that different constructions would have emerged. For example, it is possible that five years from now the racial politics which currently dominates the cultural politics of forest management (and much else besides) will be replaced by other differences, such as differences between irrigators, graziers and environmentalists. (Such differences currently dominate resource management issues on the Cooper Creek and the Paroo River where cotton growers (irrigators) clash with graziers and environmentalists. They are also very topical along the length of the Murray River, where water allocations are contested.) This illustrates that issues and alliances, and indeed values, meanings and constructions of place, can change over time. This is an important finding for research management; it means that processes must be flexible and dynamic. As proposed in chapter ten, participation in resource management must be ongoing, in order to take account of changes in meanings and values over time.

7.3.1 Settler Australian construction of the forest

Arguably the dominant construction of the Barmah-Millewa Forest is tied to its colonial history. This is the forest that is known by many white families who have lived close to the forest and worked in it for up to five generations. Their use of the place is characterised by cattle grazing, timber cutting and recreation. In addition, their family heritage is tied to the forest, as it has provided a source of employment and recreation for up to five generations of family members. The forest contains sites of importance to individuals and families: it
contains workplaces, sites of recreation and sites that mark significant life events. Timber workers and graziers' notion of who they are and where they have come from is constructed around their own and their family's association with the forest. As one retired timber worker explained:

[It's been a] big part of me life, for sure - work, pleasure, whatever (Interview 2.6).

The commodification of the forest has also defined timber workers and graziers' knowledge and aesthetic appreciation of the forest. Detailed knowledge of the forest and the river system has been built up over many years through direct observation and experience. Many features and areas in the forest have been named by graziers and timber workers and the aesthetic appeal of the forest is defined by these dominant forest uses. For example, individuals associated with the timber industry frequently described the beauty of timber that has had silvicultural work to produce tall, straight mill logs (see chapter 6.2.5).

Key incidents such as the LCC's proposal to phase out logging and grazing in the Barmah State Park, and the current Yorta Yorta Native Title Claim appear to have heightened claims to white heritage aspects of the forest. These incidents have been perceived by timber workers and graziers as threats to both their economic livelihood and identity. They have resulted in increased lobbying for these uses to continue, and have caused individuals and the groups that represent them, to think about and articulate the importance of the forest to them. For example, the LCC proposal to phase out logging and grazing in the Barmah State Park, prompted claims from the grazing community about the "human" heritage of grazing in the forest (Fahey 1988). The Yorta Yorta Native Title Claim has further prompted these timber and grazing groups to consider the importance of the forest to them (see the following sections of this chapter).

This construction of the forest draws on a particular interpretation of history, which has been built around the white settlement and development of the area. This construction of the forest is dominant amongst the local white communities, for which the forest has historically provided an important source of employment and income and recreation. The amenity the forest provides to the local community is an important element of this construction:

*It's been the lifeblood of this community ever since my grandfather was a boy sort of thing. Without the forest the town wouldn't be here, not only because of employment, [but] also good cheap firewood and recreational purposes (Interview 2.3).*

Tourism has become increasingly important for the local area, with the decline in the employment base of the forest. Environmental values are increasingly infiltrating this dominant construction; however chapter nine illustrates that the environment concept is appropriated so as to legitimise grazing and logging which are central to this particular construction of the forest.
7.3.2 *Aboriginal construction of the forest*

The Yorta Yorta people present a construction of the Barmah-Millewa Forest that is very different to the construction put forward by the graziers and timber workers and their families. The forest has historically provided a source of physical, cultural and spiritual existence of the Yorta Yorta people for many thousands of years. The forest is viewed as a fundamental component of Yorta Yorta identity and provides a link between the past, the present and the future. One Yorta Yorta woman explained that the land and rivers provide her with:

*An identity of who I am, and existence - the land did provide for my ancestors, and it still provides, not only in a physical way but in a spiritual way too (Auscript 25.11.1996: 2048).*

This construction draws from a very different interpretation of history; that of Aboriginal dispossession as a result of white settlement. The Yorta Yorta people have had a very different experience of the forest environment to that of the settler Australians. Their relationship with the forest has been characterised by both change and continuity, as the Yorta Yorta people have adapted to circumstances imposed since white settlement. The location of Cummeragunja beside the forest and the public land tenure of the forest have enabled the Yorta Yorta to maintain a close relationship with the forest. The forest contains many sites of spiritual and cultural importance and has been the site of many claims for land and compensation. The forest has become symbolic of the Yorta Yorta struggle for social justice.

For the Yorta Yorta, the current Native Title Claim is part of the process of asserting their identity, an identity which is firmly tied to the land. The very identity of the Yorta Yorta has been challenged through the Native Title Claim. The Yorta Yorta say that 'Yorta Yorta' is a community name that encompasses various local descent groups. However, respondents to the Claim argue that there were many different tribes in the area, two of which had a language which the other Aboriginal groups referred to as Yorta Yorta (Australian Broadcasting Corporation 1997).

The management of the resources of the area has emerged as key aspect of the Native Title Claim. The Yorta Yorta have asserted an alternative reading of the area's past; a reading which acknowledges prior Aboriginal occupation, use and management of the area and highlights the environmental degradation that has resulted from white settlement. Through the Native Title Claim, the Yorta Yorta have challenged current management practices and have sought to highlight the detrimental impact of current uses on the environmental and cultural values of the forest and river environment.
7.3.3 Managerial construction of the forest

The shape and nature of the forest environment and the kinds of associations that people currently have with the forest are influenced by forest and river management practices. In managing the forest and the river, government agencies and their representatives assert their own constructions of the forest. They view it within their own professional and personal contexts and these contexts shape the meanings and values they ascribe to it. While these constructions differ between government agencies and amongst different agency representatives (just as there are differences amongst members of the Yorta Yorta and timber and grazing groups) it is possible to talk of a combined managerial construction of the forest. To do so emphasises the policies and practices which dominate current forest and river management.

As noted in chapters five and six, the forest is currently managed to accommodate timber production, cattle grazing, bee keeping and charcoal burning. In addition government agencies are responsible for vegetation management, habitat protection and nature conservation, as well as park and recreation management and cultural heritage protection. Supply of water to downstream users, water quality issues and environmental watering requirements of the forest are also components of management. There are a range of formal and informal requirements for forest and river management to be carried out with community consultation and participation.

It is arguable that timber production and cattle grazing still dominate forest management. Global environmental perspectives are increasingly important for the management of the forest, particularly through international agreements such as Ramsar which provides for the conservation of wetlands, and the related issue of environmental water allocation. However, the multiple-use forest management perspective remains dominant, with economics and the market ultimately driving major management decisions. This is particularly evident with water management, which has been the single most contested resource management issue in the forest in the last ten years. The 100 GL environmental water allocation remains to be allocated (see 5.2.4). Water management continues to be largely driven by the supply of water to paying customers, and environmental and cultural values are fitted in around these dominant uses. Similarly, in forest management, timber production and cattle grazing dominate with zoning and special legislation protecting the environment and cultural heritage.

The Yorta Yorta Native Title Claim can be viewed in part as a reaction against this dominant management regime which derives largely from historic European uses of the forest. The Claim has seen cultural heritage and environmental issues closely aligned and working to change these historically derived management regimes. The states of Victoria and New South Wales have been respondents against the Native Title Claim. This has meant
that the government agencies have presented evidence about land tenure and historic and current uses of the forest. Despite a discernible variety of opinions amongst government agency representatives, they are ultimately employed to carry out the management regimes and policies implemented by the Minister and upper levels of management.

The resource management agencies play an important role in enhancing or marginalising the meanings and values ascribed to the forest by other interest groups. For example, as shall be illustrated in chapter eight, local Yorta Yorta and settler Australians feel marginalised from the resource management process by the value the management agencies place on scientific knowledge. In addition, restrictions on forest uses can marginalise certain constructions of the forest. Yorta Yorta people have expressed that they feel marginalised by the white systems of regulation. Many feel that they should be allowed to continue to exercise traditional rights over their country. In particular, Yorta Yorta people explained that they must obtain licences to fish and hunt in the forest; licenses to continue to exercise rights that have been handed down from their ancestors. This was heard in evidence before the Federal Court in the proceedings of the Native Title Claim:

*I think the bush was always regarded, and the way I always seen it, was somewhere you're able to go and gather food...When you look back in those days, it seemed as though we did have a right to go into the forest to camp and live and gather food. It was only in, probably the last twenty years when restrictions started to come over people, including Aboriginal people going into the forest. As I just mentioned, restrictions like where and when you can light fires. Where you can camp. Other things you're allowed to do but restrictions weren't, I guess, in place in our time and we just assumed it was our birthright to be part of it, to go in there, to do the things we were doing* (Auscript 19.11.1996: 1722).

The resource management agencies have constructed the forest as a regulated, largely natural, environment. For the Yorta Yorta people the forest is a place that embodies traditions, rights and stories. The opposition of the states of NSW and Victoria to the Yorta Yorta Native Title Claim, has not conveyed positive messages to the Yorta Yorta about the commitment of government agencies to the inclusion of Aboriginal people in resource management processes, or the inclusion of Aboriginal perspectives in resource management practice.

7.4 The Role of History

The different constructions of the forest are informed by different interpretations of the past. This is demonstrated through the Native Title Claim which has highlighted the way in which current constructions of the forest are framed and contested through different interpretations of history. These different readings of the past underlie different understandings of the present and inform debates over the future of the forest.
7.4.1 Multiple histories

As chapter two has shown, history plays an important role in the construction of place. Places are seen to be the product of articulations of social relations, comprised of the accumulation and combination of many layers of social relations over time (Massey 1995a: 188). However, the history of a place can be read in more than one way. For example, certain events or actions can be emphasised over others, some are ignored or left out, and a variety of meanings can be given to these actions or events. Most simply, a history written for one purpose or concentrating on one aspect - such as a civic or economic history - will necessarily miss other themes. And histories reflect also the imperatives of the time. It is this interpretation of history that is central to the construction of place, for any claim to establish the identity of a place will depend upon presenting a particular reading of that history (Massey 1995a). The past of a place can be read in many different ways, and competing claims about the present character of a place often depend on particular and rival interpretations of its past (Massey 1995a).

Elements of these theoretical points are evident in the Barmah-Millewa Forest, where there is an historical underpinning to the multiplicity of attachments to the forest. The history of forest and river use, settlement and development have shaped current relationships with the forest. The different constructions of the forest outlined above, are based on competing interpretations of the past. The arguably dominant white construction of the place is focused on the history of white settlement. For example, both forest (timber) workers and farmers who graze cattle in the forest have come to know the forest through the white history of settlement, development and use. They have come to know the forest through its commodification. Other uses have flowed from this economic attachment to the forest, and it has become an important source of recreation and enjoyment as well as an important part of their family history and heritage. In contrast, the arguably marginalised construction of the forest presented by the Yorta Yorta people is focused on a very different understanding of white settlement. This is the history of the Aboriginal dispossession that resulted from white settlement of the area. It is also a history characterised by both cultural continuity and change that has been a necessary part of Aboriginal survival. The history of Yorta Yorta dispossession from their country and the injustices that have occurred since white settlement have shaped the current relationships that Yorta Yorta people have with the forest.

The proceedings of the Native Title Claim have highlighted these competing interpretations of history and the way in which they structure current relationships with the forest. Writing about the relationship between places and their pasts, Massey has noted that each attempt at defining the European identity has been dependent on a particular reading of history, and that those claims for European identity which look set to become the
dominant ones generally evoke a continuous and singular history (1995a). This can be seen in the claims to the identity of the Barmah-Millewa Forest which have been drawn out in the proceedings of the Native Title Claim. The dominant grazing and timber identity of the forest draws its history from white settlement and the resultant development and use of the forest and river. White settlement brought these people to the place and provided them with employment and recreation and a sense of their own history. This dominant construction of the forest assumes continuity between past and present. History books have documented the developments that have taken place since the first settler Australians came to the area. Forest uses such as logging and grazing have played a central part in this continuous history (and hence the identity of the people and the place), as they have been practised in the area since white settlement, providing a livelihood for up to five generations of these families. The identities of these groups have been firmly fixed in the forest.

Arguments against the Native Title Claim by proponents of this dominant white construction of the forest, have questioned the identity of the Yorta Yorta. This has occurred in two ways; firstly, by arguing that Yorta Yorta is not the name of the traditional group(s) associated with the forest (see section 7.3.2); and secondly, by asserting that the Yorta Yorta people have not maintained a continuous link since white settlement with the country which they are claiming, that there has not been continuity between the past and present for the Yorta Yorta people. The current system by which Native Title Claims can be made in Australia, requires that Aboriginal claimants demonstrate to the court a continuous attachment to the country being claimed. In many cases this is very difficult, given the dispossession that occurred as a result of white settlement and the policies of removal that were practised in Australia. It also fails to acknowledge the adaptation and change that has been necessary for Aboriginal culture to survive. A Yorta Yorta man explained to the Federal Court the continuity and change that characterises the Yorta Yorta association with the forest:

Yorta Yorta culture, like most other cultures, is a culture that has been continually adapting and changing over a long period of time, even before Europeans arrived. Yorta Yorta culture was in a state of change and adaptation to many different circumstances...Post-invasion, there are probably more significant changes as a result of disruptions that took place to traditional lifestyle, forced removal of people from their tribal homelands, relocation on reserves and on and on it goes. If we look at change and continuity, perhaps we've experienced the most changes and made adaptations, you know...

The essential thing that has continued, quite amazingly, particularly when we look at the profound changes that we've had to adjust to in the last one hundred and fifty-six years which is a relatively short period of time, considering[it] against the other experience, is that our culture, our identity as Yorta Yorta people, our connection with this area, our beliefs, our cultural values, our unique identity as a distinct cultural group within Australia has survived. To me, that is an amazing achievement...

Continuity with the area is basically what this claim is all about. Yorta Yorta people have held on amongst some overwhelming odds and they have survived as a people. Not only survived as a people, but they have maintained their cultural, spiritual,
social economic connections with this land. and have continued as a unique cultural

In the proceedings of the Native Title Claim, the respondents to the Claim have
questioned the authenticity of Yorta Yorta identity and their knowledge of the forest.
Evidence contained in respondents' witness statements sought to challenge the identity of
the Yorta Yorta people and the Aboriginal use of the forest. One witness statement read:

Throughout my life I have known many Aboriginal people in the district. Until
recently I had never heard an Aboriginal person refer to themselves as being either
Bangerang or Yorta Yorta. The first time I ever heard the words Yorta Yorta was in
the late seventies when a land rights claim was made...

I have spent a considerable amount of time over the years in the Red Gum forests and
until recently I have never seen Aboriginal people in the forests hunting or collecting
food... (Witness Statement).

The authenticity of areas within the forest that are of special significance to the Yorta
Yorta such as scarred trees, middens, and burial sites has also been questioned. For
example, the court heard evidence from one of the respondents regarding the authenticity
of Aboriginal middens:

Counsel: Do you believe there are sites in the forest that are mistakenly taken to be
middens?

Respondent: Undoubtedly. There are many, many places where charcoal was burnt
in the '40s which give the appearance of a midden and even there was one marked on
the - on the map, I was told about, that I know for sure wasn't a midden... (Auscript
16.9.1997: 9370)

Such an approach serves to destabilise the Yorta Yorta Native Title Claim. It implies
that traditional Aboriginal knowledge of the area has either been lost, or has never existed.
In seeking to assert their own identity and their own construction of the forest, the dominant
timber and grazing groups have challenged the identity of the Yorta Yorta people and their
construction of the forest. Regardless of whether the court finds the Yorta Yorta Claim is
'authentic' or not, the proceedings of the Native Title Claim have highlighted the very
different interpretations of history and the way they shape current relationships with the
forest. The logging and grazing groups have asserted their own continuous history of
association with the forest and have argued that the Yorta Yorta association with the forest
has not been continuous in an attempt to maintain the dominance of their own construction
of the forest. In order to assert their own identity, the Yorta Yorta are required, under
current legislative arrangements, to establish their own continuous and singular history of
association. Such a procedure forces identities to be fixed in place. It also mobilises
constructions of place around the issue of race.

1This witness statement was filed as evidence in the Federal Court proceedings of the Yorta Yorta Native
Title Claim, but has not been given an exhibit number. Ordinarily it would be cited by the name of the
witness filing the statement, however names have been withheld in this thesis to maintain confidentiality.
7.4.2 Multiple histories, multiple futures

Another aspect of the role of history relates to the way in which these different interpretations of the past can be used to justify particular understandings of the present and the future of a place. Writing about the different claims to the identity of the Wye Valley on the borders of England and Wales, Massey (1995a) emphasises that the conflicting interpretations of the area's past underlie the different claims to the identity of the place. Further, these conflicting interpretations of history can be used to legitimate a particular understanding of the present, and are often used in debates over what the future of a place should be (Massey 1995a).

A similar phenomenon can be seen in the Barmah-Millewa Forest, where competing interpretations of the past inform debates over the management of the forest and its resources. In the Native Title Claim process, the Yorta Yorta have emphasised the environmental degradation that has occurred to the Barmah-Millewa Forest and the Murray River system since white settlement. This interpretation of the area's past recognises prior occupation by Aboriginal people. It also recognises the Aboriginal dispossession and environmental degradation that has been the result of white settlement. This reading of the area's history underlies the current Yorta Yorta Native Title Claim, which encompasses issues of recognition and social justice, as well as indigenous rights to land and resources.

The Yorta Yorta have expressed concern over the current levels of degradation occurring to the forest and the river as a result of past and current management practices. They have expressed a desire to see forest uses such as logging and grazing removed from the forest so that the cultural and environmental values of the forest that are central to their own identity, are protected. This interpretation of history acknowledges the degradation that has occurred to the forest since white settlement. Part of this interpretation emphasises the way in which Yorta Yorta people lived in the area for many thousands of years, without causing the level of degradation that has been achieved in the one hundred and fifty odd years since white settlement in the area. Understanding that there was in the past an alternative way of managing the forest, an alternative history of the forest, allows for a different future to be imagined. For the Yorta Yorta this future involves changing current management practices, in order that their vision for the future of the forest can be imagined (see chapter nine).

As we have already seen, the history of white settlement and its associated developments form an important part of the culture of the white communities in the area. Logging and grazing have been practised in the forest since white people first came to the area. Indeed the grazing potential of the forest attracted the first settlers to the area, and the forest quickly became valuable as a source of the much sought after red-gum timber (see chapter five). Today, these forest uses remain central to the culture of the local white communities. The perceived threat of the Native Title Claim to these existing forest uses has
prompted statements of white attachment to the forest and of the primacy of the forest to the identity of members of the local white community. For example, this witness statement was filed in the proceedings of the Native Title Claim:

*I have resided in Mathoura all my life. Three generations of my family have lived in the two houses that were built from the timber that was sawn at our sawmill...*

*Being a third generation timber worker I have a very strong connection to the Millewa group of forests. The Red Gum timber industry culture is strong in my family. The township of Mathoura was born on the timber industry (Witness Statement HAR2 W57).*

Forest uses such as logging and grazing are viewed by many members of the local white community as almost 'natural' in their own right. Selective logging, if carried out in the 'right' way, is viewed as necessary for a healthy, productive forest. Similarly grazing is seen to be essential to protect the forest from fire (see chapter nine). These uses remain dominant in the current management regimes. Chapters eight and nine illustrate that scientific knowledge and the concept of the environment have been deployed to legitimise these uses and to ensure their continuation. Importantly, the white heritage aspect of the forest has also been emphasised to ensure the continuation of logging and grazing, and hence to ensure this construction of the forest remains dominant. By asserting logging and grazing as natural components of the forest, alternative constructions of the forest which challenge the legitimacy of these forest uses are discredited.

This discussion illustrates that different interpretations of history can influence the way in which a place is constructed and identified. The Yorta Yorta Native Title Claim has highlighted the way in which contested interpretations of history can be used to legitimise particular forest uses and management practices. Further this section has shown that different historical perspectives underlie resource conflicts. This introduces a level of complexity that traditional resource management practices are not capable of dealing with. For resource management to be successful, these political and cultural aspects of place will need to be identified. The following section will consider both personal and political aspects of talking about place that were raised in interviews and the proceedings of the Native Title Claim.

7.5 Talking About Place

An important element of the interviews I conducted involved talking to people about the significance of the forest to them. Similarly, evidence heard from the Yorta Yorta people in the Native Title Claim (and in private responses by those opposing the Claim) was characterised by discussions of the meaning of the forest and individual and group attachments to it. These private and public conversations about the forest, revealed both the significance of the forest to these groups and the way in which individual and group attachments to place can be used for political purposes. They also highlighted the role the
Native Title Claim has played in (re)thinking associations with place, and following from this, the current lack or inadequacy of any existing dialogue on place (outside of the Native Title process).

In chapter two, a review of some recent discussions of both Aboriginal and non-Aboriginal attachments to place emphasised the problem of how attachments to place can usefully be discussed in settler nations like Australia. The crucial issue appears to be how to discuss attachments to place without reverting to hollow comparisons or over-emphasising cultural difference. This issue is very pertinent given the political mobilisation of constructions of place to either assert or contest Native Title and indigenous rights to land and resources. The politics of place and identity evident in the current constructions of the Barmah-Millewa Forest emphasise the need to consider the comments people have made about their relationship with the forest in the broader political context of the Native Title Claim.

The interviews I have conducted and the Native Title Claim process have revealed some important points regarding the way in which both non-Aboriginal and Aboriginal people are currently talking about and conceptualising place. The degree to which respondents could articulate their relationship with the forest varied between different cultural and social groups, and also amongst members of these groups. In particular this research has shed light on the differences between Yorta Yorta people, and non-Aboriginal people with links to the timber and grazing industries. One common theme identified was the difficulty individuals had discussing the meaning of place to them. Yorta Yorta people were asked to explain this in the hearings of the Native Title Claim, and this process prompted non-Aboriginal local people to think about their own attachments to the forest. In my own interviewing "umms" and "arrrs" were common as people struggled to find the words to explain the meaning the forest has for them. One Yorta Yorta man explained that you had to be part of it to understand it and how difficult it was to explain it to other people. A local grazier said he didn't know what words to use to explain it to me. This highlights the need for an ongoing discourse on place.

7.5.1 "Home"

Both Yorta Yorta people and local people associated with timber production and grazing in the forest, constructed the forest as a human environment, a place which is lived in and for some, a place of work. The forest was frequently likened to the notion of 'home'. Although used by both groups, the notion of home was used more frequently by Yorta Yorta people. Local non-Aboriginal people described feeling at home, while Yorta Yorta people referred to the forest as home.

Local people associated with timber production and grazing in the forest described the forest as a place they knew well; a place in which they felt comfortable. One local man
described the enormous part the forest had played in his life and searching for words to describe what the forest meant to him, he explained that he felt more at home there than anywhere else:

*I don't know what it is really...I s'pose I've been mixed up with it all me life - part of my life I s'pose. Let's put it, I'd rather go out into the forest than go to Melbourne. I feel more at home there than anywhere else* (Interview 2.6).

Similarly, a local woman with connections with the timber and grazing industries explained the way she felt in the forest:

*When I'm in the bush I feel] just relaxed, [at] home, comfortable...Our whole life really evolves out there...* (Interview 2.9).

Yorta Yorta people described the forest as their home. Their construction of the forest as home referred to the forest as an essential part of who they are and where they have come from. They described the forest as the homeland of their ancestors and explained the sense of belonging and source of identity that this provided:

*From my Elders talking, our forest here means sort of home - it's where our people started from and came from...* (Interview 1.3).

*Oh well, we're just, Aboriginal people are born to love the forest...It's just born in our blood. That was the only place we were welcome; we knew we were at home once we were in the forest* (Interview 1.7).

*[The forest] is home, I've grown up in it...Behind Barmah township where we used to live, when I tend to walk down that way it brings a sense of belonging that you can't really explain. [It's] like when you've been away from home, you really appreciate it* (Interview 1.4).

The use of the notion of home in relation to the forest is indicative of the close relationship that many individuals have formed with the forest and the importance in plays in their everyday lives. Yet the 'home' that these groups were referring to were very different; they encapsulated very different experiences and hopes for the future. For example, the Yorta Yorta regard the forest as their home, and as the homeland of their ancestors, yet they had been forced to dwell in places other than their home, sometimes closeby but frequently further afield. A Yorta Yorta woman explained the need to move away from her home to find employment and to educate her children:

*I've had to go away from here to get work. Aboriginal people could never get employment in the towns around here. But this was always home. After ten years in Moama [a nearby NSW town], I had to take my family away to get a proper education for them, because of the racism in the education system here...[But] home was here, it was always a part of me. The thing is, you don't have to prove we've always been here, as we do now [in the courts]. The land was always a part of me, even when I was away* (Interview 1.2).

In addition, since white settlement of the area, stories of suffering and hardship have been associated with this place the Yorta Yorta call home. The notion of home in settler nations like Australia, does not only refer to positive and romanticised experiences. Home
has come to encapsulate a range of feelings for a range of different groups, from a sense of belonging and comfort to memories of violence and dispossession. These memories and feelings reflect the uneven experiences of colonisation. They are currently being negotiated through the processes of Native Title and reconciliation in Australia.

7.5.2 "It's just part of who we are..."

In general, Yorta Yorta respondents were able to articulate very clearly the importance of the forest to them. Their responses in both the interviews I conducted and in the hearings for the Native Title Claim emphasised the fundamental importance of the forest to their lives. For example, one Yorta Yorta person told me:

Well basically it's my energy, it's my existence, it's the giver of my life. It's my life and my living, and you can live, exist [without it], but it gives you your power, because the land has powers...[It gives you] energy, your vitality, the reason for your existence. It's just like children, they're the reason for our being... (Interview 1.5).

In the proceedings of the Native Title Claim before the Federal Court, a Yorta Yorta man explained his need to spend time in the forest:

I don't think there's ever been a time in my life that I haven't spent in the bush. I take my leisure time and the time that I had free [in the bush]...I still spend a lot of time, whenever I got free time, I still spend it back here in the forest. It's just something that I always need to do...There's just some sort of yearning that I need to come back. Probably some sort of therapy. It's pretty hard to explain. But I still come back, bring my family, grandchildren, back to the forest (Auscript 19.11.1996: 1726-1727).

This man hints at the difficulty of explaining his connection with the forest. During the proceedings of the Native Title Claim, a Yorta Yorta woman was asked if she could describe to the court the spiritual side of her association with the forest. She responded:

Well, how do you explain that to people? It's - I guess I can say that I've been away [from the forest] working...but every so often, very frequently, I have to come back and connect with my own country to continue out of it; I have to recharge my batteries I suppose (Auscript 25.11.1996: 2048).

A year later, in an interview, the same Yorta Yorta woman told me:

I just really need to have the contact with the land to function right...[When I was away] I didn't feel as though I was functioning; I was existing, but not living...It has too much connections to me, I can't explain. I was asked to explain that in the court system, but how do you explain that? It's just something that is part of me; I spent too much time in there as a kid...I don't see it as any economic gain to me. I see it as a survival of myself (Interview 1.5).

The difficulty of explaining this kind of relationship to people who have no connection with the forest was illustrated in both the interviews I conducted and in the hearings of the Native Title Claim. However, as the quotes above illustrate, Yorta Yorta people were able to illustrate very potently, the connections they have with the forest. The
current Native Title legislation requires Aboriginal people to be able to articulate their relationship with their country. In order for claims to land and resources to be made, Aboriginal people have been required to illustrate the significance of country to them and to demonstrate a continued association with that country. This requires being able to clearly articulate both present and past relationships with land and resources.

7.5.3 "It's been my life"

Members of the local white grazing and timber communities expressed a range of meanings ascribed to the forest. This mixture of meanings was explained by one local man:

_We've got a strong bond with the forest. We never cease to marvel at its grandeur, it's ability to provide peace, tranquillity, recreation, enjoyment and industry. It's hard [to say what the forest means to me]...It's also got history (Interview 2.2)._

Expressing what the forest meant proved difficult for many of these respondents. The importance of the forest to them was sometimes summed up by stating the huge role that the forest has played in their lives - from economic livelihood and recreation, to heritage and emotional well-being. Despite this, an emotional attachment was often evident. One retired timber worker explained that if he couldn't go out into the forest he might as well not be living. He explained the importance of the forest for his wellbeing:

__Oh well, it means a terrible lot to me...You might think this is sentimental, but you know I get depressed sometimes...being on my own and not working. When I get down I might go out into the forest and sit on a log and think about things...it means a lot to me that way...it sort of gets you out of your doldrums. Yeah well, next to my family, it's the most important thing I'd say (Interview 2.8).__

Other graziers explained the forest as a part of themselves, and also referred to the effect of the forest on their state of mind. The following two quotes are indicative of these kind of statements:

__It's a different world altogether. If you live beside it all your life, it sort of becomes part of you - there's something unique about it - it's calm and restful (Interview 2.4).__

__...but the Barmah Forest...I don't know - it's in your blood, it grows on you and you can't get away from it...When I'm just out in the bush - you just seem to be so free. I don't know - a freeness - I don't know what words to use to explain it to you. As long as you've got no pressure on you...there's just so many things to see... (Interview 2.5).__

This last quote hints at the difficulty these people had explaining the importance of the forest to them. It was evident that in the white rural culture of these local communities, emotional attachments and the personal meanings given to a place were not frequently spoken about. Many of the respondents may have had little opportunity to talk about and reflect on their emotional attachments to the place.
7.5.4 "I suppose you could be like the Aborigines..."

Throughout the course of this research, it was noticeable that the Native Title Claim motivated many local non-Aboriginal people to consider their own attachments to the forest. The Native Title Claim was perceived as a threat by many members of the local white community. One person told me that "the land rights thing has put the spook into people". Some others spoke of the uncertainty that they felt regarding existing forest uses because of the Native Title Claim. "It's a shame the whole thing's started" appeared to be a common view among the local timber and grazing community.

Importantly, local white people privately expressed concern over the type of evidence they were permitted to present as respondents to the Native Title Claim. Discussion of their own non-economic attachments to the forest were limited and the relevance of these to the Claim was continually contested throughout the hearings. In interviews conducted very soon after the hearings of the Claim had been completed, one settler Australian likened his attachment to the forest to that of Aboriginal people:

*I suppose you could be like the Aboriginals and say [my attachment to the forest] is spiritual...[The forest] is a different world. Probably it's biggest value is its therapeutic value - it's certainly not just associated with the Aboriginals, because plenty of people have the same feeling, or not the same feeling, but [something like it]...* (Interview 2.10a).

This quote raises the issue of the adoption by white people, of Aboriginal ways of talking about their relationship to the land. This is a phenomenon that has been evident recently in the broader Australian discourse on place attachment (see chapter two; see Jacobs 1997). One possible explanation for it is that these white people have not had the opportunity to sufficiently think through their own relationships with the forest. White western culture does not encourage people to express and talk about feelings and emotions (in this case in relation to place). Members of the local timber and grazing communities have not developed their own way of talking about place and expressing how they feel about the forest.

Many white people in the area perceived the Native Title Claim to be a threat to their own economic and emotional relationship with the forest. When feeling threatened in this way, the adoption of language similar to that used by the Yorta Yorta people was one way for local white people to make a counterclaim to the forest and to establish the importance of the forest to themselves. In the witness statements of the respondents to the Native Title Claim, there appeared to be an overt use of the kind of statements and language used by Yorta Yorta witnesses. For example, the respondents' witness statements frequently mentioned the passing on of knowledge through the family, the desire to be buried in the area and the perceived right to camp, hunt and fish in the forest. These were all important
points established by the counsel for the claimants. A typical witness statement of a respondent to the Claim read:

...I would like to be buried on top of the highest sandhill in Millewa State Forest so I can watch over the forest operations...

My father taught me to take only what we needed when we were hunting...

I feel that I have a right to camp, hunt and fish in the forest and no one has the right to stop me when I am doing these activities legally... (Witness Statement NSW6 WS1.2).

The Aboriginalising of white attachments to the forest raises important political issues. We might well ask what it means for Aboriginal attachments to and claims for land. Does it devalue or trivialise Aboriginal attachments to place? Does it mainstream them? By challenging the Native Title Claim with the same notions of significance and of attachment to the forest, the difference that Aboriginal people are asserting is denied. Here we return to the problem of how we can usefully talk about Aboriginal and non-Aboriginal attachments to place. Non-Aboriginal Australians are being forced to reconsider their own constructions of place in the light of Native Title Claims and Aboriginal reconciliation. Meanings and values ascribed to place are constantly shifting as Aboriginal and non-Aboriginal Australians contest old and negotiate new relationships with place.

7.6 Conclusion

This chapter has further explored the meanings ascribed to the forest, and has situated these within the current social and political context. The description of the cognitive context in which the forest is viewed has allowed the interested parties to be recognised. It has also allowed the multiplicity of meanings ascribed to the forest to be acknowledged. The consideration of the cognitive ownership of the forest has shifted the emphasis from the attributes of the place to the individuals and groups ascribing the values and meanings. The complexity involved with managing resources, which are ascribed a multiplicity of meanings and values by a variety of interest groups, has been emphasised.

Three different constructions of the Barmah-Millewa Forest have been described in this chapter. These different constructions of the forest underlie resource conflict, and each draws on a particular interpretation of history to legitimise claims over the present and future of the forest. The Yorta Yorta Native Title Claim has illustrated the way in which the management of the forest and its resources has been tied to particular constructions of place and the identities of groups associated with the forest. The Native Title Claim has caused both Aboriginal and non-Aboriginal people to rethink and re-articulate their relationship with the forest. This research has illustrated the need for an ongoing dialogue on place in the context of natural resource management.
This chapter has highlighted the problem of how we can usefully write, think and construct different attachments to place. Ultimately, how can prior Aboriginal occupation be recognised and social justice served, while allowing multiple attachments to one place to continue side-by-side? The following chapter suggests that in the case of the Barmah-Millewa Forest, common environmental concerns and goals might offer one way forward.

The different constructions of the forest and the meanings and values ascribed to the forest are underlain by very different ways of knowing and understanding the place. The following chapter will discuss these different forms of knowledge. Chapter eight will also explore perceptions of environmental change as a way of considering the role of resource management in identifying commonalities and acknowledging differences amongst interested parties. The challenge for resource managers is to be able to engage with the multiple constructions of the Barmah-Millewa Forest.
CHAPTER EIGHT
COMMONALITY AND DIFFERENCE IN THE FOREST

8.1 Introduction

Differences in the generation, exchange and use of knowledge amongst stakeholders in the management of the Barmah-Millewa Forest have emerged as important themes in this research. Different forms of knowledge underlie the forest values, meanings and constructions that have been outlined in chapters six and seven. These different forms of knowledge and the ways in which they are generated, exchanged and used will be outlined in this chapter.

This chapter explores observations of environmental change in the Barmah-Millewa Forest and the way in which these are framed by different forest uses and different forms of knowledge. This approach allows both commonalities and differences between and amongst the groups associated with the forest to be identified. It also demonstrates the importance of considering these observations and the knowledge that informs them within the political, economic and cultural contexts in which they are formed.

The information in this chapter is largely drawn from semi-focused and focused interviews with individuals associated with the forest. Given the sampling methods used, these individuals had often been associated at some level with the management of the forest, or had at least had a long association with the forest (see chapter four). The information drawn from these interviews is therefore embedded within the issues surrounding the management of the forest. This chapter examines the three broad constructions of the forest described in chapter seven and the three groups associated with these constructions; the Yorta Yorta community, the local timber and grazing communities, and government agency representatives. The cultural politics surrounding these constructions in the context of natural resource management will be considered in chapter nine. Implications for resource management both generally, and in the specific case of the Barmah-Millewa Forest will be drawn out in chapter ten.

8.2 Different Ways of Knowing

The multiplicity of values that are ascribed to the Barmah-Millewa Forest underlie the conflict that exists amongst the local communities, and between the local communities and the resource management organisations responsible for forest and river management. Lamb and Morris (1997) have shown how the values ascribed to old growth forests by scientists and local communities are based on different systems of knowledge. In a pilot study looking at perceptions of old growth forests in Australia, they found that scientists
valued 'facts' about the forests which were based on both abstract and specific knowledge structures. In contrast, the local communities' values of old growth forests were subject to varying interpretations, beliefs and attitudes, many of which were based on subjective experience (Lamb and Morris 1997: 11-12).

A similar phenomenon was witnessed in the Barmah-Millewa Forest, where local people and government agency representatives have an understanding of the forest which is based upon different forms of knowledge. Aboriginal and non-Aboriginal local people have a knowledge of the forest built up from experience and structured by their own attitudes and beliefs. This form of knowledge is commonly referred to as local knowledge. It includes local indigenous knowledge, a knowledge system held by the Yorta Yorta Aboriginal people which is based on traditional Aboriginal knowledge and customs. In general, government agency representatives' knowledge of the forest is structured by a scientific understanding of ecological processes and management regimes and also by related administrative roles and responsibilities. This form of knowledge is referred to here as scientific knowledge. It includes managerial knowledge, as government agency representatives often have both scientific and managerial responsibilities.

In discussing these different forms of knowledge it is important to note the way in which knowledge has been theorised. Contemporary social theory has stressed "the plurality of forms of knowing" (Morrow 1994: 49). Acknowledging that there is more than one way of knowing, it has been shown that some forms of knowledge have greater power than others. They may acquire hegemonic status, with their preferred readings becoming accepted as 'natural' or 'common sense' (Jackson 1989a). The ability to deploy knowledge to shape understanding and action is an important basis for power. Further, the ability to deal in and manage ignorance and uncertainty may be just as powerful (Smithson 1989). This is significant for both the study of place and the practice of natural resource management. For as we shall see, knowledge can be used to perpetuate particular meanings of place and to legitimate certain uses and management regimes over others.

The generation, exchange and use of knowledge has been emphasised as an important factor in achieving effective community participation in Australian resource management (Campbell 1994). This relates not only to having the relevant forms of knowledge available to make appropriate management decisions, but also to the way in which the interaction between different forms of knowledge helps to structure relationships between stakeholders in resource management. For example, management decisions are made within government agencies drawing on the scientific knowledge of outside experts and government agency employees. These decisions may also draw, to varying degrees, on the knowledge held within the local community and built up over the years by observation and experience. The degree to which local communities are consulted or participate in decision making (and hence the status given to local knowledge) is indicative of the institutional culture and
hierarchical structure of government agencies. In particular it relates to the way in which communication and decision making occurs between different levels of management, and whether decisions are made from 'top-down' or 'bottom-up' (Campbell 1994). This research on the Barmah-Millewa Forest has not focused on the institutional culture or the hierarchical structure of resource management agencies. However, the plurality of different forms of knowledge and the way these structure the relationships between local communities and government agencies involved in the management of the forest has emerged as an important theme. This information offers some insight into the tensions that currently exist between the local communities and government agencies in relation to the management of the forest and its resources.

Recent research has illustrated both the value and limitations of incorporating local knowledge in the resource management process (Finlayson and Brizga 1995; Lane 1997; Roberts and Sainty 1996, 1997). This work has demonstrated the importance of collecting and recording local knowledge, particularly in relation to changes in the physical environment. For example, the oral history process documented by Roberts and Sainty for a project on the Lachlan River in NSW revealed new 'information' about the historical ecology of the river which "was probably not achievable by other means" (1997: 32). Roberts and Sainty note that "an additional reason" for undertaking their research was a widely held view that members of local communities "by dint of long personal experience, are a rich repository of useful ecological information" and that this information is not being accessed (1997: 3). Lane (1997) also provides a strong argument for the inclusion of the recollections of local people as a supplement for both historical records and scientific understandings which often lack an historical dimension. Importantly though, she acknowledges the limitations of local knowledge and suggests that an analysis of the process of memory itself must also be included when incorporating local knowledge with scientific knowledge. Finlayson and Brizga have also highlighted the limitations of including local knowledge in resource management, emphasising that although useful, the oral tradition may contain major misconceptions which require it to be critically evaluated and corroborated by field and documentary evidence (1995).

The limitations of local knowledge may prove to be beneficial for observations of environmental change. For example, Lane argues that the subjectivity which often makes oral history or local knowledge unreliable for factual accounts, "makes it extremely valuable for comprehending the human impact of environmental changes, the role that local people have played in these changes and reasons for their attitudes and behaviour" (1997: 203-204). Given that "local people accumulate knowledge about the country from their own experiences and from those of prior generations", she explains that "the features we distinguish in the landscape, the kinds of changes we observe taking place, and our attribution of the causes of change, all relate somehow to who we are and what our life experiences in that place have been" (1997: 203). This suggests that an understanding of
the broader social context in which observations of environmental change are made will be important for the interpretation of this type of information.

The discussion of local and scientific knowledge in this section and the following discussion of observations of environmental change in section 8.3 adds insight into the complex relationship between people and place and the ways in which this can and does influence the process of resource management. The way in which this knowledge can be deployed to legitimise certain constructions of the forest over others is considered in chapter nine. Further implications for resource management are drawn out in chapter ten.

8.2.1 Generating knowledge

The interviews I conducted with Aboriginal and non-Aboriginal local people, scientists and resource managers, revealed a distinction between the way scientific and local knowledges are generated. In particular, local members of the grazing and logging community valued knowledge gained through direct experience and observation in the forest. The following quote is illustrative of the way in which local knowledge is generated:

*My first memory of life is down at Gulpa Creek. I can remember my mother catching a turtle about the size of a two shilling piece. That was in the 1939 flood. From age seven I used to go into the forest to help Dad crosscut sleepers...[I've spent] nearly forty-five years continually working the area. I'm no genius, but when you walk around the same area for forty-five years you pick things up (Interview 2.1).*

Local people associated with the timber and grazing communities often noted the lack of local knowledge being used by government agencies to manage the forest. One retired timber worker explained the importance of local knowledge of the forest:

*Somebody who knows something about it [should be looking after the forest]. See the old practical blokes, they were the best. They knew the forest and what was going on. You've got to be born in the bush to understand it I think (Interview 2.8).*

This concern often related to scientists and resource managers coming to the area with knowledge gained from environments very different to red gum forests, such as softwood forests, or from text books. One local woman involved with the timber and grazing industries noted that "you don't learn everything out of books" (Interview 2.9). Successful management of the forest and river was seen to incorporate local knowledge with scientific knowledge:

*I think there's a lot to be learnt from local knowledge. I think that's where the [government agency] chaps, they come and don't spend enough time to learn about it... (Interview 2.6).*

*I believe they want a balanced group or committee that incorporates local knowledge with our college men. If they could work together it would come out of that, because there are some things you can't learn sitting behind a desk. One of the things we've noticed with our foresters is they've had no experience with red-gum. They've learned down at Creswick [a forestry training institute elsewhere in Victoria] and have no*
experience of red gum. They get down here and everything's different... (Interview 2.4).

The government agency representatives I interviewed acknowledged the importance of tapping into the knowledge held within the local community. The historical perspective that local people who had spent a lifetime in and around the forest could provide was regarded as particularly valuable:

*I think you need that - you need to have knowledge of the forest to carry out your job. So we do rely on locals for their knowledge. That's something we should never ignore - the knowledge the locals provide - particularly the historical perspective* (Interview 3.4).

*Scientists tend to rely on the people who've spent a lifetime on it, because they don’t have the time to collect the data. They have to sift through [the local knowledge] and sort fact from fiction...* (Interview 3.2).

The inclusion of a chapter written by a local man about the watering of the Millewa Forests in a comprehensive book on the Murray River by the MDBC (Mackay and Eastburn 1990) illustrates the value given by some scientists to the detailed knowledge that local people have built up over the years through observation and oral tradition. This man showed me with great pride the list of authors for this book, which included his name, a bloke with "only" technical school qualifications, amongst an array of scientists, many of whom were "doctors" and "professors" (FN#1: 217).

The appreciation of the value of local knowledge by government agency representatives was tempered by the view that local knowledge was of more use for the management of some issues than others. In particular they noted that an historical perspective sometimes contained management practices that were ecologically damaging. Local people's understanding of river flow patterns was seen to be particularly useful for resource managers, whereas historical practices were often seen to conflict with ecological requirements:

*In some areas [local knowledge] is very important and in other areas it's not. In general, community people have [a] very good understanding of flow patterns and flooding regimes, but not so good an understanding of ecological requirements* (Interview 3.4).

*A lot of people have a history [with the forest], they might be sixty years old and their father and grandfather have worked in the forest. They've got to realise that [the] things of the '30s and [the] turn of the century stuff in a lot of cases were very good, but in other cases caused a lot of damage...You talked about environmental flows ten years ago, you would have been shot, but people are slowly accepting these things* (Interview 3.4).

These views were supported by my observation of conflict between the local timber and grazing communities and government agencies over the management of woody debris, commonly referred to as 'snags' in the river system. Since white settlement and regulation of the Murray River, snags have been removed to facilitate navigation and to increase
channel flow. The philosophy of river management has now changed and these historical views of river management conflict with the ecological perspective. This is discussed in more detail in section 8.3.1.

The local Victorian shire council of Nathalia, which encompassed the Barmah Forest, had recently undergone restructuring which saw it amalgamated with surrounding shires to become a much larger entity (Moira Shire). In the process, elected councillors were sacked and Commissioners appointed. This was seen to erode the local knowledge of the Shire, as many local Shire Councillors were replaced by non-locals representing other parts of the Shire. This was seen to have ramifications for areas like the Barmah-Millewa Forest. One local Shire Councillor commented that:

Local knowledge is very important. We're just finding that out now. [We've had] two years with Commissioners [and] now we're finding that we have to go back to the locals and get that knowledge...When they restructured [the shires in Victoria] all the local knowledge was lost - 99% of it was lost. The social issues - once upon a time it figured high on council issues, environmental concerns and economic concerns were always on the political agenda. Now, while they're still important, they don't get the attention they probably should. We all look at the big picture now and sometimes miss little things. I'd hate to see it deteriorate - the forest. We like to see sensible management of it (Interview 3.2).

Government agency representatives spoke not only of the value of the knowledge contained within the local community, but also of the local knowledge they had built up over the years they had been employed in the area. One government agency representative reflected on the way he did things differently since first moving to the area:

The things I do differently to when I first came here is to work with reality a bit more rather than text book theory, not that I throw out text book theory, but it can't observe the gut feelings about how something's going to react to putting water on it, or [the] impact on people's livelihoods...Certainly I draw lines [between when to use gut feeling and when to use text book theory]...and if I lost that [ability], I shouldn't be in the game (Interview 3.10).

There was the view amongst government agency representatives that the local knowledge they had acquired since being in the area was valued by their department, particularly given the high turnaround of staff that the following section will discuss. There was however, some reservation about the value the various government agencies place on the local knowledge accumulated by their employees:

One of the big nobs from Melbourne did tell me [they value my knowledge of the area]. He pleaded for me not to leave, to stay here another ten years. I asked him to put it in writing (Interview 3.9).

...[Government agencies] are constrained by numbers and budgets and if you quizzes managers, they would say yes [they do value the local knowledge acquired by scientists] and if they had a big pool of money they would do all they could to retain you (Interview 3.10).
One of the major concerns expressed by local people related to the institutional culture of government agencies, particularly the trend for employees to stay for relatively short periods of time in one place. This meant that any local knowledge that the agency representative had accumulated, and the relationships they had developed with local people, would be lost when the representative moved to another area:

*You get a fellow there and you talk to him, and they shift him [to another town], and you get another fellow and you have to educate him...* (Interview 2.4).

*There's a lack of [local] knowledge and especially in the Nathalia office now it's frightening - there's only two officers out there who's been there more than twelve months* (Interview 2.10a).

This problem was also acknowledged as a problem by government agency representatives.

This was seen as a great impediment to maintaining working relationships between local communities and government agencies. It was viewed as a frustration and a drain on local people's time and energy. This was particularly noticeable within the Yorta Yorta community. The following quote reflects this frustration:

*There's a constant turn around of different governments and we're constantly trying to tell different ministers...we're constantly trying to tell the same story and it takes time to get your message through, because governments change...* (Interview 1.1b).

This quote illustrates the broader context in which Aboriginal people deal with governments. The management of the forest is viewed as but one issue, amongst others such as land rights, health, education and employment, about which Yorta Yorta people must lobby governments for change.

### 8.2.2 Exchanging knowledge

The interviews I conducted also revealed differences in the way knowledge is exchanged. It was a common view and concern amongst local timber and grazing communities and government agency representatives that the knowledge held by many local people would be lost in the future if steps were not taken to record it. Most of this information is not written down and many of the people thought to be knowledgable about the forest are not young, as local knowledge is built up by spending time in the forest and being closely associated with it over a long period of time. Part of the problem was seen to be the decline in viability of the timber industry in the forest. Local knowledge was passed on from father to son in the sleeper cutting industry, but the industry is seen to be no longer viable and the younger generation have had to move away from the area to find employment. This aspect of the timber industry was seen to play an important part in the exchange of local knowledge:

*After this generation there'll be no knowledge of the forest, don't worry about that. Everything that's done is coming out of an office somewhere, with no practical knowledge whatsoever...* (Interview 2.8).
Some of the biggest problems is that a lot of those [local] people are getting on in years and because the forest was managed differently in the past I'm not sure the knowledge is getting passed on adequately... (Interview 3.2).

It was the view that it would be very beneficial for scientists, resource managers and local people to have local knowledge recorded, so that this information is not lost and so that it is readily available to be drawn on when needed. A related point was the difficulty of tapping into the local knowledge of the area:

**I guess people who have worked in the forest all these years must have a certain amount of practical knowledge. I believe you must have a certain amount of practical knowledge to make proper decisions, or to lessen the impact of bad decisions. I wouldn't imagine that any of the blokes that work out there physically would sit down and expound their views, but you might pick it up by just casually talking to them (Interview 3.1).**

**I think most of them [government agency representatives], they mightn't think it, but they get a lot of information from the locals and they probably could get a lot more if they wanted it. There's probably a lot of knowledge that if I had have known I could have put something together...you tend to forget over the years... (Interview 2.6).**

In contrast to local knowledge, scientific knowledge is largely communicated and exchanged in formal ways, through scientific journals and published reports. One government agency scientist and resource manager, spoke of the frustration that the results of research being carried out in the forest were not being read or recognised by local people, because the work was published in scientific journals which local people did not read (FN#1: 143-145). The formal modes of communication of results required to be a member of the scientific community, did not coincide with the less formal avenues of communication of information in the local community.

This also points to the very different ways in which scientific knowledge and local knowledge is formed. As opposed to the requirements of long periods of time spent in the forest for local knowledge to be generated, scientific knowledge is subject to a set of rules and standards aimed at ensuring its validity and rigour. One government agency scientist and resource manager spoke of the difficulty of conducting scientific research given limited funding and tight timetables. This often meant that he had to produce reports which were not refereed by independent scientists, and this lead to his concern about the rigour of the research and how these results were used (FN#2: 7-9).

This also relates to the degree of certainty required by scientists to make an observation. This was described very well by one scientist and resource manager who explained the dilemma of needing to be able to scientifically prove statements. He explained that from a scientific point of view he wouldn't stand up in a seminar and say the river's getting wider, but in a pub he probably would (Interview 3.10).
8.2.3 Using knowledge

Local people expressed frustration at the amount of research and investigation that has gone on in the Barmah-Millewa Forest, at the expense of on ground action. It was common for interviewees to indicate the huge volume of reports written about the forest with their hand held high above the kitchen table or even the floor, or to haul out all the reports to show me just how many had been written and how much money had been spent. This frustration was reflected amongst the community representatives involved in groups concerned with the management of the forest and the river, such as the CRG and the Annual Forum. Two community representatives explained:

*We wanted action, we didn't want more investigation. We believed we had enough information* (Interview 2.1).

*At the moment, most groups are pretty frustrated. There've been sufficient gains to keep the interest going, but the last two years interest has dropped off...people are very disillusioned. They've achieved some of their aims, but people are becoming pretty frustrated. There's not a lot of young people involved...* (Interview 2.10a).

There was acknowledgment by government agency representatives of the community disenchantment with science because of the years of spending money on research and reports. One government agency representative explained that "there's been a lot said and written about it but not much done" (Interview 3.5). However, government agency representatives also emphasised the need to understand the system so that mistakes were not made (FN#1: 53). An important aspect of this was the need to consider the forest as part of a bigger ecological system, not just made up of individual resources:

*We talk about forest ecology, not just timber* (Interview 3.4).

*I think the focus of water management in the forest for too long has been specific to the forest itself...[There is a] need to start looking at [the] broader requirements of the river system of which Barmah-Millewa is one of the keystone areas* (Interview 3.5).

There was common concern amongst both local communities and government agencies that each group had its own political agenda. Local communities were concerned that government agencies had their own agenda and that their input would have little impact if it did not fit with these interests:

*I think there should be more community involvement, especially with people who utilise it. I think the example's been set with the Community Reference Group - the Barmah-Millewa Annual Forum, but there's been a lot of opposition from management. They're not going to accept [input] from what they called unskilled [people]...* (Interview 2.10a).

Despite this, there was some acknowledgment from members of the local timber and grazing communities that these agendas were often driven from upper management, which
is not based locally. Government agency representatives were seen to be under pressure from a range of groups associated with the forest:

Those fellows on those groups, the agency fellows, have got to keep their jobs and there's times they'd like to do something, but they can't because they get pressure from other sides... (Interview 2.4).

Government agency representatives expressed concern that some community representatives had 'vested interests' that could affect the process of community participation. This raised the issue of scale. Local knowledge was seen to be place-specific and very detailed, whereas managerial and scientific knowledge sought to place the forest within the broader ecological system. Tensions between government agencies and local communities were explained in terms of these differences in scale:

I like to know what [groups involved with the management of the forest are] out to achieve. My concern is that there are political ramifications of these [community] groups. You question sometimes their concern about the forest...That's always in the back of my mind - are they concerned about the forest or their own self interest groups. I think the [annual forum] could be a lot better...I think the problem with the annual forum is that it's too localised...Yes, you need that local knowledge and participation in a project, but [you've] got to be very careful [you] don't isolate yourself from the bigger picture...Whatever we do in the forest has implications for [areas] upstream and downstream (Interview 3.4).

An important aspect of the politics surrounding the management of the forest was a lack of trust between local communities and government agencies. This appeared to be fuelled by a lack of understanding and acknowledgment of the constraints and interests, vested or not, of both local communities and government agency representatives:

I think there should be trust and open feelings around the [annual] forum...but there's certainly mistrust between community and government agencies... (Interview 3.10).

8.2.4 Community participation

Despite acknowledgment of the value of local knowledge by government agency representatives in the interviews I conducted, local people expressed concern that they were not achieving the level or type of input they wanted. One local man explained their desire for "meaningful input" (Interview 2.1). Part of this related to the recognition by scientists of the value of local knowledge. This same local man told me of a scientist who referred to him for information:

...[A notable scientist] was asked a question and he said I think you should ask [me]. That made my day (Interview 2.1).

Local people did not believe there was enough input from people with knowledge and familiarity of the forest. Individuals who had been or were currently associated with the
timber and grazing industries expressed concern about the lack management of the forest from offices outside of the local area:

*There's too much stuff coming out of the offices, too many people sitting on their little chairs thinking up things to hinder people* (Interview 2.8).

*People who don't know the historical value[of the forest] or its origins, are the ones making the decisions* (Interview 2.10b).

The answer to this problem was seen to lie in more community participation and greater cooperation between community groups and government agencies. Amongst the grazing and timber communities, it was acknowledged that the government agencies should continue to be responsible for the management of the forest and the river, but that more community input and cooperation was needed:

*The [government agencies should be responsible for looking after the forest], but I think the broader community should have more of an input, more of an advisory role...I think this annual forum group - if they could work in there and the [government agencies]...could listen...* (Interview 2.9).

Local Aboriginal people, the Yorta Yorta, also expressed frustration at being excluded from management processes. There was a general feeling that management decisions were made without sufficient consultation. Although Yorta Yorta people had been represented on the Community Reference Group (CRG) and the Annual Forum, the legal and personal constraints of the Native Title Claim on the Yorta Yorta community had made it difficult for representatives to continue to attend. As with non-Aboriginal local people, concern was expressed about the gap between 'upper management' and the local community:

*We're never asked [about how the forest and the river can be looked after], because it comes from upper management. But it wouldn't hurt to ask local people, whether [what they say] is right or wrong...The people on the ground are seeing more than the people making the decisions* (Interview 1.3).

This frustration appeared to be more systemic than the frustrations expressed by non-Aboriginal local communities. There was a general feeling of exclusion from the management process. More than this, the loss of control of the land and water that had sustained Yorta Yorta people for thousands of years, had resulted in what was viewed as alien ways of using and managing resources, and a vastly changed forest and river environment. Exclusion from the current management process was considered but one manifestation of the broader exclusion of Aboriginal people from their lands and the processes of government since white occupation. Yorta Yorta people expressed their concern to me (and in the hearings of the Native Title Claim) over the changes in the forest and the river system and their lack of input into the management process.
Part of this frustration seemed to be related to the perceived lack of recognition by
government departments of the custodial role the Yorta Yorta people had in relation to the
Barmah-Millewa Forest:

*I think that's why we have our cultural officers and site officers in our area. We
believe the government should go to these people, because we are the custodians of
the land. But in a lot of cases that isn't so. A lot of government departments don't
hold that policy* (Interview 1.4).

With a lack of recognition or understanding of traditional Yorta Yorta knowledge of
the forest and the river, past and present management regimes were seen to lack the
knowledge or understanding of the area that was required for its proper management:

*We've been trying to tell them [white people] since they first came here, trying to tell
them how we look after [the forest and the river], how we fish and hunt, and after one
hundred and eighty years of telling them about our area and how to look after it I
think they still don't understand it. They utilise it to its fullest. After one hundred and
eighty years of being here they're still trying to understand how to look after it. I'm
not saying we've got all the answers, but through oral history and that...* (Interview
1.1b).

There was a perceived need to include indigenous knowledges in the management of
the forest and the river. Surrounding the Native Title Claim were arguments for the
recognition of indigenous knowledges and involvement in the management of the forest
and the river. This quote from an interview with a young Yorta Yorta man illustrates the
importance of involvement in the management of the forest and the river for Yorta Yorta
people:

*Well who does look after the forest and that now? Does anybody? We [Yorta Yorta]
try to. Does the farmers, the irrigators? Does state government, local government? I
think they all have their thumbs in the pie somehow and we're just a crust off the pie.
So that's what we're trying to do now, to have a say over management of the little
parts that have been left [as crown land]...So who was the managers of this land for
40 000 years? And suddenly we have no say in it and all the things that was done to
it, some of that's irreversible - [for example] the weirs, the townships. So that's up to
us now to have a say in the management [of the forest and the river], or else there
won't be anything left...I'm not saying there won't be any forest left, just poorly
managed [forest]. I'm just saying that we have to be involved in the management of
lands and waters* (Interview 1.1b).

These findings raise issues concerning the stakeholder hierarchies employed in the
resource management process, notably whether Aboriginal people can be considered as a
stakeholder with equal claims and rights to any other stakeholder. These issues pose
incredible challenges not just for the process of resource management, but also for the way
in which we, as white Australians, relate to place. These issues will be further explicated in
chapters nine and ten.
8.2.5 Comment

Local, indigenous and scientific knowledges are generated and exchanged in different ways. These differences combine with various levels of experience and personalities to complicate the process of resource management. Differences in the meanings ascribed to the forest and in the way knowledge is generated, exchanged and used have contributed to the perceived need by local timber and grazing and the Yorta Yorta communities for greater levels of community participation. In particular, the Yorta Yorta people have expressed systemic marginalisation that encompasses issues greater than just resource management, including indigenous rights to resources, social justice, employment, education and health. The nature of the Yorta Yorta relationship with the forest may enable the recognition of Native Title and greater levels of participation in resource management to go some way towards addressing the issues of indigenous rights to resources and social justice.

Differences between local knowledge (including indigenous knowledge) and scientific knowledge appear to be one important source of government agency/local community conflict over the management of the forest. As some of the quotes above illustrate, the Barmah-Millewa Annual Forum is potentially a very valuable group through which to bridge the gap between differences of knowledge, experience and values. The following section will highlight potential areas of commonality on which such a group could build. This reinforces the observation made in chapter seven that there is a need for continued dialogue that addresses these different understandings of place and resource management issues. It might also be possible for such a dialogue to build on areas of commonality.

8.3 Perceptions of Environmental Change

The value of consultation with local communities on matters of resource management has been demonstrated through research investigating perceptions of environmental change. As noted above, these studies show that it is valuable to document local knowledge, particularly historical perspectives of environmental change, and combine them with scientific knowledge and historical documents to provide a more complete picture. Local people’s knowledge of the Barmah-Millewa Forest was often expressed through a keen sense of the change that had occurred in the area in their own lifetime. Change to the environment of the forest emerged as an important theme in this research. Local people were very keen to discuss the changes they had observed in the forest and the river environments.

The comments collected on changes to the forest and river environments identify a large and valuable local knowledge base. An oral history approach, as advocated by Lane (1997) and Roberts and Sainty (1997) was not adopted for this project, for reasons discussed in chapter four. As a result, the information tends to refer to general trends
observed for 'the forest' or 'the river' rather than to changes observed in specific places. This aspect of the research is not intended to provide detailed documentation of environmental change in the region, or to correlate local perceptions of change with scientific evidence. This has been documented by Leslie (1995) for the Moira Lake which lies within the Barmah-Millewa Forest. Rather, through observations of environmental change, this section identifies areas of difference and commonality amongst various groups associated with the forest, whilst highlighting the value and limitations of incorporating local knowledges in the resource management process.

The limitations of local knowledge and the importance of combining and cross checking with other sources has been noted in the literature (Lane 1997; Finlayson and Brizga 1995). Local knowledge has been found to be more valuable for some aspects of environmental change than others. For example, Lane (1997) found that oral accounts of water courses in her study area showed more potential to provide a greater level of detail and historical perspectives than did comments on climate. Comments on the introduction and spread of weeds were also an important source of information, however "attributions of the cause of the introduction and spread of weeds were impossible to separate from the antagonism that was felt towards the Forestry Commission as a land manager in the region" (Lane 1997: 203). The selective nature of human memory has also been noted by Lane (1997: 203). In addition, Finlayson and Brizga (1995) have shown how the oral tradition, or local knowledge, may contain misconceptions about environmental change. In case studies of the Nogoa River in Queensland and the Avon River in Victoria, reconstructions of river channel behaviour from the documentary record and field evidence both "suggest somewhat different histories of change to those perpetuated in local folklore" (1995: 190). They found that local knowledge is a serious source of information, but emphasised that it must be verified with other documentary evidence (Finlayson and Brizga 1995).

The different forms of knowledge described above underlie the observations of change to the Barmah-Millewa Forest and the Murray River that follow. Knowledge of the forest and observations of change were framed by the way in which the individual or group constructed the forest: the way they used the forest and the values and meanings they assigned to it. This illustrates that local knowledge, like scientific knowledge (see Morrow 1994) is framed by cultural and political contexts. Given that knowledge is not politically neutral, it is valuable to view local knowledges and the observations they give rise to, in light of the way in which the individuals or groups construct the place about which knowledge is held. This is important consideration given the increasing pressure for the resource management process to include the knowledges, needs and desires of local communities.
8.3.1 River changes

Local people, both Aboriginal and non-Aboriginal, spoke passionately about the changes they had noticed to the Murray River in their own lifetime. Despite marked variations in the way in which local individuals and groups valued the Barmah-Millewa Forest, this research has identified some common observations of change and common concerns for the Murray River system. Observations of change to the Murray River also reveal some differences between groups associated with the river, which reflect different uses and priorities associated with different constructions of the forest. Above all observations of change to the Murray River system emphasise common ground on which resource management processes can build.

The topicality of the changes to the Murray River in the interviews I conducted was perhaps not surprising given the widespread attention given to the current state of the river. Stories relating to the degradation of the Murray River system appear frequently in the local and national media and numerous publications have documented the degradation that has accompanied the development and regulation of the Murray River system (see EPA 1997; Harris and Gehrke 1997). A correlation has been found to exist between the level of newspaper reporting on the Murray River between 1958-1988 and drought events; when the region was experiencing drought, there was a greater incidence of reports relating to the Murray River, particularly regarding water quality decline. This was greatly reduced during periods of non-drought (Dovers pers comm 1998). I conducted my research on the Barmah-Millewa Forest during an El Nino event, when the country had been in an extended drought period and the Murray River was in pretty bad condition. This may have contributed to the topicality of the River in the interviews I conducted.

More significant though, may be the social and cultural role that the river plays, in various ways, in the lives of the Yorta Yorta people and non-Aboriginal people in the area. Inland waterways such as the Murray River system have been documented as "key components of our history and folklore, for both Aboriginal people and the European settlers" (Crabb 1997: vi). The importance of "water as a social good", with its "remarkably complex economic, social, political and institutional dimensions which are intrinsic to our society" is beginning to be publicly recognised (Day 1996: 27). The first paragraph of the 1997 NSW Rivers Survey illustrates the fundamental importance of inland rivers:

Rivers are a vital part of our natural heritage; irreplaceable, priceless assets which play a crucial role in our nation's social, spiritual and economic well-being. Our river systems give us amenable places to live, a focus for our spiritual ties with nature, and fresh water, one of the four basic elements of life. Rivers are fundamental to our productive land systems, standard of living, food, recreation and employment. River ecosystems support much of Australia's biodiversity as well as important fisheries resources. The scarcity of rivers in this dry continent makes them all the more precious (Harris and Gehrke 1997: vii).
Comments such as these are emerging largely in response to the widespread degradation that has occurred to Australia's river systems since European settlement. Evidence of this degradation is especially clear in the Murray region, in rivers regulated for water supply and in inland lowland rivers (Harris and Gehrke 1997: ix). The river system in the vicinity of the Barmah-Millewa Forest fits into this category. Many of these changes to the river system have been observed by local people.

Human activity in the area surrounding the Barmah-Millewa Forest has been focused on the river system and the forest, which is supported by the river system. Aboriginal groups used the river for transport and food, and the river featured in stories of the Dreaming. The river system also influenced white settlement and development of the area, allowing the development of townships and irrigation schemes and transportation systems. Today, the river system continues to be an essential component of human activity in these areas, providing food and water, recreation and a focus for social and cultural activities. It is therefore not surprising that the river was frequently mentioned in relation to environmental change. It is also not surprising that discussions of the river highlighted common ground between the diverse groups associated with the forest.

"You could see the bottom of the river..."

Local people noted the dramatic changes that have occurred in the condition of the Murray River, particularly the increasing 'murkiness' or turbidity of the river. Turbidity is related to the amount of sediment or other particles suspended in the water and comes from sources such as soil and riverbank erosion and sewerage effluent. There is also some evidence to suggest that turbidity levels in the Murray River have increased since the introduction of European carp (EPA 1997).

Perceptions of change to the Murray River were framed by experiences in the place. These observations reflect the central role of the river for many social and cultural activities in the forest, such as fishing, camping (almost always beside or close to the river), and swimming. The following three quotes, taken from interviews with Yorta Yorta people, demonstrate the observed change in water quality and the river ecosystem. They also illustrate the important role of the river in these people's childhoods. The similarity of these observations is notable:

...When I was a kid we used to walk along the river and pick up crays and put them on the bank, and we could see them [in the water]...You'd never see them today, not with water conditions as they are (Interview 1.3).

When we were growing up you could see the bottom of the river and the Broken Creek, or not the bottom, but it was clear, you could see fish swimming. I know you don't catch fish like you used to (Interview 1.4).
The river's changed a hell of a lot. The river, when I was a kid, the water was clear and you could even see fish and lobsters...We could drink it... (Interview 1.7).

Similar observations were heard in evidence given in the Yorta Yorta Native Title Claim:

You only have to have a look at the Murray River as it is today. To me it's just being used as a giant sewage system. In my days on the river banks, I can remember being able to see the bottom of the river. You could see fish, crayfish in the water, not like it is today... (Auscript 26.11.1996: 2209).

Non-Aboriginal local people also observed changes to the water quality of the river and the decline in the abundance of native fish species. The first quote is taken from an interview; the second from a witness statement lodged in the Federal Court proceedings of the Native Title Claim:

The fish have become harder to catch...The Murray River has changed itself - [it] used to be crystal clear or greenie-clear. [It's] now murky brown (Interview 2.2).

When I was a boy there were thousands of mussels in the Murray River. The River has changed a lot and now there are hardly any... Considerable damage has been done to the river over the years by putting in channels, weirs, dams and pollution. The river has changed so much since I was a boy, it saddens me to think about it (Witness Statement1)

The decline in the number and diversity of native fish species in the Murray River is seen to be an important indicator of the degradation that has occurred. This has been well documented in the scientific literature (see Cadwallader and Lawrence 1990; MDBC 1989; EPA 1997; Harris and Gehrke 1997). For example, the 1997 NSW Rivers Survey notes that "despite intensive fishing with the most efficient types of sampling gear for a total of 220 person-days over a two-year period in 20 randomly chosen Murray-region sites, not a single Murray cod or freshwater catfish was caught" (Harris and Gehrke 1997: ix). This is a very different situation to that documented in photographs, historical documents and local memories, which highlight the abundance and diversity of native fish species (see Victoria Standing Consultative Committee on River Improvement 1984: 37; Leslie 1995).

Although non-Aboriginal people also noticed these changes to the river system, discussions of change to the river system with people involved in the timber and grazing industries often moved to focus on other aspects of the forest such as changed flooding regimes and its impacts on the forest, river bank erosion, and the choking of the river system with snags. This may reflect their involvement with different forest uses.

1 Again, this witness statement was filed as evidence in the Federal Court proceedings of the Yorta Yorta Native Title Claim, but has not been given an exhibit number. Ordinarily it would be cited by the name of the witness filing the statement, however names have been withheld in this thesis to maintain confidentiality.
The common observations of change to the river system illustrate that although there are multiple values and meanings attached to the forest, these different constructions overlap in the same space. The changes observed to the Murray River indicate that there have been physical changes to the river that have been experienced by all local people, albeit in very different ways. As noted above, the river plays a central role in supporting both human and non-human life, as well as providing an important social function. Observations of change to the river system within living memory, and the sense of loss that this has imparted in local people, offers common ground between Yorta Yorta people and non-Aboriginal local people involved in the tourism, grazing and logging industries. Although Yorta Yorta people and descendants of white settler Australians have very different histories of the area, the changes to the colour of the river water and the difficulty of catching fish these days were observations local people had in common. Evidence given by a Yorta Yorta man in the Native Title Claim illustrates the common ground:

...It was always different back in those days because there was so many different varieties of fish that was available to us. Fish was so plentiful as well too, back about thirty year ago. I think most of the people around this part that can remember back that far...they would know what I am talking about. There was plenty of fish and a good variety of fish in the rivers (Auscript 19.11.1996: 1727 emphasis added).

Similarly, a Yorta Yorta woman noted the common concerns of older non-indigenous local people who have also witnessed the dramatic changes to the river system:

I don't like [the changes to the forest and the river]. I mean change will happen, but interference change is different to other change...water courses change all the time...but [interference change] is not good to the environment, it's not good for people. Have you ever spoken to old [non-indigenous] people who've lived along the river? They don't like it because they can see the devastation that's going to happen (Interview 1.5).

Accompanying these observations of change in the Murray River were often comments about the cause of these changes and judgements about how the river is treated today. It was common to hear the river described as "a sewer" or a "drainage channel". The first quote is from a Yorta Yorta person; the second from a local person employed by a resource management agency:

...Yorta Yorta people are river people...but we can see the river almost only used now as a drainage channel...We're pretty upset over that (Interview 1.7).

The river is silting up, [there's] bank erosion, the quality of the water is deteriorating - 31 years ago it was clear - it's a dirty gutter now. Say 15 years ago, you could drive between tree and water - now the tree is in the water [due to bank erosion]. The river is being used as an irrigation channel and a drainage channel for unwanted waste - they both affect the health of the trees... (Interview 3.9).
"It's a life-system..."

The Murray River system supports life, both human and non-human in an otherwise dry landscape. Although uses and values differed between Aboriginal and non-Aboriginal people associated with the forest, the fundamental importance of the river to support life was acknowledged by all groups. What did differ, was the degree of this acknowledgment, and the kind of life that the river was seen to be supporting.

Non-Aboriginal people living close to the forest noted the importance of the river and the amenity it provides for local people. This was often framed within the economic significance of the forest to timber and grazing groups:

[The most important aspect of the forest to me] would have to be the water. Without the water there wouldn't be the forest and we wouldn't have the bird-life, and when we're out there that's where we usually choose to go to - like [we say] 'I'll meet you at the river', or we ride [our horses] around the river. So the river would be the main part that we use and the forest is the means to get there...Without the timber, we wouldn't have the finances to own the land that keeps us here (Interview 2.9).

The importance of the river for the health of the forest was also noted. The river was often described by non-Aboriginal local people as the 'life-blood' of the forest. One local tourist operator whose business relies on the environmental qualities of the river, and whose family has had a long association with river boats, noted the importance of the river for the whole system:

The saddest thing of all is to see the Murray River which should be the life-blood, running through the middle of the forest, in such an unstable condition, up and down like a yo-yo and not knowing which way to go because of Canberra['s] control and upsetting the seasons (Interview 2.7).

An understanding of the river as an important part of life, was expressed very clearly by Yorta Yorta people. Numerous references were made to the river and the forest as vital organs of a human body in both the interviews I conducted and in evidence heard before the Federal Court in the proceedings of the Native Title Claim. The river was described as the "spine", and the Barmah and Moira Lakes and wetlands as the "kidneys" or the "lungs" of the system. This reflected the view of the river as a "life system" for the region and its people:

I think the river's too important, it's too much of a life-system for everyone, and it's slowly getting clogged up. When are we going to stop and realise...the water's not getting put into the forest and the wetlands, and that's the kidneys, the lungs of the system, and that's going to slow it down. Who's going to take responsibility for that? (Interview 1.5).
"You don't get the floods like you used to..."

Changes to the frequency, duration, timing and seasonality of floods in the Murray River and the effect on the Barmah-Millewa Forest have been well documented in scientific literature (see Leslie and Harris 1996; Ward et al 1994; Maunsell 1992; Bren 1990; Murphy 1990; Chesterfield 1986; Dexter et al 1986). Issues of water management have been prominent and contested and have prompted community involvement in the last ten years. As some of the quotes above have already shown, the changes to the flooding regime of the river system have been very noticeable to local people. The following quotes also illustrate this:

[The Murray River's] a perched stream, which means that water runs away from it all the time. Since they put the dams on the streams we don't get the same winter / spring floods that we used to... and with high summer flow we're getting water out into the forest at unseasonable times (Interview 2.4).

Lack of annual watering is probably [the] greatest detriment to the forest. With more and more water control the forest isn't getting enough water and when it does it gets too much... (Interview 2.3).

The value of local knowledge of flow patterns in the Barmah-Millewa Forest has been acknowledged by some government agency representatives. The value of this knowledge is reflected in the inclusion of a chapter on 'watering the Millewa Forests' in a comprehensive text on the Murray River (Mackay and Eastburn 1990). This chapter was written by a local man from experience and knowledge built up over a life-time (see section 8.2.1).

Changes to the flooding regime of the river were often cited as the cause of changes to the forest. Although the causes attributed to these changes are varied, "one frequent denominator that usually heads the list of such causes is the alteration to the natural flooding regime that used to influence the forest" (Ward et al 1994: v). Regulation of the river's flow has resulted in large changes to the forest structure and community composition (Ward et al 1994; see also Leslie 1995; Dexter et al 1986; Chesterfield 1986). Local people have noted how changed flooding regimes have affected both the regeneration and the health of red gum:

[There has been] great change [to the forest with] two or three times as many trees as there used to be, brought about by a few things, but one is the short quick floods we get [now]. In years before, the weir would have long floods that would cover young seedlings and kill them off... (Interview 2.4).

I noticed when I joined the State Forests in 1962 the change of the forest I knew back in the late '40s. [There was] a vast difference [in the forest] from [the] late '40s to [the] early '60s. It was a very dry and stressed forest until [the] early '70s. [I'm] talking about the New South Wales side of the forest. It was the drought effect that had taken place because of structures [which control the flow of water into the forest]. Now since the mid '70s, the face of the forest has completely changed since then. Now [there are] problems because of letting too much water in [to the forest]...[it] highlights the need for management (Interview 2.1).
For many local people, discussions of forest and river changes prompted comments on river regulation and changed forest flooding regimes. As noted above, memories of how the river used to be were common. This was especially so amongst the Yorta Yorta people.

**River bank erosion**

Increased river bank erosion was another change that was frequently mentioned. Many of the sand banks that older generations of both Yorta Yorta and members of the timber and grazing communities recalled fishing from or camping on were gone. Even the younger generations had noticed a significant erosion of the river banks. One young Yorta Yorta man had noticed changes to his favourite swimming spot:

*Where we used to swim, [the river bank] used to go straight up. But now there's three layers and the bank's going back (Interview 1.1a).*

The rise and fall of the river, which is said to happen more frequently and more quickly since river regulation, was seen to be one of the major causes of river bank erosion:

*Rise and fall of rivers softens banks and causes bank erosion, and with high summer flow we're getting water out into the forest at unseasonable times. And because Adelaide's growing and needs more water - there's more water got to be pushed through the river, which is making lots of the creeks running out of the river bigger. Black Engine Creek is getting wider each flood - I remember when it was only as wide as this table, sixty years ago (Interview 2.4).*

River bank erosion was an important issue on the agenda of a recent tour of the Barmah Forest by the Barmah Forest Preservation League (BFPL). Present on this tour were invited members of parliament and government agency representatives. The accompanying document notes that "bank erosion is causing considerable concern" with causes attributed to river regulation, European Carp and power boats (BFPL 1997: 5-6).

River bank erosion was also mentioned in evidence heard before the Federal Court in the Yorta Yorta Native Title Claim. Evidence was heard from Yorta Yorta people whilst on a boat trip along the river. On this trip eroded river banks with bare tree roots were pointed out. The court was told by a Yorta Yorta man:

*...what you see indicates the extent of erosion that has now taken place on the rivers as a result of the, you know, increasing activities on the river, particularly speed boats and that, from bank wash and river erosion (Auscript 20.11.1996: 1858).*

Speed-boating and water-skiing were commonly attributed causes of river bank erosion. Local Yorta Yorta and members of the grazing and logging communities expressed dismay at both the effects of speed boats on the river and the noise that they made. One local grazier noted that "speed-boats [are] also causing bank erosion" (Interview 2.4). They were also seen to be incompatible with passive recreation of the river, such as
fishing and camping, and the status of the river as a "life-system". Yorta Yorta people commented that:

I think there's a lot more power boats than when I was a kid. I believe there can be recreational use, but there shouldn't be any speed-boats, because [the River's] a life-system, we've got plenty of lakes and that [for speed boats] (Interview 1.5).

You know you can't go and relax and fish by the river when speed boats are tearing up and down...I think the forest is a place to go and relax, not to listen to rowdy boats... (Interview 1.7).

Local non-Aboriginal members of the timber and grazing communities also commented on the damage caused by speed boats:

[The] river's been ruined by the opposite to passive recreation. Passive recreation doesn't do any harm, but speed-boats [and] house boats are wrecking the river (Interview 2.3).

Power boats on the river have changed it too. We've got to cater for everybody and changing times. Maybe there ought to be areas zoned for power boats to keep some order so that one type of recreation doesn't upset the other (Interview 2.2).

The interviews I conducted with campers in the forest suggested that speed-boaters and water-skiers on the river in the vicinity of the forest were often visitors, either from larger towns nearby or from the city.

'Snags'

Local people associated with the timber and grazing industries viewed the accumulation of woody debris or 'snags' in the river as a big problem. Since white settlement the channel of the Murray River and other waterways in the system have been periodically de-snagged or dredged to remove logs and obstacles to water flow and to aid navigation of the waterways. However, there has been a change in philosophy in more recent times, and the importance of these logs and debris for fish habitat has been realised (see Cadwallader and Lawrence 1990). Recent research has emphasised the positive contribution of snags to river ecology and has reported that the effect of snags on river flooding was usually small and less than has traditionally been believed (Gippel et al 1998). This view has frustrated local people associated with the timber and grazing industries, who believe that the accumulation of snags in the river raises the river level by restricting channel capacity, therefore contributing to the problem of unseasonable forest flooding (BFPL 1997: 6). Amongst these people the issue of snags frequently prompted discussion of different opinions on management between government agencies and local people. De-snagging was an important management component of the river that they had come to know so well:

We suggested many years ago and I can never get at the bottom of it or find out why, but the number of big trees that have fallen into the river of recent times...All we hear about is habitat...It's a bit disappointing from the river I knew. If that's what [the
department] want then that's alright, but [it's a] bit disappointing for me (Interview 2.5).

A Yorta Yorta man spoke very differently about snags, the removal or realignment of which was seen to create undesirable changes to the river he knew and used:

I s'pose [my friend's] only sixteen and I'm twenty-three, and the changes we've seen, you know you can't get to places we used to like to go to...a hard bank where you used to swim has disappeared, your favourite fishing hole has disappeared because a tree's [snag's] been realigned...I suppose all those things affect you (Interview 1.1b).

This is indicative of the different associations with the forest, which are based on very different experiences of history. Many local non-Aboriginal people still view some historical post-settlement river management practices as common-sense, despite recognising the degradation of the Murray River.

8.3.2 Forest changes

"A lot of the big trees have gone..."

For the Yorta Yorta people, the loss of "the big trees" from the forest was noted as a major change. This was seen to reflect management practices, such as logging, that were detrimental to the "natural form" of the forest:

...A lot of the big trees have gone out of the forest...even the forest is farmed. To me it's not a true forest anymore - I mean it is, it still has the same influence on me (Interview 1.5).

A non-Aboriginal local man who had spent his working life in the forest, including a twelve year stint working for the forestry department, also noted the lack of big trees in the forest:

...Probably the biggest change is the growing lack of big trees, replaced by several smaller ones - [we] haven't got the big timber we used to have. If you look at timber in the sawmill, they're only fence posts compared to what they were... (Interview 2.3).

Leslie (1995) has noted that the forests have been converted from an old-growth to a predominantly regrowth condition by silvicultural treatments and harvesting of sawlogs which have been practised for over 100 years. This has resulted in a red-gum forest which supports more young, actively growing trees of a smaller dimension than at the time of European settlement. However, he notes that despite the impacts of river regulation on forest flooding and tree growth, the overall productive capacity of the forest has probably significantly increased (Leslie 1995).
"Two or three times as many trees..."

Local people associated with the timber and grazing industries noted changes in the density of forest vegetation, notably the river red gum. Leslie has noted that around fifty per cent of the total area of treeless plain mapped in the Algeboia and Porters Plains in 1947 now supports river red gum (1995: 98). One man explained to me that in the 1950s there was approximately one tree to an acre and that each tree could be singled out with a thick pencil line on the 1946 aerial photographs. He explained that there were now some areas that you could not walk through because the vegetation was so thick (FN#1: 91). Comments like these were frequently made and were often framed in terms of forest use. The two comments that follow are illustrative of this:

*I could stand at the Barmah Yards and see the Barmah Lakes and see right over to the One Tree. Today you can get lost just going from the yards out to the One Tree [because the trees are much thicker]. Mustering we used to be able to see each other, now we have to have Walkie Talkies (Interview 2.5).*

*[Now] there are plenty of places you can't ride a horse through. [You] used to be able to gallop right through [the forest]...Due to the fact that [the forest's] got a lot more trees, it's encroaching on areas that used to grow Moira grass (Interview 2.4).*

The change in vegetation density was noticed on the wetlands and plains within the forest, where red gum was encroaching on areas that were once Moira grass plains. A variety of explanations for this process were given, usually emphasising changes to the flooding regimes. Siltation, whether through a natural process, or increased by changes to flooding regimes, and changes to the fire regime were also mentioned as causes:

*[A] big change in the forest is the regeneration [of red-gum], it has been very noticeable in my time. I remember the likes of Bucks Lake [and] Top Lake would be large expanses covered in Moira grass in summer. Now lots of those areas are treed now. [This is] caused by two things; the absence of Aboriginal fires and changes to [the] Murray River flow. The water was more regular and deeper pre-Hume [Dam]. Today it is shallower and more spasmodic. It doesn't scour [the] lakes and they are silting up (Interview 2.2).*

Changes to forest health were also noticed, once again framed by the particular use of the forest. One local man remembered working in the forest, helping his father cut sleepers. He remembered how they would roll the log they were working on into the shade, so they could work out of the heat. About ten years later, when this man returned to work for the State Forests, he noticed a remarkably changed forest. The forest had a much reduced canopy which offered fewer areas of shade and was of poor colour (FN#1: 211). This he attributed to changed flooding regimes.
Wildlife

Both Yorta Yorta and non-Aboriginal local people commented on the decline in wildlife in the forest, particularly in native fish (as already discussed) and bird-life. These changes have been documented in the scientific literature (see Briggs 1990). Changes to the bird-life in the vicinity of the Barmah-Millewa Forest, as indicated through historical documents and the memories of local people, have been documented by Leslie (1995). He reveals the dramatic changes to the diversity and abundance of fauna populations of the Moira Lake to be a relatively recent event, correlating them with the escalation of irrigation developments in the 1960s. He concludes that the regulation of the Murray River has been the most significant agency responsible for the deterioration of the ecology of Moira Lake (Leslie 1995: 100). The deterioration of wildlife was mentioned in interviews with both Yorta Yorta people and non-Aboriginal local people. A tourist operator who makes use of the array of birdlife in advertisements for his business, noted that:

"I'm just old enough to notice quite a habitat change, quite a change in bird-life. When I was a young bloke it used to be swarming with all sorts of birds...but now, mainly due to river regulation by the Murray Darling Basin [Commission]...only a small number of those birds are coming back now (Interview 2.7)."

A local man with links with the timber and grazing communities explained that "...I don't think there are as many birds in the wetlands" (Interview 2.2). A Yorta Yorta woman explained that:

"You don't see the wildlife that we used to see in the forest area - bird life, plant life, it's just all eroded... (Interview 1.2)."

These changes were also mentioned in the evidence given by a Yorta Yorta person before the Federal Court in the proceedings of the Native Title Claim:

"...You can see that there's been quite enormous changes that have taken place in terms of the amount of bird life that exists now compared with back then. You don't see the large flocks of bird life that our ancestors spoke of in terms of swans and these indigenous bird-life and fish (Auscript 26.11.1996: 2220)."

8.3.3 Forest futures

The question of the future of the forest produced some surprising responses. While individuals had different opinions about what they wanted the forest to look like in the future, a common notion of sustainability and inter-generational equity ran through the responses of both the grazing and timber and Yorta Yorta communities. The differences in responses indicated the different ways in which the forest was constructed by these communities, which draw on different interpretations of history and different forms of knowledge to legitimise different forest uses. Although there are fundamental differences
between these constructions of the forest, common notions of sustainability and inter-generational equity provide further evidence of common ground on which to build. The question remains as always, do resource managers have a moral obligation to protect certain resource uses (and constructions of the forest) over others? Can the needs of all groups be negotiated whilst ensuring that groups maintain meaningful associations with the forest?

The Yorta Yorta people described a desire for the forest to be more 'natural', to be back to something of its natural state prior to white settlement in the area:

(In the future I'd like the forest to look] the way it did two hundred and ten years ago - in a natural state...You'd like to see more native animals than what you do cattle or horses, because [now] you see more [cattle and horses] when you drive around (Interview 1.1b).

(In the future, I'd like the forest to look] healthy, a good healthy forest and clean water...The water's got to come back to its natural way... (Interview 1.7).

Members of the grazing and timber communities emphasised the industry aspects of the forest, although these were mixed with recreational use:

[I] primarily look at it as a red-gum forest and if it's managed to produce maximum volume of saw logs, that's the number one criteria. That means managed as red-gum forest and the watering, culling, regeneration and sustainable use of the forest are thought about. The cattle grazing for fire control, that's another thing to think about. The tourism is another aspect to think about - take snags out of the creek for canoeists. The wood cutters...they're organised to make sure they aren't damaging anything. If managed in that way, everything can be slotted in behind that (Interview 2.2).

Using this construction of the forest, timber workers and graziers often emphasised that they'd like to see more money spent in the forest, particularly on silvicultural works to enhance timber production and river management. The same local man with a long family association with both the timber and grazing industries explained what he'd like the forest to look like in the future:

I reckon the Barmah Forest as it is today is pretty good and I just hope that it can look as good as it is today, forever - apart from small management issues (and they are to improve sustainability). I do think there could be more silvicultural work - there could be more thinning out of stands [of red-gum] and use of by-products. [There] could be more culling of trees with no potential to grow into mill-logs...There needs to be constant work on riverbanks to make sure that [we] don't have the forest flooded in summer months when the river's running at high level, so [we] don't have detrimental summer flooding... (Interview 2.2).

This industry view was often combined with environmental and recreational aspects. For example, a local woman associated with the timber and grazing industries explained:

[In twenty years' time I'd like the forest to have] lots of good heads on the trees, good quality timber, lush healthy understorey, unsilted rivers, healthy wetlands full of bird-life and a healthy ecosystem... (Interview 2.9).
One local man who had spent his life working in the forest highlighted the environmental aspects of the forest:

[In twenty years time] I'd like the forest to look like it was fifty years ago, [with a] lot of large trees, timbered sandhills, clear rivers and streams. Probably [also] the return of birdlife which is a bit lacking at the moment in some species of birds (Interview 2.3).

Although it appeared some people had not thought much about what they'd like the forest to look like in the future, it was clearly something that some individuals had given a lot of thought to. One local retired timber worker explained that the future of the forest was something he often thought about:

I'd love to see the forest in 2050 - I've got it sort of in my mind, looking beautiful...Oh, my word, I'm always thinking about it (Interview 2.8).

In contrast, it was noted that government agencies hadn't thought about what they'd like the forest to look like in the future. One local shire councillor expressed concern that there was no vision of what the forest should look like in the future:

One of the biggest problems is governments aren't prepared to put enough money into [the forest]. I'm not really sure they have a clear idea of what they'd like it to look like in 50 - 100 years time (Interview 3.2).

Government agency representatives' ideas of what the forest should look like in the future varied considerably, according to their professional roles and responsibilities and their personal background and experience. Lower level managers were often local to the area and their vision of the forest reflected the importance they placed on industry in the forest as well as recreational and environmental concerns. A local man employed by a government agency explained:

The timber...and the water [are important aspects of the forest]. They're both personal and work...The deterioration of both is a concern to me - some how or other the agencies have to learn to control the summer flooding so that we have a forest in 50 or 100 years time. And I'm concerned that we continue the silviculture works...It's a renewable resource provided it's looked after, maintained. Grazing's an important aspect of it to me, I'm definitely pro-grazing. It's a form of utilisation of a natural resource and provided it's controlled, it's definitely got a place in the management of the forest (Interview 3.9).

[In the future I'd like the forest to look] much the same as it is now, only [I'd like] the areas that are being affected by summer flooding to regain their health, whether that be wetlands or timber. Other than the areas affected by summer flooding...I'd like it to continue as it is for the next 200 years - well indefinite (Interview 3.9).

In contrast, a government agency representative with university training who had not grown up in the area, emphasised the ecological and environmental aspects of the forest:

I wouldn't like to see more dead trees [in the future]. [I'd like to see the] health of the forest improved and restored. [The] visual appearance of forest can be a very poor indicator [of forest health]...What people might look at and say is visually very
attractive, is biologically dead. Parts of [the forest]...still has its visual attractiveness, [the] river still looks attractive - running at bank full in summer looks nice - [but] people don't notice that [the river] banks are eroding, water [is] spilling out and killing trees and [there are] no native fish (Interview 3.5).

Despite the different hopes for the future of the forest, which are based on different constructions of the forest, a notion of sustainability (identified by me, but also directly used by some local people) ran through the comments of the grazing and timber and the Yorta Yorta communities. There was concern that the forest would not be there in the future if management practices didn't change. A key aspect of this concern was that the present generation's children and grandchildren would not get to see or know the same forest. These concerns are based on different interpretations of the past, different ideas of the present and visions of the future. However, a common concern for the future is nevertheless presented. The first two quotes are from Yorta Yorta people. The third quote is from a woman who lives beside the forest and whose family is involved in the grazing industry:

[I feel] very sad in a way [about the changes to the river and the bush], because it doesn't seem to be getting any better. It's getting worse and that means there's not going to be anything left in the future (Interview 1.4).

I suppose [I feel] downhearted [about some of the changes to the forest and the river]. The things I saw when I was a kid growing up, I'd like my kids to see them today. Those kind of things, kids are only ever going to hear about...like the clear water, [seeing] the fish and the crays swimming in the water (Interview 1.3).

If they don't do anything we're going to lose it all...If they don't hurry up and do something our grandchildren at our age now are not going to know what it is (Interview 2.10b).

8.3.4 Comment

This section has identified areas of commonality amongst the Yorta Yorta and grazing and timber communities. In particular observations of change in the Murray River provide potential common ground on which resource management could build. Observations of change in the forest reflect more closely differences amongst local groups, nevertheless observations of change to both the diversity and abundance of fish and native wildlife were common amongst local groups.

Comments relating to the future of the forest further emphasise the different ways in which the forest is constructed, and show very different visions for the future of the forest. However, a common notion of sustainability has been identified, providing further common ground between the grazing, timber and the Yorta Yorta communities.
8.4 Conclusion

This chapter has revealed the different ways in which the Barmah-Millewa Forest is known and experienced. It has shown the differences between the way in which local (including indigenous) and scientific knowledges of the forest are generated, exchanged and used. This information is important for resource management, as it sheds light on the differences and barriers that can exist between local communities and government agencies.

Observations of environmental change have also been described in this chapter. These revealed the way in which different forms of knowledge and the different values and meanings ascribed to the forest can frame the way in which changes in the environment are observed and experienced. In describing and interpreting these observations, this chapter has outlined differences and commonalities, particularly between local grazing and timber communities and the Yorta Yorta community. In particular, commonalities were found to exist in relation to changes to the river environment, and in the shared notion of sustainability and inter-generational equity. These groups draw on different interpretations of history, and present very different ideas for the present and visions of the future. Despite this, some common observations of environmental change and desires for the future have been identified. The evidence I have drawn from the proceedings of the Native Title Claim illustrates the valuable information contained within this source. It also demonstrates the importance of these issues to the local Aboriginal and settler Australian communities.

The following chapter will reconsider the various constructions of the forest to further explicate commonalities and differences in relation to forest management, and to reveal the cultural politics associated with the management of the forest. It will outline the way in which different forms of knowledge and different notions of the environment can be used to legitimise certain activities and management regimes. Chapter ten will consider in more detail implications for the process of resource management, both generally and in the specific case of the Barmah-Millewa Forest.
CHAPTER NINE

THE POLITICS OF PLACE AND NATURAL RESOURCE MANAGEMENT

9.1 Introduction

As a way of further unravelling the politics surrounding the conceptualisation and management of the forest, this chapter explores in more detail the way in which the forest is constructed, in the context of resource management. This reveals that a politics of identity, focused around race, has been and continues to be associated with the struggle over the forest and its meaning. This chapter will also consider the way in which the forest is constructed by both local people and visitors. This adds insight into the tensions that exist between government agencies and local communities surrounding the management of the forest and its resources. The institutional dimensions of the cultural politics which surrounds forest and river management are also discussed. This chapter consolidates and extends the material presented in the preceding chapters. A discussion of the political ramifications of this kind of research and the broader process of resource management concludes the chapter. These issues are considered further in the concluding chapter.

9.2 Constructions of the Forest (Revisited)

This section returns to look more closely at the different ways in which the forest has been constructed as a place. The different forms of knowledge described in chapter eight and the different values and meanings described in chapter six and seven, manifest themselves in very different opinions about the way in which the forest and the river should be managed. This section will explore the way in which different constructions of the forest intersect with opinions on management. As we have seen through the previous chapters, particular forest uses and hence particular regimes of management have become central to the identities of individuals and groups associated with the forest. For example, graziers and timber workers have lobbied for grazing and logging to continue in the forest, and they have employed both scientific and local knowledges to legitimise their claims. Through the course of the Native Title Claim, the Yorta Yorta community have outlined a very different system of management which is based on a different interpretation of history. Scientific knowledge and local indigenous knowledge have also been employed by the Yorta Yorta to support their claims for an alternative management regime.

In particular, it is useful to consider the different ways in which notions of 'nature' and 'environment' have been used to legitimise or oppose particular constructions of the forest. Indeed, the construction and used of notions of 'nature' and 'environment', reveal much about the politics of identity involved in the construction of place and bound up with the
management of the forest and the river. As Lipschutz and Mayer have commented, "the meanings that people, acting collectively, give to Nature around them are critical to their sense of identity and location in the world, even as they are often central to their local modes of production and social reproduction" (1996: 14). What lies at the heart of the definition of the term 'nature' is whether we include ourselves in the definition, and in what kind of relationship (Williams 1980). The uses to which words like environment and nature are put can be instructive of the relationship between people and place (Harvey 1996).

The terms 'nature' and 'environment' have been used in many different ways to refer to many different relationships between people and place (Williams 1980; Duncan 1994; Harvey 1996). For example, the way in which 'nature' has been conceptualised has changed over time and space, the most profound change occurring with the Enlightenment and the transition to capitalism which saw Nature constructed "as external, as primordial, as historically prior to the development of humans and human society" (Fitzsimmons 1989: 108). This conceptualisation separated Nature from culture and viewed indigenous peoples as at one with, and part of a feminised Nature (Jacobs 1996). As a socially constructed concept "we must recognize that externalized, abstracted, Nature-made primordial provides a source of authority to a whole language of domination" (Fitzsimmons 1989: 109). As Harvey explains "words like 'nature' and 'environment' convey a commonality and universality of concern that can all too easily be captured by particularist politics" (1996: 118). Conceptualisations of 'nature' and 'environment' can be used to legitimise certain actions and forms of knowledge over others.

With increasing pressure to manage resources sustainably and the prominence of issues such as Native Title, individuals, groups and institutions involved in resource management have cause to rethink their relationships with land and resources. In this political and cultural climate, notions of 'nature' and 'environment' continue to be constructed and appropriated as a way of legitimising relationships and actions. For example, with the rise of environmentalism and "modernity's quest for an ecologically sound future", indigenous knowledges have increasingly been appropriated as a way of finding new and ecologically sound ways of relating to the natural environment (Jacobs 1996: 137-138). This has been evident in some alliances formed between conservation groups and Aboriginal communities. The appropriation by white people of language and concepts used by Aboriginal people to describe their relationships to land and resources is one way in which white people are seeking to justify their own relationships to place. The use of notions of sustainability by the timber and grazing communities described at the end of chapter eight, is another example of the use of the notion of the environment to legitimise current forest uses.

A further look at the two major local constructions of the Barmah-Millewa Forest which were outlined in chapter seven provides insight into the cultural politics involved in
place construction. The way in which these two constructions of place define and interpret notions of 'nature' and 'environment' illustrates the way in which the politics produced by place crosses into the domain of resource management. Information gained through interviews is supplemented here with material from the public domain, notably evidence given before the Federal Court in the proceedings of the Yorta Yorta Native Title Claim, and a document produced by the Barmah Forest Preservation League to accompany a tour of the forest by invited politicians and management personnel. As public documents, these reveal something of the way in which these groups have chosen to represent themselves and the forest in the public arena.

9.2.1 A 'productive' forest

This section will discuss the way in which timber workers and graziers construct the forest and some of the complexities of these constructions. Some of the findings reported in this section have also been identified in studies by Watson (1990) and Tracey (1995) from interviews with timber workers in Australia. These two studies have therefore helped to frame the following discussion.

Timber workers and graziers are included in this discussion as one group, as there is significant overlap between these groups. This overlap may reflect the bias in the interview sample towards Victoria where it is common for graziers to live close to the forest. It is also common for a family to have connections with both the logging and grazing industries. In addition, these forest uses appeared to have assumed a 'natural' status in the eyes of the majority of the local white community, who viewed logging and grazing as part of the white heritage and history of the area, as well as an important management tool. The two uses were often seen to go together, for example grazing was seen as necessary to reduce fuel loads and minimise the risk of forest fire. Fire was said to scar red gum trees, making them unsuitable for mill logs and logging and silvicultural works were seen to be necessary to maintain a productive and healthy forest.

The way in which both graziers and timber workers constructed the forest as Nature was shaped by their working lives. Graziers made part of their living in the forest and timber workers derived all or part of their income from the forest. The forest was therefore viewed as a productive space which required careful management. The forest was likened to a vegetable patch; managed and controlled:

I believe your forest is like a vegetable patch - when carrots get to size you should harvest it otherwise it would go to seed. [You] need to take small trees out to give others room to grow (Interview 2.4).

The timber's got to be looked after...to produce timber. If it's not looked after it's just going to be a forest of no value I think (Interview 2.6).
Although the value of the forest was seen to be tied to timber production (and cattle grazing), these individuals also expressed a range of non-utilitarian values and a strong sense of attachment to the forest. These have been described in the previous chapters and have grown out of the utilitarian timber and grazing interests that instigated the connection between these people and the forest.

Timber workers' aesthetic appreciation of the forest was also shaped by their work. Timber workers and some graziers spoke of the beauty of tall, solid trees which would make suitable mill logs, and spoke to me of the importance of carrying out silvicultural practices to produce these trees (see also chapter 6.2.5). In Victoria some of the best specimens of these trees and other very old or big trees had been named after retired forest workers, foresters and other notable locals. The significance of some of these trees has been recognised by DNRE and protected from harvesting operations. One local man showed me a tree that he had picked out and named after himself. He had carved the tree's name into its trunk and he told me how he kept an eye on it to make sure it wasn't marked for harvesting. Timber workers recognised that their background influenced the qualities they looked for in trees.

The view of the forest as 'productive' was also evident in the way both timber workers and graziers talked about the threat of having the forest 'locked up' (see also Watson 1990; Tracey 1995). In the early 1980s the Victorian Land Conservation Council recommended that both logging and grazing be phased out of the Barmah State Park. This resulted in the establishment of the Barmah Forest Preservation League (BFPL) in 1982; a group of mainly local people with interests in logging, grazing, recreation and tourism. Current membership stands at approximately 160, with an active committee of 25 (BFPL 1997: 2). This group was successful in lobbying to allow logging and grazing to continue. One local man who had been heavily involved with the establishment of the BFPL explained these events to me:

'Barmah Forest Preservation League was very successful in the early days - very successful in keeping Barmah Forest as a State Forest, not National Park. I was personally involved in writing the amendments to [the] National Park Act. We'd lobbied hard, because there'd been a strong move to have all of the forest to become National Park. We were successful in moving amendment to have cattle grazing and logging continue in the forest. Without the League, we don't know, but have [a] strong feeling that [the forest] would have become a National Park. [It] wouldn't have been Barmah Forest for all - [it] would have been Barmah Forest for the greenies. We were concerned to keep industry and [the forest] as we'd known it as children. We were concerned if locked up as National Park, [we] would lose all those industries - grazing, logging...[We had] concern that we'd get that day when fire would jump river, or [there'd be a] lightning strike or [a] careless camper, and we'd get fire. That was one of our greatest fears. We've continued to be a watchdog for the forest...We never ever wanted to lock it up, we wanted to use it on a sustainable basis... (Interview 2.2).

'Locking-up' the forest was seen to be a threat, not only to the economic livelihoods of local people, but also to the forest itself. By excluding forest uses such as grazing, there was a perceived increased risk of wildfire that could destroy the 'productive' aspect of the
forest. The perceived threat of wildfire was very real for timber workers and graziers, who also often lived close to the forest (especially in Victoria). I was told stories recounting bad fires, and it was recommended that I should go to the areas burned in these fires to see the effect of the fires on red-gum:

*This is what we've been trying to tell them, that when you get a fire like that [Ulupna Fire], all small ground living creatures perish. They tell me, I wasn't there, that birds were dropping out of the sky. If that was to start at Barmah and you had a west wind, you'd lose the whole forest. They shut up this eastern end of the forest once and it was frightening to go there - there was no cattle in it [to keep the undergrowth down] (Interview 2.4).*

There was some evidence of changing attitudes towards the use of fire as a management tool, however, the description of fire as a "threat" and an "enemy" of the forest was common. The information booklet produced by the BFPL for a tour conducted through the Barmah Forest on March 6 1997 demonstrates this view:

The Strathmerton Fire in January 1990 showed just how devastating wildfire can be in a river red gum forest in Northern Victoria. Ulupna Island through to Tocumwal was ravaged, destroying not only the forest, but the wildlife and native flora as well. Similarly the 200 hectare Sandspit fire of December 1967 (ungrazed for the prior 17 years), and the Top Island fire which jumped the Murray River from N.S.W. in November 1982 are all areas of destruction from wildfire in Barmah Forest, and still today clearly demonstrate why it is so very important to seriously endeavour to protect a river red gum forest from wildfire (BFPL 1997: 4).

This view of fire provides a rationale for the continuation of cattle grazing in the forest. Given the challenge to cattle grazing by environmental groups and the Yorta Yorta these arguments continue to be made.

Timber workers viewed themselves and were viewed by graziers and farmers, to be the 'best conservationists'. A local man who had spent his life working in the forest in varying capacities, described himself as "a conservationist at heart". This has also been noted elsewhere amongst timber workers (Watson 1990; Tracey 1995). A local grazier explained:

*When it comes to forest workers, they're like farmers - if they don't look after their areas, they won't have a job. If they knock down timber willy nilly, they won't have a job (Interview 2.4).*

This view stems from the timber workers' and graziers' family history and personal experience of working in the forest (see also Tracey 1995). It also emerged from a particular use of the notion of the environment. It was understood that a young growing forest was better for 'the environment' than an old established forest. The BFPL, of which many local graziers and timber workers were members, expressed this view:

With all the talk today about the Greenhouse Effect and the depletion of the ozone layer, it is worth noting that a healthy growing forest absorbs carbon dioxide from the air, whereas an over mature and dying one acts in reverse (BFPL 1997: 3).
The concept of sustainability was used by advocates of forest grazing and logging to refer to a continuation of these forest uses in a way that would ensure the viability of the industry in the future. As discussed in section 8.3.3, the concept of sustainability was not alien to these timber workers and graziers. They expressed a strong attachment to and detailed knowledge of the forest, and a concern for the health of the forest. Forest health was seen to be important, so that the forest might continue to support the industries that have shaped and given meaning to these workers' lives. In doing so, the forest would also continue to provide important social values and cultural values for the timber and grazing communities.

The acceptability of the concept of sustainability to the environmental movement has given a formal and recognisable title to locally accepted ways of operating in the forest. It has provided the timber and grazing industries with a term that was adopted and proliferated more by governments and the environmental movement. In this way, the concept was used to imply that the logging and grazing industries were not damaging the environment. The first point in the BFPL's Statement of Purposes is "to promote conservation of the Barmah Forest, so that it may yield the greatest sustainable benefit to present generations, while maintaining its potential to meet the needs and aspirations of future generations" (BFPL 1997: 2). In addition, it has aligned itself with the World Conservation Strategy's definition of conservation, being:

The management of human use of the biosphere so that it may yield the greatest sustainable benefit to present generations while maintaining its potential to meet the needs and aspirations of future generations (BFPL 1997: 2).

An important aspect of this 'productive' construction of the forest is the natural status that logging and grazing have assumed. Members of the BFPL "believe that timber production on a sustainable yield basis is essential for the long term future of the entire Barmah Forest" (1997: 3). Both logging and grazing are viewed as important and necessary functions for a productive and healthy forest, activities that the "forest won't survive without" (FN#2: 235). They are viewed as a 'natural' part of the system, and the opinion that they should continue in the forest is regarded as commonsense (see also chapter seven). A local shire councillor whose family had been associated with grazing in the forest explained:

The current management of [the forest] now is basically none. They used to thin a lot and manage for timber production. Now they don't, and you wonder if it will develop into any forest (Interview 3.2).

Scientific and local knowledge have variously been deployed to support the continuation of logging and grazing in the forest. The effects of cattle grazing on the regeneration of river red-gum have been scientifically studied (see Dexter 1978). These studies have reported that under the current system of grazing under agistment in the forest, "grazing of cattle on regeneration areas is not detrimental to seedling establishment" (Dexter 1978; 185). In addition, these studies have found that "extensive grazing of cattle of
regeneration areas keeps weeds that are competing with seedlings for moisture in check, and seedling mortality due to soil drought is much less than on ungrazed areas" (Dexter 1978: 175). The results of these studies have provided support for one of the main arguments of cattle graziers - that cattle do not adversely affect regeneration of red gum and indeed enhance it by keeping the undergrowth down. This also reduces the fire hazard of the forest (FN#1: 295). However, the 'science' of these studies has been contested by some groups. In addition, much attention has been focused on the effects of river regulation and changes to forest flooding on the red gum forests (see Dexter 1978; Dexter et al 1986; Chesterfield 1986).

Overall, it has been noted that "the question of changes induced by logging is a difficult one" (Bren 1990: 234). Although some studies have suggested logging as a factor contributing to the abandonment of tree-nesting waterbird species in the Barmah Forest, it has been suggested that the long-term impact of logging and silvicultural activities on wetland dependent fauna has been insignificant compared to the impacts of river regulation (Leslie 1995). Bren (1990: 234) has commented that "it is conceivable that logging may lead to subtle and unappreciated changes in the forest, but no one has produced evidence of these".

Scientific knowledge such as this is variously used to support claims that cattle grazing and logging should continue in the forest, and to repel challenges by those concerned about the environmental effects of these uses. However, the effects of logging and cattle grazing on the forest are contested by the Yorta Yorta and environmentalists. Some commonly held assumptions, such as the assumption that grazing reduces fire hazard by reducing understorey growth have been challenged. It has been noted that data on this issue are lacking and the effects of historical changes in species composition of flammability, through grazing, are unknown (Frood 1988). Fire management was viewed as an important issue for the forest by one government agency representative who discussed alternative scientific evidence in the international literature that suggested that cattle grazing could increase the risk of fire by changing the structure of the understorey vegetation. Funding could not be found for a research project looking at this issue (FN#2: 7-9). This government agency representative also had links with an environmental group that operated in the region:

*Number one [management issue for the forest] would be water management and closely aligned with water management would be fire management, and it's something that people are too scared to touch, and a distant third would be cattle grazing...I rank those as most important because they are the ones that have most impact for the forest (Interview 3.10).*

*I'd just wish people would take [fire] more seriously...it concerns me that we have to graze for fuel management especially on these smaller reserves on the river... (Interview 3.10).*
Despite these views, most local members of the timber and grazing communities remained convinced of the negative impacts of fire on the productive nature of the forest. Different attitudes towards fire appear to be culturally formed.

This productive view of the forest was characterised by a 'multiple use' philosophy of forest management. Multiple-use management is the process by which various forest uses and values are combined to achieve the "greatest long term social and economic benefits" (Dexter et al 1986). As with any management regime, which uses and values are included in this process and how the greatest long term social and economic benefits are defined is open to interpretation. A multiple-use philosophy is evident in the view of the BFPL where certain uses and values are viewed as more important than others:

The B.F.P.L is totally convinced that multiple use management, with the primary aim of producing maximum volume of saw logs, should continue to be the management policy for the entire Barmah Forest and Parks.

We believe that timber production on a sustainable yield basis is essential for the long term future of the entire Barmah Forest.

The excellent condition of the Barmah Forest today after more than a century of timber production is proof of the forest's ability under careful management to go on producing timber for the long term, and at the same time provide an environmental haven for all other associated occupations and recreations, and the habitat for the wildlife and flora (BFPL 1997: 3).

While industry remains a central feature of the grazing and timber communities' construction of the forest, notions of heritage and global environmental concerns are increasingly important. This section has shown how local and scientific knowledge and a particular construction of the 'environment' have been deployed to legitimise current forest uses. The complexity of an individual timber worker's and grazier's association with the forest is reflected through the following quotation. This member of the BFPL strongly reflects the views of the League, revealing his timber industry background as well as the influence of more global environmental concerns that are beginning to influence local thinking:

[The most important aspect of the forest to me is] just the forest itself, the river red-gum forest. When I think of the forest I think of the red-gum as the main part of it and everything else just fits into that. The Barmah-Millewa Forest is a red-gum forest - it's not [just] a place to graze cattle or a tourist resort - it's a red-gum forest...In the Barmah Forest there's 30 000 ha - 25 000 [ha] is red-gum forest, the rest is wetland and ridges, and whilst is recognised under [the] Ramsar Convention as significant wetlands area, that's just one part of it. I like to think of Barmah Forest as red-gum forest with all these other parts to it. A large part of that is river management. When I think of the Barmah-Millewa Forest I think also of the River Murray. It's not just trees, it's the whole ecosystem. [I] also would have to think of the Millewa Forest to take in the whole picture. I'm not conversant with it though, like I am with Barmah Forest (Interview 2.2).
Yorta Yorta people spoke of the forest not being a "natural" forest anymore in terms of both the forest itself and the flooding regimes that support it. There was a strong desire for changed management practices, to restore the forest to its "natural form" and to retain the values and qualities of the forest that were important to them. Current management regimes were seen to be detrimental to the natural and cultural value of the forest. This was made very clear in the proceedings of the Native Title Claim before the Federal Court of Australia:

...they are the conclusions that we have come to, that under the current sustainable yield policy, the forest is being logged way over that particular policy and it hasn't taken into consideration the many years that it was being logged over the sustainable yield level and hasn't allowed for the forest to retrieve or catch up.

...Well, my individual view is consistent with the position of the Yorta Yorta Clans Group has adopted in its policy document and the right to exclude those activities we believe are having a detrimental effect on the forest and also on the natural and cultural values, is a right that we believe we should have. That includes logging. It includes a whole range of other activities that we believe are detrimental to the values that we are trying to maintain...Preservation of heritage, preservation of those rights of access and use and broader issues such as the need for water at the right time of the year to give those old red gums a good drink that they deserve. General water quality issues themselves in terms of trying to increase the quality of water and other broader issues relating to natural aspect such as the condition of the forest, the interdependent wildlife, bird life, the Lakes itself.

...From the research that we've done and all evidence that we've collected, we've come up with about twelve different significant factors in terms of the impact that cattle are having on the forest...What we say is, the overwhelming evidence suggests that the removal of cattle will greatly benefit indigenous plants, animals and cultural sites by reducing grazing pressure and physical disturbance to the forest. The hoofed animals are incompatible with the conservation principles and the natural and cultural values of the forest...The overwhelming evidence is that cattle are incompatible with the forest and those values which we are trying to preserve, natural and cultural (Auscript 19.11.1996: 1695-1699).

In addition, Yorta Yorta cultural heritage sites such as burial grounds and middens, were often required to be fenced for protection from cattle, horses, and wild pigs. This was seen as necessary but certainly not desirable. A Yorta Yorta man described this to the Federal Court:

...but we still don't believe...that our sites should be fenced off; we're smothered in barbed wire now; we could hardly breathe, there's that much barbed wire around...why can't our sites be just left natural like they were 40 or 50 000 years ago? (Auscript 18.11.1996: 1634).

An important element of Yorta Yorta concerns about the current use and management of the forest relate to environmental considerations. Although the wetlands of the forest are
protected under the Ramsar Convention, this appeared to be having little impact on the way in which the wetland areas were managed:

The Barmah and Moira Lakes are supposed to be protected under the RAMSAR convention which is a UNESCO, United Nations convention that protects and preserve wetlands of international importance, particularly water fowl...in order to protect them under the RAMSAR convention, there needs to be a buffer zone established at the edge of those wetland systems so it allows them to re-generate and to come back to some sort of equilibrium but at the moment, we don't [have] any of these things...Cattle are still allowed to graze down to the edge of the water. We often say we have a Clayton's RAMSAR convention. The convention you have when you're not having a convention because, really, it is contradictory to those sorts of values it aims to preserve and maintain (Auscript 19.11.1996: 1698).

Concerns about the adverse effects of grazing on the forest and associated wetlands have also been noted by some government agency representatives. Ironically the Place Report for the Barmah Forest on the Register of the National Estate Database states that "in recent years natural conservation demands have influenced forest management, grazing has been phased out and protection of natural and cultural values sought" (AHC Undated: 4). Grazing in fact continues in the forest, and remains a contentious issue. The compatibility of grazing and logging in the Barmah State Park, which has as one of its functions to conserve and protect natural ecosystems, has been questioned, particularly given the Ramsar listing of the area. One government agency representative privately noted the incompatibility of grazing and logging with many of the conservation measures of the forest.

The concerns expressed publicly in the proceedings of the Native Title Claim emphasise the connection that Yorta Yorta people see between the environmental or 'natural' values and the cultural values of the forest. These views were also expressed to me privately and in talks given to student groups visiting the forest (FN#1: 59; FN#2: 245-247). In the Australian Radio National Background Briefing current affairs program on May 11 1997, a re-enactment of evidence given before the Federal Court was used to illustrate the way in which land and cultural heritage are interwoven for the Yorta Yorta people (Australian Broadcasting Corporation 1997):

Barrister for the Yorta Yorta: Do you accept that there's a distinction between matters of cultural heritage on the one hand and matters of protection of the land and the environment on the other?

Yorta Yorta respondent: I, no, I don't believe there is - should be - a distinction.

Barrister for the Yorta Yorta: Why do you think there's no distinction?

Yorta Yorta respondent: Because the whole reason for our existence is because of the whole land, and cultural heritage sites are just a physical mark of our existence on the country. But the land itself sustained us.

Barrister for the Yorta Yorta: And do you regard yourself - when I say 'yourself' there, I'm referring to the Yorta Yorta people - as having rights or obligations to the whole land?
Yorta Yorta respondent: *We have obligations as the people from this country. We believe that we were placed here, that we come from this country and we have obligations to look after it and be a part of it; and obligations to - when you see that something's depleting, or things are happening, then to modify your activities and your way of life to be able to meet the needs of that country.*

An important part of this concern is the view that water cannot be isolated from land, especially in this floodplain country. Water management is seen to play a central role in the degradation of this country (FN#2: 245). This is also reflected in the concern the timber and grazing communities and government agency representatives have for water management issues. The level of concern that the Yorta Yorta have expressed over the changes to the river system is reflected in the inclusion of the waters of the Murray River system in the Native Title Claim. Throughout the proceedings of the Claim, the Yorta Yorta have commented on the degradation that has occurred to the river system, and expressed the significance of the river to them. Aboriginal relationships with land have received more attention in the past and have been validated through the recognition of Native Title over land. The Yorta Yorta Claim to water is important in that it asserts an attachment to inland waterways in a white system that views land and water as separate entities. A Yorta Yorta man explained the importance of water to them:

...The importance of water is equally important as land. We don't see no separation of those two aspects, land and water. Because, if you look at the whole claim area, as I said earlier, you'll find it's a huge network of water systems...So, in regard to water, it is equally important as land, in terms of preserving land, preserve water (Auscript 19.11.1996: 1700).

As non-indigenous Australians, we do not have the language to describe the inter-relationship of land and water. Our whole language is land based, and the management of water resources in Australia is based on an understanding of European (English) river systems, which have proved to be very different to those in Australia. Here, creeks and rivers flow intermittently, sometimes underground, sometimes not even reaching the sea. Agricultural land has been fenced off from water courses, and levee banks have been built to keep water separate from land. Regulation has occurred on rivers like the Murray with little or no understanding of the natural system. Water has and continues to be treated as a commodity, as an extractable resource, with management decisions being made on the basis of economics. In this type of management regime, the regulated groups (those with commercial interest in government regulation) will always be involved in the decision making process, while those outside the regulator/regulated relationship (such as indigenous and environmental groups) have traditionally had little access to the decision making process (Comino and Mossop 1994).

The Yorta Yorta claim to waters of the Murray River system can be understood as a response to the past and current system of river management, and more specifically, the past and current view of land and water as separate resources. The notion of *cultural flow* has been introduced in the Native Title Claim, and can be understood as a parallel concept to
environmental flow, which remains contested and presently unworkable in the current system of river management. This concept emphasises the inter-relationship between land and water, and between the environment and culture. The Yorta Yorta claim to water emphasises the need for non-indigenous Australians to find ways of talking about and managing for the inter-relationship between land and water. It also emphasises the need for decision making processes which value and include the interests of groups that are outside of the regulator/regulated relationship.

The public Yorta Yorta construction of the forest (and the river) was focused around restoring the forest to a more 'natural' condition. However, it does not appear that the Yorta Yorta believed that the forest could return to a totally 'natural' condition, or what Jacobs refers to as 'primordial Nature' (1996: 121). The view of the future appears to be for a forest (and river) managed in an alternative way; in a manner that asserts and supports the cultural identity of the Yorta Yorta.

The alliance of black and green issues in Australia and the politics involved with this is not new. In Australia, Aboriginal land rights successes are increasingly being realised through options already established by environmental objectives, especially in non-urban areas (Jacobs 1996). For example, chapter three illustrated this through the case of mining in Kakadu National Park and the handover of Uluru National Park to the traditional Aboriginal owners. As Gelder has noted "Aboriginal claims for sites are inevitably empowered by drawing on the discourses of heritage and conservation" (1991: 16). The focus on the environment has certainly strengthened the Yorta Yorta Claim and has helped them to assert an alternative to the dominant timber and grazing construction of the forest. Alliances such as those between Aboriginal and conservation groups emphasise the complex relationships that are currently involved with the management of natural resources.

9.2.3 Comment

Environmental objectives are increasingly being established and recognised for the Barmah-Millewa Forest. However, it remains very much a 'productive' forest in the eyes of the white timber and grazing communities and in the brief of the government departments responsible for forest management. In many cases science is deployed to help logging and grazing continue, albeit in a more sustainable and environmentally responsible way. There are a number of environmental groups and concerned individuals associated with the forest; however, these interests do not appear to have the lobbying power of either the local timber and grazing communities or the Yorta Yorta through the Native Title Claim. Environmental concerns have found their strongest voice through the Yorta Yorta Native Title Claim. However, the majority of the forest's status as State Forest allows for utilitarian uses such as logging and grazing to continue to dominate management objectives.
The environmental concerns over the current management of the forest and the river put forward by the Yorta Yorta have been perceived by the logging and grazing communities as a threat to their use and enjoyment of the forest. In addition, the Claim to waters of the river system have been perceived as a threat to groups not directly associated with the forest such as the irrigation industry, city and shire councils and recreational groups along the river. Through activities such as logging and grazing many white families have come to identify with the forest; such activities tie these people to the forest and have been the launching point for the ascription of many non-utilitarian values. A previous attempt by the Victorian LCC, to phase out logging and grazing in the Barmah State Park was met with local community protest and lobbying which asserted the white heritage aspects of the forest. The perceived threat of having the forest 'locked-up' by the 'greenies' has been recast, as the perceived threat of having the forest 'locked-up' as Aboriginal land. A racialised politics of place has emerged around the issue of forest management.

9.3 The Cultural Politics of Natural Resource Management

The management of the Barmah-Millewa Forest is tied up with the cultural politics of place and identity construction. The term cultural politics refers to the extent to which the cultural is political (Jackson 1989a), and provides a useful way of considering the contestation over meanings and management in the forest. In the domain of cultural politics, "meanings are negotiated and relations of dominance and subordination are defined and contested" (Jackson 1989a: 2). Three issues are discussed in this section: the politics of place which has been built around race; the construction of the forest as a rural environment; and the institutional dimensions of this politics which surrounds place and natural resource management.

9.3.1 A racialised politics of place

In constructing the Barmah-Millewa Forest as a place, a politics of identity has been produced. This reflects statements such as that of Ching and Creed that "place is rarely, if ever, the sole dimension of identification. Rather, place inflects other dimensions such as race, class, gender, and ethnicity" (Ching and Creed 1997a: 22). Given the politics surrounding the Native Title Claim, a politics of identity, built around race (Jacobs 1996) has been produced in the struggle over the forest and its meaning. The Native Title Claim has concentrated the politics of difference around race and it has emphasised the way in which the politics produced by places can change over time in accordance with political and cultural circumstances. As chapter seven has shown, this is framed by different interpretations of history, which can themselves change to suit changing circumstances.

A key feature of the Yorta Yorta Native Title Claim concerned the management of natural resources. This illustrates how closely resource management reflects and perpetuates certain constructions of the forest and the identities of those associated with it.
White timber workers and graziers expressed concern that if Native Title is granted the Yorta Yorta may choose to log or graze it, without having the knowledge of how to log and graze it sustainably. The Native Title Claim was therefore seen to threaten the economic viability of timber workers and graziers, not just by excluding them from the resource, but by potentially eliminating the resource through unsustainable practices. In talking about this, timber workers and graziers constructed Aboriginal people as potential ecological vandals, whilst implying that they themselves were the 'true conservationists', the ones with the knowledge and experience to manage the forest sustainably. One local man explained to me:

*I think the Department of Natural Resources and Environment certainly should be the managers [of the Barmah Forest]. It certainly should remain in the control of the Victorian Government. I don't have any confidence in the Yorta Yorta people managing it. I'm sure there are some people in it who would...[The] Native Title Claim is money driven. I would be concerned that they would sell it beyond sustainability. I believe [the] Aboriginal part of it should stay in the hands of the Victorian Government, with free access to Aboriginal people which they've always had. I think the '67 referendum made us equal partners. I don't think Aboriginal people have the expertise to properly manage it...[I] don't think they should be managers any more than the sleeper cutters or the tourists. They can use the forest for recreation and cultural activities (Interview 2.2).

A government agency representative who was from the local area, shared a similar perspective, emphasising the perceived management implications of the Native Title Claim:

*One of the big [management issues for the forest] is going to be the result of the Native Title Claim. I'm concerned that if the Yorta Yorta people are successful, have they got the expertise to manage it, or will they lock it up? I firmly believe [the forest's] there for everyone, whether they be white, purple, yellow, brindle, you name it (Interview 3.9).

These quotes illustrate the way in which many local people framed the Native Title Claim; by emphasising that the forest was there for everyone, not just for Aboriginal people and not just for white people. The motto of the BFPL echoes that Barmah forest is "for all, forever", yet the very construction, uses and management regimes they support are vastly different to those proposed by the Yorta Yorta people. Further, the meanings ascribed and the uses carried out by the dominant grazing and timber groups, are seen to run counter to, and in many cases marginalise or degrade the values and meanings ascribed to the forest by the Yorta Yorta.

Alternative explanations for the design of the Dhanyya Centre further explicate the very different meanings that the forest has for these two groups, and the politics of identity that is tied up with the management of the forest. During the Federal Court tour of the Dhanyya Centre a Yorta Yorta person explained the Dhanyya Centre was built to resemble an Aboriginal mound. Alternatively, the BFPL claim the building was designed to resemble as outrigger log barge from the river boat era (BFPL 1997: 6).
Yorta Yorta people and local people associated with the timber and grazing industries have very different ideas about the uses and values that forest management should perpetuate. However, both Yorta Yorta people and local white graziers and timber workers share a notion of sustainability, of the continuation of the place for future generations. Currently, the conflict lies in the differences between the conceptualisations of this place, in the different values and meanings ascribed to this forested space. The Yorta Yorta, in asserting their identity and seeking recognition and social justice, have outlined their own construction of the Barmah-Millewa Forest. Motivated by perceived threats to the meaning and value of their place, members of the local grazing and logging communities have asserted their own construction of the place. Both constructions of the forest have been asserted to allow the continuation of (or to reclaim) the meanings and values that make this forested space their place.

This case has shown that "essentialised constructs of identity and place are open to a range of reinventions, adaptations, invigorations and reappropriations at the hands of both colonisers and colonised" (Jacobs 1996: 161). Indeed, although as chapter seven has shown, these essentialised construction draw from the past, they are "produced in the present in order to negotiate the inequities of power produced in the modern" (Jacobs 1996: 161). The politics of place and identity are constantly changing in Australia as issues of Native Title and reconciliation force us all to (re)consider our relationship to place. This shifting ground offers enormous challenges for the process of natural resource management, which has at its very heart the relationship between people and the environment.

The timing of this research with the Native Title Claim ensured that difference built around race has provided the strongest non-commonality in relation to forest management. In conducting this research it was difficult to gauge whether these issues had been as influential in the past as they are in the present. Certainly, they appear to have been fuelled in the present. Media reports of the visit of One Nation leader Pauline Hanson to Echuca, near the Barmah-Millewa Forest, documented the violence that broke out between police and Yorta Yorta community members (Dixon 1998). Reports of the closing of the Barmah Primary School, at the time of writing this thesis, further illustrate the racial tension within the local community. Thirteen Aboriginal children attend the Barmah Primary School, while most of the town's white primary school children attend school in either Nathalia or Moama, both more than 30 kilometres away (Murdoch 1998). The school has been in operation for 115 years, during which it has been mostly multicultural. The proposed closure of the school has prompted observations of racial tension in the town. A report in The Age quoted a local resident on racial prejudice. She explained that "It's silent. Nobody discusses it openly but it's there. The fact is there is a lot of racial prejudice in this town" (Murdoch 1998: 4). The same article reported that "some residents said racist feelings had been fuelled because of a Native Title claim" (Murdoch 1998: 4). It has been suggested that the school may be shifted across the river to Cummeragunja in NSW.
Despite the racial difference presented to me, the local white community members I interviewed expressed some acceptance of the need to include Aboriginal people in the management of the forest. A local grazier and settler Australian noted that:

*I think there's a need there too, regardless of what you think about Aboriginal land claims, there's a need to include Aboriginal people, to take account of the past. And that wouldn't be hard - it's just pigheadedness that's stopping it, on both sides (Interview 2.10a).*

A local tourist operator explained:

*A lot of people would like to leave the Aborigines out, but let's face it - they're vital. And they've got a lot of history to protect too... They were looking after [the forest] before we stuffed it up... (Interview 2.7).*

Recognition of the importance of history and the degradation of the forest and river environment appeared to prompt these comments.

The outcome of the Native Title Claim - whether a judicial determination handed down by the Federal Court or an agreement negotiated amongst the parties - will determine the trajectory that the management of the Barmah-Millewa Forest will take. It is hoped that this process, and the period of adjustment following a decision, will allow for differences to be acknowledged and commonalities identified, while allowing social justice to be served. It is apparent that all groups would favour the identification of commonalities and differences, while social justice is particularly desired by the Yorta Yorta people.

### 9.3.2 Constructions of rurality

A divide exists between rural and urban Australia. Although the Australian ideology rests heavily on particular constructions of 'the outback' and bush icons such as 'The Man from Snowy River', most of the Australian population lives in cities which hug the Australian coastline. Rick Farley, speaking on *Radio National*, has referred to the Great Divide (as in the Great Dividing Range) as a social divide between rural and urban Australia (Farley 1998). People not living in the cities are constructed as other to the city. Rural Australia and Australians have come to be defined as what the city is not and as what the city and its occupants do not want to be. Hence, to generalise, rural Australia is often constructed as being not politically or culturally progressive, not well informed and educated and not wealthy. However, rural society and 'the bush' are seen by many to nurture positive social and individual traits. This rural/urban distinction is seen to underlie many of the power relations that shape the experiences of people in many different cultures. It generates political and economic conflict as well as social identification (Ching and Creed 1997a). This can be seen in the way local people spoke of the forest, in the tension between government agencies and local communities, and in the tourism aspect of the forest.
Both Yorta Yorta and non-Aboriginal local people constructed the forest in opposition to the city. The experience of visiting the forest was described positively. In contrast, the experience of visiting the city was given negative connotations. The first quote has appeared partially in earlier discussions, and is taken from a local grazier who has also had connections with the timber industry. The second and third quotes are from young Yorta Yorta men:

I don't know what it is really. I really enjoy - I like going out there and driving around looking at the timber. I don't hesitate if someone suggests how about we go out. I s'pose I've been mixed up with it all me life - part of my life I s'pose. Let's put it, I'd rather go out into the forest than go to Melbourne. I feel more at home there than anywhere else (Interview 2.6).

I just like the surroundings and the trees and that. I've lived here most of my life and that, so kind of when I go to the city I fret for [the forest]. I miss the river and that. It's just nice and quiet, not as much smog and that in the air (Interview 1.1a).

I think it's a sense of belonging for me, belonging to our country, the forest, the river, the lakes, the birds, the animals and that...[It's] better than [listening to] a police siren, or a fire bell or a car horn. I lived in Melbourne for about three months and that was enough for me...You just stay stagnant really. I s'pose in the bush there's always something to do around the river, or even in town...[there's] always something new - [like] there's a new bird...there's another canoe tree...It's a big forest. There's always something you didn't know before. In the city or in towns nothing changes. A new building might go up but it looks like the one down the road. Here, they cut a tree down and it's gone forever, and another one's not going to grow like it, because every tree's an individual (Interview 1.1b).

The distance between the city and the country was highlighted in the antagonism that was expressed toward the higher levels of management of the forest and the river which came from offices in cities such as Sydney, Melbourne or Canberra. Decisions were seen to come out of offices in cities, from people with little or no local knowledge and no understanding of the impact of their decisions. These bureaucrats were sometimes described as 'shiny bums', and their lives were seen to be very different to those of local timber workers and graziers; they worked in offices, lived in the city, had often obtained their knowledge through a university degree, and might never even have been to the forest. Some local people reflected the power relationships that occur between the city and the country. Government agencies and their representatives, were seen to be very powerful, and somehow stronger and smarter than country people. One local person associated with the timber and grazing communities commented that:

[Local groups] have been severely impaired by government agencies using their strength to override basic country people... (Interview 2.9).

An important aspect of this may reside with the general feeling of marginalisation amongst primary producers in these small rural communities. Their declining economic status appeared to make them feel vulnerable to changes in government legislation, declining markets, economic restructuring and declining services. They also appeared to feel marginalised by the Native Title Claim.
Visitors to the forest also constructed the forest in opposition to the city. Interviews with campers in the forest over the Easter holiday weekend and the Anzac Day long weekend revealed the attraction of the forest as a place "to get away from it all and get in touch with nature" (VS18). Despite the crowded camp sites and tent after tent lining the river bank during popular holiday times such as Easter, visitors noted the "solitude...where you can be with other people and not have to worry about the city life - the rat-race" (VS14). Camping in the forest beside the Murray River was viewed as "one of the quintessential Australian bush experiences", away from the city (usually Melbourne), but not too far away (Melbourne is less than three hours drive away).Being able to sit around the campfire was viewed as an important part of the camping holiday, and the consumption of alcohol and socialising with friends were often a central part of the experience. The network of tracks in the forest offers many opportunities for secluded camping by the river, or in less secluded and more accessible camping grounds.

For these visitors, the forest was a place where the routines of everyday life could be suspended, where "you don't have to cut the grass or feed the dogs" (VS11). The difference of the forest and the river from normal city life attracted these people. Here they could let their kids get dirty and wear old clothes; here their mobile phones didn't work. The forest was constructed as other to the city. In constructing it as such, the local people for whom the forest was 'home' or workplace were rendered invisible in the landscape. Local people wishing to camp or generally relax in the forest chose times other than the main holiday weekends to do so. In addition, they chose more secluded camp sites further into the forest to keep away from busy main camping grounds which tended to be occupied by visitors from the city. Even in the forest the city/country dichotomy had a spatial manifestation.

Tourism is becoming increasingly important to the local economy and visitors are an increasingly important component of forest management. The need for forest management to cater for visitors was acknowledged by local people. However management decisions and actions that were carried out by government agencies in the name of visitor management were sometimes strongly opposed by local people. For example, a number of very old red gums were cut down by the relevant government agency in the most popular camping ground in the Barmah Forest. Local people were outraged at this decision, which was carried out because of the risk of falling limbs to campers, who could sue the relevant government agency. One local person explained that he always showed visitors these trees, which were thought to be many hundreds of years old. While local people would be very wary of camping under old red gums such as these, visitors from the city often didn't have such local knowledge. Management acts such as these catered for visitors to the forest, usually city people. In doing so they sometimes destroyed valued local features of the forest. The city/country power relationship can be seen to operate in many different ways through the use and management of the forest.
9.3.3 **Institutional dimensions**

The cultural politics surrounding the management of the forest and the river is reflected in the institutional arrangements governing resource management. Interview responses from graziers and timber workers and the Yorta Yorta community emphasised the political aspect of managing resources. They emphasised the role resource management institutions themselves play in the cultural politics of resource management. They also illustrated the different relationship that the local timber/grazing communities and the Yorta Yorta community have with the government agencies responsible for resource management.

The cultural politics surrounding the management of the forest has been most evident in the local calls for participation in resource management, which was a key theme raised by participants in this research. Amongst the white timber and grazing communities there appeared to be a mistrust of government agencies, related to the city/country divide that exists in many areas in Australia. Different forms of knowledge, for example local knowledge (country) and scientific knowledge (city) play a large part in the construction of this divide. This has been discussed in chapter eight and above. Superimposed on this mistrust there appears to be some affinity between the resource management institutions and the white timber and grazing communities. The resource management institutions are based on European concepts of the Australian environment, Western management regimes and have a predominantly white employee base. Grazing and timber groups have built up a strong regulator/regulated relationship with these institutions and have developed significant lobbying power. They place their trust in the existing system to recognise and protect their interests. One local grazier explained the mediating role that he believes the state government agency should play in managing resources and the politics that surrounds them:

*I believe that [the forest] should be in the hands of the Department [of Natural Resources and Environment] - this is where we get into cross-purposes and it shouldn't be left to the individual - I [might] want to grow timber and you [might] want trees for possums etc. If you have a governing body, they should be able to reach some agreement (Interview 2.4).*

This quote illustrates the belief that the system will protect the interests of graziers (and timber workers). This same grazier explained the political aspects of managing resources:

*Of course there's a few groups [who] don't want cattle and logging in the forest...It would reduce your income, mean [you] couldn't carry as much stock. It all comes down to how big the group is against you and how many votes the politicians get (Interview 2.4).*

Timber workers and graziers have had to lobby previously to protect their forest uses - and they have won. It appears that they mobilised significant lobbying power when the LCC recommended that logging and grazing be phased out of the Barmah State Park.
Although these groups called for increased participation, there appeared to be the belief within these groups that the system would protect their interests. The call for plurality of involvement (increased community participation) within the present system is not perceived as a threat to these groups because they have a significant amount of local power. In addition, calls for plurality of participation enhances the legitimacy of processes that serve their own interests.

In the context of the Native Title Claim, this may be understood as a race issue. The state governments of Victoria and NSW have appeared before the Federal Court as parties against the Native Title Claim. These resource management institutions have been formally opposed to the claim of the Yorta Yorta people, who they ironically view as important participants in local resource management groups. Although the Yorta Yorta expressed a desire to enter into a regional agreement regarding water management issues, the MDBC have refused to enter into an negotiate with them prior to the outcome of the Native Title Claim.

Environmental management of inland rivers has been noted to be an area of intense conflict (Comino and Mossop 1994). The issue of river management was seen to be more complex than forest management by graziers and timber workers. The interests of the timber/grazing communities are more marginalised in relation to river management than forest management as they compete with large and powerful irrigation groups. The complexity and politics surrounding river management lead these local groups look to the MDBC to act as a mediator and manager. This same local grazer and many others like him, acknowledged that the river could not be managed by state government departments, and emphasised the role of the MDBC in mediating between the states of Victoria and NSW:

*I believe the river, instead of having [a] New South Wales group and a Victorian group, should be managed by the MDBC, and [they should] tell Victoria and New South Wales their plan to manage the river. It's one of the things that would eliminate all of that squabbling between states (Interview 2.4).*

Other local people emphasised this position:

*The* river's not being well managed - *they* never seem to find a happy medium. *The* river's up and down, causing problems with the river bank. Sudden rises and falls cause problems - trees fall in...*The* MDBC is supposed to have control over it now. Their instructions [are] supposed to go to [NSW] water resources. *The* MDBC should be doing it [managing the river], but at the moment [they're] not doing it properly. *There are* too many of these toothless committees along the river - *it's* got to be controlled by one strong body, they've got to assume complete control and do it properly. *They're* bowing to too much pressure from state agencies (Interview 2.3).

These quotes illustrate the misconception amongst many local people that the MDBC has the power to control the management of the Murray River. The MDBC manages water on behalf of the states in accordance with the Murray Darling Basin Agreement. For changes to be made to this agreement, which outlines the equitable sharing of waters
between the states, the consent of the land and water ministers of the states of NSW, Victoria and South Australia is required. In effect, the MDBC has 'no teeth'. One local shire employee recognised this problem:

_I think the river's stuffed up if you want my opinion. I believe there's only one way to manage the river and that's to have one central Federal Government body managing the river and the streams running into it - to control the quality of water running into it. The way it is now, three states look at each other and says 'are you doing it'? We're using our rivers as drains rather than streams. The Murray Darling Basin Commission - they've got no teeth. I feel sorry for poor old Adelaide that cops the results. [The] way we're doing it now, we're draining our rural lands into the river, pouring our sewerage into the river (Interview 3.1)._  

This issue was further reflected upon by an employee of the MDBC:

_When we were the River Murray Commission we used to be called "the toothless tiger"...When we were reconstituted into the MDBC they increased our responsibility geographically, but were careful to keep us toothless...the Constitution was always a constraint [and so the ownership of water still rests with the States]...we never owned any water and that was by design too (Interview 3.11)._  

The MDBC does not have the authority to over-ride the interests of the states. The belief that they do provides problems for the image of the MDBC, causing a community backlash against them as resource managers.

The Yorta Yorta people have had limited involvement with processes of participation and systemic marginalisation from resource management and broader governmental processes has been expressed. This is evident in the history presented in chapter five (in particular section 5.3.4; see Goodall 1996), is reflected in the literature on Aboriginal involvement in resource management (see for example Smyth 1993; Altman et al 1993), and has been evident in interview quotes from Yorta Yorta people presented in chapter eight. Although this might be contested locally, it is supported by literature and history, and as a perception held by Yorta Yorta people, must be acknowledged and addressed through resource management processes. The Native Title Claim to both land and water emphasises Yorta Yorta people's desire to be involved in and to influence decision making processes. In the interviews I conducted, participation in resource management was emphasised by Yorta Yorta people as the only way to bring about change. Government agencies were seen to have the power and the money to manage the forest and the river. A Yorta Yorta woman explained to me the need to make their voices heard in order to bring about change:

_If we sit there and still complain and complain and make our concerns heard, we might bring about change. They're [the government agencies] getting the money to do it so they better be doing something (Interview 1.2)._  

_I think to, if they're not happy with what they see, to complain and take notice of it and make their voices heard. Because that's the only way we can get things done... (Interview 1.2)._
The issue of race was seen to play a part in the management of resources, and the difficulty Yorta Yorta people had making their voices heard and in being recognised was discussed. Resource management institutions were seen to be heavily influenced by white interest groups. The same Yorta Yorta woman explained to me her frustration:

Well, the forest and the river just need protecting from too much abuse of it. The waterways as I said, are the lungs of the place...This is the problem at the moment; the river is more salt than plain water. A lot of them [irrigators] we've found out have been taking out more water than they're entitled to. They've got to be made accountable...They [white people] think Aboriginal people have no intelligence, that we'll waste the money we get... (Interview 1.2).

...[In] lots of ways, we're very sad about the condition of [the forest], and when you drive through it, it's not how you remember it as a child...We've tried...to go onto committees and put up ideas and people see you as obstreperous or whatever, rather than as trying to help (Interview 1.2).

In contrast to the timber and grazing communities, the Yorta Yorta emphasised the need for increased participation in order to bring about change to the status quo. They were lobbying for a change to the management regime and the institutional structure, in order that their interests may be heard and recognised. Yorta Yorta involvement in current management processes was limited by their focus on the Native Title Claim as a mechanism to bring about change. Their dilemma lay in whether to continue with the small processes, that up until now had largely failed to recognise their needs, or to concentrate their attention and energy on the Native Title Claim, which could potentially bring about change to the local balance of power. There were also legal implications of their participation during the Native Title Claim, and difficulties given that many of the other community representatives and the government agencies are formal parties against the Claim. We might well ask: institutions of governance for whom?

The main mechanism through which participation on the key issue of water management is being achieved is the Barmah-Millewa Annual Forum. This includes local community representatives (including two representatives from the Yorta Yorta community), state government agency representatives, and is convened by the MDB (although this has been outsourced to a consultancy firm). This group was frequently espoused by members of the logging/timber communities as the type of group that was required for increased community participation and the inclusion of local knowledge into forest and river management. However, the tensions between local community groups and government agency representatives were mentioned frequently, and in many cases appeared to threaten a breakdown in communication. This was evident in the discussion in chapter eight. Although the type of group appears to be promising, there appears to be a need for even greater levels and perhaps different types of community participation. There also appears to be the need for a group which considers a broader range of management issues. Most importantly a change in the power relationships that currently structure resource
management in the area is required if resource management decisions are to be sustainable into the future.

This discussion illustrates the cultural politics that surrounds the management of the Barmah-Millewa Forest, where issues of race and rurality among others, influence management processes and outcomes. It has highlighted that although the principle of participation is good, in practice it is very difficult to achieve. Relationships of power are defined and meanings and identities are contested in the domain of natural resource management. This emphasises the need for a dialogue which embraces the political (and cultural) aspects of managing resource and considers constructions of place within the context of natural resource management. This will be further discussed in chapter ten.

9.3.4 Comment

This thesis has not been written as a way of furthering one group's claims to place, identity and forest management over others. Rather it has sought to unmask the complex cultural politics that surrounds the management of natural resources in a settler nation like Australia which moves ever so tenuously towards postcolonialism. In doing so, it acknowledges that particular white constructions of the forest continue to dominate forest management, whilst Aboriginal constructions of the forest have been marginalised since white occupation (see chapter 7.3 and this chapter). Institutions can be understood as products of their historical setting and thus can be expected to reflect past understandings and imperatives, rather than current challenges or expectations (Goodin 1996). For example, there are not well established avenues for issues of indigenous rights to resources to be considered in relation to the management of natural resources in the Barmah-Millewa Forest. The institutions of management in the area are geared more towards the inclusion of white interest groups, such as the timber/grazing communities, which often fall into the regulator/regulated relationship with government agencies. These groups are assured of at least some participation in decision making, whilst other groups such as Aboriginal groups like the Yorta Yorta remain outside of these decision making systems. This is a legacy of the way in which white settlement and development has taken place in the area. It is also the case that these relatively new non-market aspects of the environment, such as cultural heritage and indigenous rights to resources, are not yet clearly outlined in the institutional landscape. Resources still tend to be managed by sector, such as forests, water and agriculture, which do not readily accommodate these non-market values.

In order to inform the process of resource management and broader debates regarding attachments to place in Australia this thesis has explored both the marginalised and the dominant constructions of the forest. Indeed it has focused on the cultural politics that exists between these two groups regarding the use, management and meanings of the
Barmah-Millewa Forest. Such information is vital for participatory resource management to address the needs and desires of local communities into the future.

9.4 Conclusion

Different forms of knowledge and particular notions of the environment are deployed to legitimise or oppose certain constructions of the forest. This chapter has revisited the major constructions of the Barmah-Millewa Forest and has revealed the way in which constructions of the forest are tied up with a politics of identity. Given the Native Title Claim to the area, the politics of identity surrounding the management of the forest has been built around race. Meanings ascribed to the forest have been defined and contested through the Native Title Claim. The importance that resource management has assumed in the proceedings of the Native Title Claim illustrates that meanings are continually being defined, contested and negotiated through the process of resource management.

The racialised politics of identity which surrounds the management of the forest, and the construction of the forest as a rural environment in opposition to the city, have shown that problems of race and rurality are challenging institutions of management. The current resource management institutions appear to be unable to include the multiplicity of meanings ascribed to the forest in resource management practice, or to address issues of power; they have been defined by past understandings and imperatives, and are therefore not well equipped to deal with current challenges such as those posed by Native Title. The cultural politics which surrounds the management of natural resources suggests that a dialogue on place will need to be incorporated into the management of the Barmah-Millewa Forest and its resources. This may help to facilitate a change in power relationships, which is needed if sustainable resource management decisions are to be made. The following chapter will explore the notion of a local dialogue on place.

This chapter has illustrated the relevance of a cultural geography perspective (which recognises the constructedness of place) in interpreting and contextualising different forms of knowledge and the various observations and opinions that characterise the process of resource management. The following chapter will conclude this thesis by considering the implications of this research for the theory and practice of resource management and cultural geography.
CHAPTER TEN

CONCLUSIONS

10.1 Synthesis

The central concern of this thesis has been to apply a cultural geography perspective to the process of natural resource management. It has been argued that this is important given the diversity of interests that currently characterise natural resource management and the complexity of relationships with place in settler nations like Australia. Resource management can no longer be purely concerned with the adequate and continuing supply of resources to meet market demands. Issues of the environment, cultural heritage, indigenous rights to land and resources and Aboriginal self-determination and reconciliation (among others) currently influence demands on resources and their management.

The existing and potential contributions of place theory to resource management have been examined through a review of both the theory (chapter two) and practice of place (chapter three). In reviewing the different ways in which place has been conceptualised, I have emphasised the need to understand that places are both socially constructed and emotionally felt (chapter two). This illustrates that places are known and experienced intimately, while acknowledging that these experiences are structured by political and cultural contexts. In particular this research has focused on literature emphasising the construction of place in the current political climate of Aboriginal land rights, Native Title and reconciliation in Australia. This literature highlights the difficulties associated with talking about and actually constructing place. This is particularly so in a settler nation like Australia where Aboriginal and non-Aboriginal Australians are struggling to find 'progressive' ways of constructing place in a political environment which forces individuals and groups to strategically fix their identities in place (Jackson and Jacobs 1996).

Experiences in other settler societies such as the United States, New Zealand and South Africa show that Australia is not alone in struggling with issues of land, history and place (see various chapters in Griffiths and Robin 1997). The relationship between theory and practice has been demonstrated through a review of existing applications of place theory to the specific context of natural resource and cultural heritage management (see chapter 2.3). This discussion has illustrated that such applied research is still in an early stage. It has highlighted the substantive issues currently facing cultural and natural resource management and further explicated the value and relevance of the approach adopted in this thesis.

Chapter three has provided a review of some notable and not so notable cases of conflict over natural resource management in Australia. It has found that contested
meanings and values underlie resource-related conflicts. It has been argued in this chapter that although always implicit, too little attention has been given to the different meanings ascribed to particular places in the context of resource management. In this chapter it was also argued that the management of resources has become increasingly complex as the relationship between natural and cultural resources have been rethought. Notions of heritage have infiltrated debate and indigenous interests in land and resources have gained standing in debates over the environment. Notions of authenticity and belonging have become important themes in debates over place and natural resource management.

The research methodology employed to study place construction as it relates to the management of the Barmah-Millewa Forest has drawn on both interpretive and constructivist approaches to human geography (chapter four). The methodology recognises that there are multiple constructions of the social world, and that some constructions of 'reality' have come to be seen as more fundamental or 'natural' than others. Such an approach emphasises the political dimensions of the relationship between culture and society, and indeed, between people and the environment. These political dimensions have imposed various opportunities and limitations on this research which have been considered in chapter four. The qualitative research techniques employed in this research have also been outlined, including the choice of the Barmah-Millewa Forest as a case study, and my role as researcher. Supplementary research questions were introduced at the end of chapter four to operationalise the primary research questions in the specific context of the Barmah-Millewa Forest. They have guided data collection and analysis.

A complex physical, social and institutional environment has influenced past and current relationships with the Barmah-Millewa Forest (chapter five). The management of the forest is complicated by a complex physical environment which has evolved on the periodic flooding of the Murray River. Dramatic changes have occurred to the natural system since white settlement, notably through the regulation of the river and the introduction of logging and cattle grazing. White settlement also caused dramatic changes to the social environment, and the Aboriginal association with the forest and the river. Despite this, local Aboriginal people have maintained a close association with the forest and have made many attempts to claim land and compensation. The most recent is a Native Title Claim currently awaiting a decision in the Federal Court. The outcome of this Claim will be important for future relationships in the forest. This complex physical and social environment is influenced by a plethora of government agencies, non-government organisations and policies and conventions which govern the management of the cultural and natural resources of the forest and the river. The institutional setting is illustrated in figure 5.3.

As a way of describing the range of values ascribed to the forest, a classification of values is applied in chapter six. This illustrates the range of associations with the forest,
while demonstrating the application of this approach to natural resource management. It is noted that the categorisation of values does not adequately illustrate the complexity of associations with the forest. A series of characterisations of association with the forest have been developed and situated on a heuristic diagram to further illustrate the complexity of individuals' involvement with the forest.

Rather than just describing the values assigned to the forest, it is necessary to contextualise these within the professional and personal roles, responsibilities and experiences of the individuals and interest groups. It is also necessary to consider the broader political and cultural contexts influencing relationships with, and management of the forest (chapter seven). An approach developed by Boyd and Cotter (1996) and Boyd et al (1996) was adopted to describe the 'cognitive ownership' of the various groups associated with the forest. The description of three constructions of the forest and the groups associated with them, which have emerged as the most prominent and (potentially) influential in terms of forest management, has further explicated the political and cultural context in which the forest is known and experienced. These groups are the Yorta Yorta community, the timber and grazing communities and the resource management agencies. These constructions revealed competing forest meanings and different interpretations of history. The role of interpretations of history has been considered in more detail in this chapter through the context of the Native Title Claim. Key issues concerning how we talk about place and our relationship to it have emerged from the interviews I conducted and from the Native Title Claim transcripts. These have been discussed in light of the place literature reviewed in chapter two.

Throughout this thesis I have emphasised the dilemma which cultural geographers and resource managers currently face; how do we talk about difference in relation to resource management in a constructive way, and how can this difference be usefully incorporated into the process of resource management? This will be explored further through the notion of a local dialogue on place in section 10.5. As a first principle, this thesis has argued that it is important to identify and acknowledge difference. This thesis has identified and acknowledged differences between local community groups. I have explored the different forms of knowledge that structure the way the forest is known and experienced (chapter eight). Differences between the way in which scientific, local and indigenous knowledges are generated, exchanged and used have highlighted tensions between the Yorta Yorta community, the timber and grazing communities and government agency representatives. The discussion of perceptions of environmental change have revealed the way in which different forms of knowledge and different uses of the forest influence observations of change. However, this discussion has also highlighted commonalities in relation to observed environmental changes and concern for the health of the river in particular. A consideration of the different forest futures that were raised in interviews also revealed a strong commonality in relation to a sustainability ethic; albeit based on very
different forest uses and meanings. The identification of commonalities between diverse local groups offers ground on which resource management can build.

The cultural politics of natural resource management is identified in chapter nine. I have argued that particular forest uses and regimes of management have become central to the identities of individuals and groups associated with the forest. By reconsidering the constructions of the forest proposed in chapter seven, I have illustrated that particular forms of knowledge and notions of 'nature' and 'environment' have been appropriated to legitimise or oppose particular constructions of the forest and the identities of the groups associated with them. Through the Yorta Yorta Native Title Claim, identities of particular groups have been fixed in place. A politics of place has been built around race. This politics of identity continues to be produced in the struggle over the forest and its meaning. In addition, the construction of the forest as a rural environment, in opposition to the city, influences the meanings ascribed to it and the way in which it is managed. The institutional dimensions of these have been discussed, revealing the role government agencies can play in enhancing or marginalising particular meanings ascribed to the forest. The power relationships that exist in relation to forest management have been revealed, leading us to question for whom the resource management institutions exist. I have argued that the future successful management of the forest depends on restructuring these power relations. The outcome of the Native Title Claim, the rethinking of participatory processes, and further research of this kind may facilitate this.

10.2 Aim and Research Questions (Revisited)

The broad aim of this research has been to explore constructions of place and the way in which they may relate to the process of natural resource management. A number of questions have guided research under this broad aim. The primary research questions (presented in chapter one) were informed by substantive issues concerning cultural geography and natural resource management. Supplementary questions (which made these general research questions operational in the context of the Barmah-Millewa Forest) were added in chapter four. Each of the main research questions will be addressed individually in this section, to illustrate the contribution of this research. I will also indicate how the supplementary research questions have been addressed. The list of primary and supplementary questions has been kept broad to guide the research process. I have focused on the questions which the case of the Barmah-Millewa Forest sheds light, and the questions that are only partially answered highlight areas requiring further research.

Review

1. Does place theory have any current or potential contribution to make to the process of natural resource management?
The literature reviewed in chapter two has demonstrated that place theory has a significant contribution to make to resource management, but this contribution is in its infancy. This has been demonstrated in two ways. First, the review of theoretical literature on place and recent academic dialogue in Australia has highlighted particular features of the conceptualisation of place of relevance for resource management. For example, earlier literature on place acknowledges that places are often intimately known and emotionally felt. More recent literature emphasises the social construction of place, and in doing so acknowledges the multiplicity and dynamic nature of meanings ascribed to places. The literature also highlights that individuals and groups construct their identity in and through place. Further, recent literature from Australia indicates that in the context of Aboriginal land rights, the construction of individual and group identity is frequently also about place (Jacobs 1996).

Second, many of the aspects of place emphasised in this review of the theoretical literature have been recognised as aspects influencing the process of natural and cultural resource management (see chapter 2.3). In particular this research highlights the emotional responses people have to places, the multiplicity of meanings ascribed to places, and the challenge of identifying and incorporating these into the management process.

The research which specifically applies place theory to the process of natural and cultural resource management is embryonic. It has been applied to the context of resource planning and management in the United States and is being developed in the context of cultural heritage management in Australia. There are few precedents for the application of place theory to the specific context of natural resource management in Australia. In this respect, the thesis as a whole can be read as a partial response to this research question. There remains however, much further research to be done.

2. What role have aspects of place played in conflicts over natural resource management in Australia?

Cases of conflict over natural resources in Australia have been reviewed in chapter three to ascertain where and when aspects of place have been considered, and to further explore the relevance of the notion of place to resource management. The cases reviewed emphasise the multiplicity of meanings and values ascribed to places and the role these have played in resource-related conflicts. These cases also demonstrate the political aspect of managing resources, the importance of notions of belonging and authenticity, and the problems derived from the separation of natural and cultural resources. Importantly, the review of these cases illustrates that although always implicit, aspects of place have received too little attention. The multiplicity of meanings and values underlying resource conflict have often been noted, but they have rarely been explored in detail. This study of the Barmah-Millewa Forest has sought to address this gap. It has highlighted the different (often unacknowledged) aspects of resource-related conflicts, including the politics surrounding
the construction of individual and group identities, relationships of power, notions of heritage and indigenous rights to land and resources. It has allowed difference to be acknowledged and commonalities to be identified, as a possible path towards the resolution of conflict. The application of place theory to other cases of conflict over the environment might provide greater insights into resource-related conflicts in Australia.

3. How useful are current approaches which seek to include meanings and values into the process of natural resource management?

This research has explored three broad approaches which provide a way of describing and interpreting the meanings ascribed to the environment. These are the identification and classification of values, the description of cognitive ownership, and the interpretation of various place constructions. This section will briefly review the application of these approaches.

The identification of the range of values ascribed to the environment and individual resources has become a common approach in resource and cultural heritage management. The use of the term value in the management literature has been considered in chapter three (section 3.2), and the significance of different attributed values to resource-related conflicts has been displayed through the cases considered in the same chapter. A value classification has been developed and used to facilitate the description of the values ascribed to the Barmah-Millewa Forest in chapter six. This classification facilitated the description of the range of values ascribed to the forest, however it did not fully illustrate the complexity and overlap that exists between the different categories of values. Six characterisations of associations with the forest and an heuristic diagram helped to further explicate the complexity and multiple-layering of the values ascribed to the forest by any one individual or group. The discussion in chapter six was illustrated with quotes from interviews and the characterisations of association are based on field data, however it would be possible to identify the basic values with minimal field work. The risk of such an approach is that the full range of values may not be identified, and their connectivity not sufficiently explored.

The description of 'cognitive ownership' (Boyd and Cotter 1996; Boyd et al 1996) in relation to the Barmah-Millewa Forest allowed the variety of interest groups to be identified and described their claims of association with, and interest in, the forest (chapter 7.2). This approach places the emphasis on the groups associated with the place, rather than focusing on the inherent qualities or attributes of the place as the value approach does (Boyd et al 1996). It recognises the range of associations with a site/place/resource and the different contexts in which it is viewed. With a focus on the people associated with a place, this approach may allow for the dynamic nature of the meanings and values ascribed to place to be recognised. This is important from a longer term policy and management perspective. The description of cognitive ownership requires more extended observation and
involvement in the setting than the value approach, and it is essential that the whole range of interest groups are identified and the context in which they view the place described.

Social construction theory informs (explicitly and implicitly) much recent research on the notion of place (see chapter two). In particular it enables us to reconsider the categories used to structure our understanding and experiences of the world. I have found the interpretations of constructions of place to be a useful approach in the context of natural resource management. It has facilitated an understanding of the relationships between the different values and meanings ascribed to places/resources, different forms of knowledge, different forest uses and opinions of management. Most importantly it situates these within the broader historical, political and cultural context. Relationships between different constructions of place also highlight the relationships of power that emerge as meanings are negotiated and contested. This has been demonstrated through the description of different constructions of the Barmah-Millewa Forest in chapter 7.3 which underpins the subsequent discussions of relationships with and management of the forest (in chapters eight and nine). Although extremely insightful, this requires a significant understanding of the setting which can be very time consuming; for example a total of 62 interviews (most interviews lasting between 1 and 2 hours) were conducted with local people and government agency representatives, 177 visitors were interviewed (most interviews lasting between 10 and 20 minutes), and a total of 118 days were spent in the field conducting interviews and observation. Interviews can take a considerable amount of time to set up, the researcher being required to fit in with the time constraints of research participants and local events. However, this kind of approach is necessary to gain an understanding of the cultural politics which surrounds and often constrains resource management.

The application and review of these three approaches has provided a methodological contribution, as has the application and review of the range of research techniques which will be discussed in section 10.4.2.

Application

4. How do constructions of place differ amongst local communities, and between local communities and the institutions responsible for the management of natural resources?

Five supplementary research questions (posed at the end of chapter four) helped guide the collection, analysis and presentation of information to answer this question. The interested parties associated with the Barmah-Millewa Forest (question 4a) were identified and their claim of association with the forest described in chapter 7.2. The organisations and institutions involved in the management of the forest (question 4b) were outlined in chapter 5.4 (and in figure 5.2). The meanings and values these groups ascribe to the forest (question 4c) were discussed in chapter six and further explored in chapter seven. The way
in which these groups construct the forest as a place (question 4d) was explored in chapter 7.3 and then reconsidered in chapter 9.2. The extent to which these different constructions of the forest are given expression in the public arena (question 4e) has been illustrated through the evidence presented from the Native Title Claim proceedings, the analysis of a public document written by the Barmah Forest Preservation League, and discussions in chapters eight and nine regarding the participation of local people in the management of the forest and the river. This will also be considered further in section 10.5.

In the case of the Barmah-Millewa Forest constructions of place differ markedly amongst the local Aboriginal community and the white timber and grazing communities. They are characterised by different interpretations of history (chapter 7.3 and 7.4), different forms of knowledge (chapter 8.2), different forest uses and opinions on resource management and different appropriations of the concepts of 'environment' and 'nature' (chapter 9.2). They have also had different experiences of the institutions governing the management of the forest and the river (chapter 9.3.3). The institutions responsible for the management of the forest and the river have different professional and personal roles and responsibilities to those of the local communities (chapter 7.3). In general, their construction of the forest is based on scientific and managerial knowledge as opposed to the local and indigenous knowledge contained within local communities (chapter 8.2). Ultimately, their construction of the forest is defined by their professional roles and responsibilities which may be more closely aligned with one community group than another. For example, the current managerial construction of the forest still appears to be built around historical European uses of the forest (such as logging and grazing) with other concerns (such as the environment and cultural heritage) slotted in around these. The relationships between local communities' and government agencies' constructions of the forest will change over time and space.

5. How do different constructions of place relate to different resource uses, differing opinions on resource management, and different forms of knowledge?

The way in which different groups know and experience the Barmah-Millewa Forest and how these differ (question 5a), has been explored throughout chapters six, seven, eight and nine. Different opinions on the management of the forest (question 5b) have been outlined in chapter eight and also chapter nine.

This research has shown that different forms of knowledge underlie different constructions of the forest. The three constructions of the forest described in chapter seven, are equated with three distinct (although not mutually exclusive) ways of knowing the forest (local, indigenous and scientific knowledge). A further discussion of these constructions in chapter nine reveals the way in which knowledge is deployed to legitimise certain constructions of the forest. In addition, the discussion in chapters 7.3 and 9.2 reveals the way in which different resource uses and management regimes have become a central
component of the identity of the Yorta Yorta community and the timber and grazing communities and their particular constructions of the forest.

6. **What capacity do resource management institutions have to include multiple constructions of place in the process of natural resource management?**

This research has identified the major institutions involved in the management of the Barmah-Millewa Forest (chapter 5.4) and has highlighted current community concerns regarding participation in resource management (chapters 8.2.4 and 9.3.3). The knowledge valued by the resource management agencies concerned with the Barmah-Millewa Forest (question 6a) has been outlined in chapter 8.2. The mechanisms by which local knowledge can be conveyed and discussed (question 6b) and the fora for the discussion of different representations of place (question 6c) have been considered in discussions of participation in resource management (see chapters eight, nine), and will be further considered in section 10.5. This research has found that there is currently no existing forum in which the multiple meanings and values ascribed to the forest are being discussed. While the existing Barmah-Millewa Annual Forum may provide a potential avenue for such a dialogue on place, the existing power relationships amongst and between community groups and government agencies will need to change for this to occur. Further, more detailed research would be required to assess the capacity of existing resource management institutions to address these issues, and to identify the institutional requirements for increased community participation and an ongoing dialogue on place. I will consider these in a speculative manner in section 10.5.

**Implication**

7. **Can this style of research contribute to the theory and practice of cultural geography and natural resource management?**

The style of research employed here provides insights into the cultural and political context in which resource management currently operates in Australia. It emphasises the cultural aspects of natural resources, allowing for a more integrated approach to management. Further, it offers possibilities for eliciting and including multiple meanings and values into the process of resource management. It also offers an approach which may identify commonalities on which resource management can build.

This style of research offers an approach through which theory can be linked with substantive issues and vice versa. This provides opportunities for theory testing and building based on observation, ensuring that theory is relevant to substantive issues and that substantive issues are informed by theory.
10.3 Limitations

The Yorta Yorta Native Title Claim has provided opportunities and imposed limitations on this research. In particular it has meant that I have conducted this research in a highly politicised environment. It imposed constraints on the availability and willingness of people to be interviewed and the issues they were prepared to discuss. The sensitivity of issues discussed in interviews was heightened and interviews were not taped for this reason. Witnesses in the Native Title Claim could not be interviewed before they had been cross-examined, and the time and energy taken up by the Claim combined with political and legal considerations to make the local communities, particularly the Yorta Yorta people, very wary of researchers. It was not possible for me to attend all of the Native Title Claim hearings as the court sat on approximately 100 days in Melbourne, northern Victoria and southern NSW. Transcripts from the hearings were only available to me in the Federal Court chambers in Melbourne. In addition, the timing of the Native Title Claim, with a decision still to be handed down, has meant that no closure on the issue has been achieved in this thesis, leaving the future management of the forest and relationships with it uncertain.

The timing of this research to coincide with the Claim is likely to have influenced the research findings. For example, as the research progressed it became difficult (in terms of time and the availability of information) to look at the whole range of interest groups. Thus, I have focused on the grazing/timber communities, the Yorta Yorta community and government agency representatives. These were the groups which emerged as the most engaged with local management issues and currently or potentially the most locally influential. Had my research been a couple of years earlier or later, different groups and issues may have emerged. Other groups and perspectives have been somewhat obscured by the Native Title process, and differences within the white grazing/timber communities and the Yorta Yorta community have been suppressed because of the polarisation of issues.

It was necessary for my research to be distanced from the Claim itself in order to gain interviews, so the Native Title Claim has been treated as one (important) aspect of the current situation surrounding the management of the Barmah-Millewa Forest. However, as the research has progressed the Native Title Claim has proven to be very instructive of the role of place in the process of natural resource management, even if for reasons explained above, the level of detail and analysis of the Claim itself is limited.

During the writing of this thesis, I encountered the problem of representation, which is currently being tackled by scholars across the social sciences. My representation of the identities and place constructions of individuals and groups associated with the forest differ from the way in which they would represent themselves. Although I have sought to represent their relationship with the forest accurately, this has been influenced by my own
interpretations. My own subjectivity and the theory and concepts I draw on have influenced the representations that appear in this thesis. For example it is not likely that timber workers and graziers would describe their relationship with the forest in terms of a racialised politics of place.

This research has examined both the Barmah (Victoria) and the Millewa (NSW) Forests. Interviews have been conducted with individuals from both sides of the river, however the snowball sampling technique has created a bias in the sample towards Victoria. The individuals I have described as belonging to the timber/grazing communities were mostly from Victoria, where graziers often have farms adjoining the forest and where families often have associations with both the timber and grazing industries. Further research would be required to determine differences between the Victorian and NSW population. In addition, the snowball sampling technique produced mostly men over fifty years of age for interview in the timber/grazing communities. This was a significant finding in itself, indicating the type of knowledge valued and the people considered most qualified to speak about the forest. All of the state government agency representatives interviewed were male and under fifty years of age, while men comprised two-thirds of the semi-structured interviews conducted with Yorta Yorta people. Further research explicitly eliciting the perspectives of women would be valuable to explore commonalities and differences within the local communities.

Working across a diversity of groups proved to be very difficult given the racial tension within the local community. This required a significant amount of sensitivity, and the ability to handle a range of situations regarding opinions on contentious issues such as Native Title, the environment and the government. Research such as this is very time and energy intensive. Conducting in-depth interviews requires fitting in with the lives of individuals and displaying sensitivity towards their particular circumstances. In rural communities people are generally involved in a number of committees or organisations other researchers may also add to the pressure on people's time, especially when the issue or location is particularly topical (as in the Barmah-Millewa Forest). Although there was a degree of saturation of interest in outside research projects amongst the local communities, I was able to gain access to local communities which other researchers were denied (in particular the Yorta Yorta community). Although the approach I adopted was time consuming and restricted the total number of interviews I could conduct (and hence the amount of data collected), this approach proved to be integral to the success of the research given the politicised context in which I was working.
10.4 Implications for Research

10.4.1 Theory

This thesis has demonstrated that theory is useful, but that it needs to be empirically applied if it is to shed light on substantive issues such as Native Title and Aboriginal land rights, as well as resource management. This and other Australian research has demonstrated that both indigenous and non-indigenous Australians are being forced to rethink their relationships to place in light of issues of Native Title and resource management. However, it remains unclear how local communities can achieve the 'progressive sense of place' advocated by Massey (1993a), while the political climate makes it necessary for groups to strategically fix their identities in place (Jackson and Jacobs 1996). In this context it is necessary that empirical research linking theory and practice continues. Theory-building and testing through observation will be critical if we are to develop more informed and enlightened ways of thinking and talking about place and more effective systems of resource management. Alternatively, research such as this needs to feed back into theory, to ensure that theory remains informed and relevant to substantive issues.

Chapters two and three have shown that place theory has not yet had much to say about natural resource management. Given that individuals and groups assign values and meanings to resources, as components of place, it appears timely to apply place theory to the context of resource management. Aspects of place have been implicit in much analysis of conflict over the Australian environment (as chapter three has shown). This research has demonstrated that the use of place theory to analyse such cases, can provide significant and timely insights into resource conflicts in Australia.

10.4.2 Methods and practice

A number of different research techniques have been tried in this research as a way of identifying those which are useful for this style of research. Some of these techniques have been successful, some less so. A critical review of these is useful to determine the potential future application of these techniques. As noted in chapter four, discussion and drawing exercise with 11 and 12 year old school children was trialed as a source of information. This provided some information about forest use and insight into the way in which these young people viewed the forest. However, drawings are difficult to interpret in a meaningful way and although the drawings characterised some of the different relationships with the forest, they did not prove to be all that instructive given the resource management focus of the research. This research technique would be very useful in a community-building project which would benefit greatly from the input of children. It was less useful in a project focused on the political and cultural context of resource management.
A 'mapping' exercise was also trialed with adult interview participants. They were asked to draw a 'bird's eye view' of the forest or a 'map', including in the drawing places of importance to them. This did help to elicit stories about particular places in the forest, however people were frequently concerned that they couldn't draw well enough and were wary of the process. There was an added problem of analysis of the drawings, but most importantly, once the Native Title Claim hearings began, the task became politicised as the notion of a 'map' carried connotations of boundaries. This task might be more appropriate in less politicised environments and possibly in groups, rather than in a one-to-one situation.

Visits to the forest with interview participants proved highly instructive. They were only conducted on five occasions as they were time-consuming and were often difficult to organise. Taping these interviews would be a great benefit as it is impossible to take notes of all the information that this technique elicits. This technique would be very beneficial for this kind of research.

Short structured interviews were carried out with campers in the forest during Easter and Anzac Day holiday weekends. Given that these were short structured interviews, it was possible to conduct a large number of interviews (54 separate interviews with 177 people over three days). Although this technique didn't elicit detailed information, it proved useful for its purpose of gauging the range of different people and the reasons they chose to visit the forest.

The unstructured and semi-structured interview techniques employed for the local white communities, government agency representatives, and the Yorta Yorta community proved most successful. The unstructured approach (with minimal note-taking) in the first instance seemed important, particularly given the politicised environment I was working in. The semi-structured interviews were an efficient way of collecting information as they focused the interview on particular points of interest, while still allowing flexibility. Some interview participants appeared to favour this semi-structured approach; some participants felt they didn't have anything much to tell me about the forest, and felt safe knowing I had specific questions to ask them. In a less politicised environment, focus groups may have proved very instructive. Such groups could be used in the future as a community-building exercise, as they offer the potential to facilitate discussion and negotiation amongst stakeholders. They do, however, entail significant levels of responsibility and skill and should not be entered into lightly and certainly not until levels of contestation have diminished.

These methods and other approaches for identifying multiple meanings and values and describing the broader cultural and political context have been developed and applied in this thesis and elsewhere (see values, cognitive context and place construction discussion above). Despite the patchy utility of the different methods employed, it would be wise for
future research of this kind to use, or at least seriously consider using multiple methodologies. Different research techniques will be more or less useful in different contexts. The use of single research methods or techniques may constrain findings and lose the 'multiple lens' value of taking more than one approach.

The challenge for researchers and practitioners now is to further refine, through application in different contexts, approaches and techniques such as I have reviewed and trialed here. The issue of how multiple meanings can be included into the resource management process without sacrificing one in favour of another poses a significant challenge for natural resource management.

10.5 Challenges for Natural Resource Management

This research has presented a picture of the complexity involved with the management of the Barmah-Millewa Forest and its resources. It has made the case that talking about place is useful and important for natural resource management. It was shown that the application of place theory to natural resource management is embryonic (chapter two) and that aspects of place have been latent in analyses of resource conflicts in Australia (chapter three). Through the study of the cultural politics that surrounds the management of the Barmah-Millewa Forest, this thesis has shown the validity of applying place theory to natural resource management.

The immediate challenge for natural resource management is to listen to the findings of qualitative studies such as this. It is important that natural resource management takes the time to allow studies like this to occur, recognising that there are no 'quick fixes' for the current complexities surrounding the management of resources. This thesis has outlined the tension between cultural and natural values and the largely economic paradigm in which resource management decisions are made. The inclusion of studies such as this one into the resource management process will heighten this tension; the implication is that resource management needs to expand its ambit to include cultural, environmental and political concerns alongside those of resource allocation, management and economics. Indeed, such a need is stated in much recent policy, albeit only generally and not in any operational way. This suggests that more studies of this kind are needed to provide information on the cultural and political context in which resource management operates; it currently operates in these contexts without fully understanding them. If resource management is seriously committed to community participation it must take the time to understand the factors which influence these processes.

The way in which these issues might translate into management processes or institutional arrangements requires further investigation. However, the case of the Barmah-Millewa Forest has illustrated that the terrain of stakeholders and the values and meanings they ascribe need to be included in the management process. Further it suggests the need
for a local institutionalised and continuing dialogue on place that builds understanding and relationships amongst interest groups, enabling problems to be avoided or negotiated as they arise.

10.5.1 A local dialogue on place: Some necessary conditions

The need for a local dialogue on place has arisen from the findings of this research. Such a dialogue, as shall be outlined in this section and applied to resource management both generally and in the specific context of the Barmah-Millewa Forest, might offer a way of building trust and understanding amongst diverse stakeholders. As a possibility emerging from this study's finding, this is dealt with in a speculative manner, to identify basic elements of a future direction.

Many researchers have identified and discussed the need for dialogue, and various notions of what this might be and at what scale it might operate have been outlined. For example Habermas' (1990) notion of communicative action, Giddens' (1994) dialogic democracy, and Dryzek's (1990) discursive democracy all stress the importance of communication to enhance mutual understanding. These terms are all outlined in a general sense, at the global, nation-state or personal level, but rarely at other levels in between. At a more localised level Rayner (1997) emphasises the importance of conversation in achieving a truly democratic society. Similarly, Cox (1995) stresses the importance of communication and processes which sustain debate and difference as a way to achieve "a truly civil society". These general assumptions, however, do not translate easily into local natural resource management contexts. I have identified the need for an ongoing localised dialogue on place as a way to engage with the broader political and cultural issues surrounding the management of natural resources.

The overall aim of this process might be: to build mutual understanding in an inclusive and iterative way, rather than in a confrontational or crisis-driven fashion. This aim is somewhat akin to what is generally understood as 'reconciliation' in Australia; however, it refers to more than just black-white relationships (although these may often be central to it), and it seeks to ground the notion of reconciliation in local events, processes and contexts. It is possible to ascertain some general features that this kind of process might require. These 'necessary conditions' have emerged from the experience of this study, and from the work of Rayner (1997), Dovers and Mobbs (1997), Goodin (1996), Cox (1995), Giddens (1994), Dryzek (1990) and Habermas (1990). The necessary conditions of a local dialogue on place are that it:

- is inclusive, public and visible;
- is uncensored, informed and responsible;
- is robust, flexible and persistent;
- builds trust and mutual tolerance;
• sustains difference and debate;
• is located and tractable to a 'community' (with the relationship between people and place evident in existing management concerns, not defined by a researcher), and
• in doing all of this, addresses issues of power.

The latter point about power has received less attention in the literature in relation to this notion of dialogue. However, it will be fundamental to achieving successful dialogue on place; serious attention to the other necessary conditions outlined above (which, as we shall see, are often very different to the features of current processes), may go a long way towards redressing existing power differentials within this process and possibly also beyond. If power remains unaddressed, then the existing marginalisations - be they of indigenous people, youth, women, small landholders, or whoever - will affect access to the dialogue, and entrench existing inequities.

These are general features that would need to be shaped according to the particular context of a given place. The following sections will explore this notion both in a general sense and through the specific context of the Barmah-Millewa Forest. This offers both an outline of one way in which resource management might progress amidst the challenges identified in this thesis, and highlights potentially rich areas of future research.

10.5.2 Applying a dialogue on place

An open and inclusive dialogue on place could facilitate the negotiation of resource management and the resolution of conflict. If begun in the absence of politicised conflict, a local dialogue on place may allow such conflict to be better handled if it does arise, as some of the groundwork and trust-building will already have begun. Most importantly, open and effective avenues of communication will have been identified and developed. This raises the question of whether people will get involved without first reaching a crisis point. The experience of Roberts and Sainty in an oral history project on the Lachlan River suggests that it might be possible to encourage participation without a crisis situation (Roberts and Sainty 1996; 1997).

Although this thesis has been more concerned with contributing to broader debates on place and resource management than it has been concerned with generalising to other cases, it is possible that the notion of a local institutionalised place dialogue could be applied to places other than the Barmah-Millewa Forest. The practicalities of doing so would be complicated by different biophysical and cultural histories, different issues operating at different scales, different cultural and interest groups and different institutional configurations. The question of what institutional arrangements would be necessary to achieve this place dialogue is difficult to answer. Casting an eye across the tried and existing institutional arrangements in the Murray-Darling Basin (within which the Barmah-Millewa Forest is located), is a useful exercise. Some innovative institutional arrangements
have been tried and established in the Murray-Darling Basin; indeed the Murray-Darling Basin arrangements overall can be viewed as a bold institutional experiment (Powell 1993).

Based on river basin boundaries, the Murray-Darling Basin Ministerial Council (MDBMC) receives advice from a Community Advisory Committee (CAC) on natural resource management issues and the views of the Basin's communities. The CAC is made up of an independent chairperson, 21 representatives chosen on a catchment basis, and representatives of four special-interest organisations (Crabb 1997). Although effective at the scale of the whole basin and on key management issues, this group is confined to an advisory role and dialogue is necessarily management rather than place focused. More localised community groups predated the catchment management committees which feed into the CAC. These were known as Communities of Common Concern (CCC) and were formed by local groups around particular management concerns. While these groups may have offered a potential avenue through which a dialogue on place could be established, they have ceased to exist because of the difficulties that were experienced having these groups - which varied in size and focus across the basin - represented at the river-basin level. The catchment management committees are seen to be more successful, as they offer a more formalised and uniform structure across the basin (MDBC pers comm 1998). Paradoxically however, there is concern over whether or not catchment management groups are truly representative of the broader communities and the question of whether catchments are a useable scale requires further exploration. It has been noted that biophysical features do not strongly determine local senses of community, despite the biophysical definition of catchment management committees (Baker 1997). Landcare groups, which operate at a 'district' rather than a catchment scale, have been found to emerge from existing social groups (Brown 1995; Carr 1994; Baker 1997), although it seems that similarity of land use systems and management issues will be important to maintain group interest and cohesion.

These experiences highlight the problems of creating new institutions, of creating structures that allow true representativeness and sustain difference and diversity, and of establishing a meaningful dialogue around place at non-local scales.

Attempts have been made to set up a more place-based program linking the cultural, historical and biophysical aspects of the basin through a program entitled "Reading the Land". After much planning and a workshop bringing together a panel of experts (see Eastburn and Milligan 1998), the program appears to have been disbanded. In addition, an education program entitled "Special Forever", operated for a number of years across the Murray-Darling Basin. It encouraged students to think about and express their personal views, values and attachment to their 'special places', as part of the MDBC's communications program (MDBC 1995). It remains unclear whether or not this program remains, given recent restructuring. Economic pressures and a climate of managerialism appear to be working against the creation of structures and projects that are sensitive to the more local and non-material issues raised in this thesis. The management conflict over Lake Victoria...
outlined in chapter 3.8 has resulted in new groups and processes being established and the MDBC has been hopeful that these new processes might break new ground in natural resource management. They have noted that the new processes have allowed Aboriginal and other stakeholders to build common ground and understanding (MDBC 1998). Again, however, these groups and processes have been crisis driven and have been focused on very specific resource management problems.

The trials and implementation of these processes in the Murray-Darling Basin highlight the need for an institutionalised (ie reasonably persistent), local dialogue on place. The way in which we might go forward with such an idea will be explored through the context of the Barmah-Millewa Forest.

10.5.3 A dialogue in the Barmah-Millewa Forest?

The case of the Barmah-Millewa Forest offers further insight into the way in which a local dialogue on place could be achieved. Importantly, a local place dialogue would require a radical change for the role of resource managers. It would require them to move their current role from scientists and managers implementing rational science, to mediators and facilitators of a dialogue on place. Such a possibility raises the question of the role of resource management agencies in the management process. In the case of the Barmah-Millewa Forest, resource management agencies have been found to be a constructor of place, often appearing as a stakeholder alongside local community groups, valuing particular forms of knowledge and favouring particular management practices. A role as facilitator and mediator would require a change in the relationship between state government agencies and local communities. Rather than regulating local community groups according to their own constructions of the place, this would require resource management agencies to facilitate local communities to establish an ongoing dialogue through which constructions of place and suitable management regimes could be negotiated. Resource management agencies would assume a data collection, monitoring and management role sensitive to the constructions of place and management regimes negotiated through the local dialogue (at the very least, cognisance of issues raised in this research might force a more explicit recognition of the constructedness of 'official' or 'scientific' positions held by management agencies).

Such a radical proposition raises a number of questions. For example, how will broader community interests be represented in this process? What are the relationships between the process of resource management, government agencies and the governments that fund them? How do we balance broader long term interests with local community interests? How do we ensure in this process some sort of equal stake for everyone? These are long term questions that natural resource management will need to address.
This thesis has identified the groups that should be involved in a dialogue on place in the Barmah-Millewa Forest. As noted above, the form that such a dialogue would take poses a serious challenge. Casting back to the institutional map (figure 5.3, located after chapter five), it is possible to explore whether any of the existing groups or institutions would be suitable. As already noted, the river basin scale has not proved appropriate for the discussion or resolution of localised problems and, in the case of a place dialogue, the river basin scale would be too general to engage with particular place issues. Any group or process operating at the state level would exclude one half of the forest and work against current attempts to move towards a more integrated management regime (which effectively means enhanced communication between the state resource management agencies). Local groups are all interest specific and not inclusive; many of them appear to be defined just as much by what they are not, as by what they are (that is, they are advancing their own constructions and interests or seeking to defend them from the interests of others). The Barmah-Millewa Annual Forum, which includes representatives of local and regional interest groups and local government and state resource management agencies appears to be the most appropriate of existing institutions, although it has a number of limitations: it is driven by particular management issues (notably water management); its structure and style does not appear to conform with the necessary requirements listed above, eg it is not a public forum (membership is clearly defined and limited); participants have expressed concern over the legitimacy given to the opinions they express; and dialogue appears to be dominated by those who are well organised, articulate and confident. These limitations would seriously compromise the ability of the Annual Forum to operationalise a dialogue on place without reform.

The findings of this thesis suggest that a shift in power relationships amongst community groups and between community groups and resource management agencies is needed if management outcomes for the forest are to be negotiated and rendered sustainable into the future. Unless such a shift occurs, the established order of resource management will remain, and contestation is likely to continue in some form or another. Such a change in power relationships will be needed to establish and to maintain a continuing local dialogue on place; such a dialogue may offer a way forward amidst complexity and contestation. The outcome of the Native Title Claim (whether a judicial determination or a negotiated outcome) will be crucial to the successful future management of the Barmah-Millewa Forest. It will also determine whether or not a shift in power relations will occur; whether or not the Yorta Yorta will be empowered through the granting of Native Title to have greater input into management decisions for both the forest and the river; and whether other groups will be satisfied that their perspective and construction of place has been legitimately heard.

One of the issues of concern raised by this research is the stakeholder hierarchy employed by resource management organisations in community consultation programs.
Consultancies prepared for the RAC Coastal Zone Inquiry have shown that much more needs to be done to adequately address indigenous concerns, including the resolution of traditional ownership claims over land and resources, and the development of appropriate consultative and co-management arrangements (Smyth 1993) (see chapter 3.6). The Yorta Yorta Native Title Claim and indigenous attitudes to the current management process in the Barmah-Millewa Forest illustrate the need for natural resource management to address the uneven power relations that exist in relation to forest management and employ more effective participatory processes.

This research has shown that consultation with indigenous communities involves some of the same, as well as many different issues to consultation with local white communities. The dialogue on place outlined above may offer an avenue through which to address the historical disadvantage and claims to prior and over-riding traditional rights (Goodall 1996) of indigenous people. More than this, it might offer a way to identify commonalities and acknowledge differences in relation to place, identity and natural resource management. The commonalities identified in this thesis provide a starting point from which an ongoing dialogue on place could be built. Such a dialogue could provide a radical departure from the current processes which appear to emphasise difference and make decisions without understanding the political and cultural context in which they are operating.

In the short term it may be possible that a dialogue on place is best achieved through the implementation of a particular project, rather than by creating yet another institution, local or broader. Certainly, a person proposing a place dialogue as I am here, may not be taken very seriously by resource managers or by busy local community members. However, this research has shown that both Aboriginal and non-Aboriginal communities are expressing a desire to have their own relationships with place and the meanings and values they ascribe to place acknowledged and legitimated. In the Barmah-Millewa Forest, an oral history program may offer a useful point from which to begin to build a dialogue on place. Such a project could document and bring together indigenous, local and scientific knowledge of the forest and river. Results from this research and from the work of Roberts and Sainty (1996; 1997) have illustrated that environmental change yields great interest and concern amongst local communities. Further this thesis has shown the potential value of such an approach; it has identified commonalities as well as differences in relation to perceptions of environmental change.

An oral history project could focus on different aspects of relationships with the forest, such as observations of environmental change, life histories and significant sites and, from this basis, visions for the future. It would offer a way of bringing communities together, and into the resource management process. Members of local communities could receive some training to carry out these projects for their own community group. Such a project would record and collate local knowledge, ensuring that this information is not lost.
to future generations, and that it is accessible to the local community, to managers, scientists, historians and the like. It would offer a way of linking understandings of each other with an understanding of the processes by which we have arrived at this point. It would also bridge the gap that this research has identified as existing between local and scientific knowledge, and across different forms and sources of these; it would help to build 'active trust' (Giddens 1994) between resource managers and local communities, while building a valuable environmental, historical, cultural and management database. Above all, it may help to foster an understanding of the different constructions of the forest, while identifying common ground.

Resource management institutions could play a significant role in sponsoring and/or enabling place dialogue through an oral history project. Funding, administrative support and publications assistance would all be valuable contributions to such a project. In the absence of any other appropriate carrier, the local media could play an essential role in documenting the dialogue (depending on the editorial attitude, this could be either a positive or a negative contribution). New skills will also be required for a such project to be successful; historians, particularly those specialising in oral history techniques and environmental historians will need to be co-opted into the project.

All of this emphasises the need for different kinds of community participation in resource management. Community participation is frequently understood as a singular policy instrument, overlooking the diversity of forms it can and should take (Dovers 1998). In the Barmah-Millewa Forest the type of participation defined and implemented for making water management decisions, like the Annual Forum, will not necessarily be applicable to the dialogue on place suggested here. Representative approaches such as the Annual Forum do not always capture the complexity and are not always truly equitable. The challenge for resource managers is to continue to engage with local communities to implement equitable and effective participatory processes. This will require significant understanding of the cultural and political context in which resource management occurs; the relationships of dominance and subordination that exist between community groups; and a rethinking of the adversarial role of resource management agencies.

The general features of a local dialogue on place, as outlined here, may be applicable to other places. In the Barmah-Millewa Forest any notion of place dialogue is shaped by the very locatable and definable nature of the place (the forest), and by the distinct claims of association with the place. Interest groups and opinions have been clearly defined and publicly heard, particularly given the context of the Native Title Claim. The different biophysical and social contexts of other areas will ensure that the application of the approach outlined here, will necessarily be different. Nevertheless, the necessary conditions for dialogue on place, and speculation on the way in which such a process might proceed in the Barmah-Millewa Forest, may prove useful or insightful for other places.
10.6 Negotiating Place: A way forward...

I have demonstrated the value of applying a cultural geography perspective to natural resource management by showing the cultural politics that currently surrounds and potentially impedes the management of natural resources. I have illustrated that the recognition of the range of meanings and values ascribed to resources and places, and an understanding of the way in which places are experienced and known, is a necessary first step for the inclusion of these meanings into the resource management process. Such an approach will help to inform the way in which resource management institutions can better accommodate the diversity of interests being expressed in relation to resource management. It may offer a way of addressing some of the pressing issues currently facing resource managers and cultural geographers alike. These include issues relating to indigenous rights to land and resources, Aboriginal reconciliation and Native Title, and the related dilemma of how we conceptualise our relationships to place in a settler nation like Australia.

The approach demonstrated and advocated in this thesis will require a mutual compromise from both cultural geographers and natural resource managers. The discussion above has outlined a new role for resource management agencies, emphasising that they must be willing to listen to, and foster new research into the cultural and political contexts of resource management. At the same time, cultural geographers must recognise that managers have statutory obligations which require decisions to be made regarding the management of places (and resources). Theory must be grounded in empirical research to further both theoretical developments and our understanding of the contexts affecting the management of natural resources.

This thesis has gone some way towards conceptualising a mutual agenda for cultural geography and natural resource management. It has revealed through the case of the Barmah-Millewa Forest the multiple contested meanings and relationships of power that can surround the management of natural resources. Cultural geographers have an important role to play in eliciting an understanding of the cultural and political context in which resource management operates. Similarly, natural resource managers must be ready to listen to and implement the findings of such research. An applied and critical cultural geography has much to offer substantive resource management issues in Australia.
REFERENCES


DCNR (Department of Conservation and Natural Resources, Victoria). 1994. Written communication to the Secretary, Barmah Forest Preservation League (September 14).

De Lacy, T. 1994. The Uluru/Kakadu model - Anangu Tjukurrpa. 50,000 years of Aboriginal law and land management changing the concept of national parks in Australia. Society and Natural Resources 7: 479-498.


# APPENDIX A

## FIELDWORK ITINERARY

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APPENDIX B

INTERVIEW GUIDES

This appendix contains the interview guides used in the second stage of semi-structured interviews with local Yorta Yorta people, local non-Aboriginal people (dominated by the timber and grazing communities) and government agency representatives. The semi-structured interview guides were adapted as appropriate to suit the situation and circumstances of the interview and the interviewee. The questions were not necessarily asked in the order they appear in, the wording was modified and other questions were added as appropriate. The interview guide used for structured interviews with visitors to the forest is also included. It was used as it appears.

1. Semi-structured Interview Guide (Yorta Yorta People)

• What does this place (the forest) mean to you?

Do you spend much time in the Barmah-Millewa Forest?
When did you start going out into the forest?
Do you think about the Barmah and the Millewa Forest or just one of them?

• Have you ever been away from this area (your country)?

• What changes have you noticed to this area over the years you've been coming out here?

In the river / bush?
Any there any differences now in the way people use the forest?

How do you feel about these changes?

• What do you do in the forest when you go there?

• How would you say you feel when you're in the bush?

• Is there anything in particular that makes the forest / river so special to you?

• The forest / river is a pretty important place to lots of different people, who do you think should be looking after it?

• What do you think are the most important tasks for the people who look after the forest / river?

Now?
In the future?

• Have you been involved in any groups that talk about looking after the forest / river?

• Do you have any other comments about how the forest and the river can be looked after?

• Is there anything that stops you from doing what you want to do when you're in the forest?

• Do you see anything that might stop you carrying out your activities in the forest in the future?

• How would you describe the importance of the forest to the Yorta Yorta people?

Has that changed over the years?
• Who taught you about the forest and the river?
• How do you think the knowledge that people like you have about the forest can be included in the way the government looks after the forest and the river?
• What would you like the forest (your country) to look like in the future (say in 20 years time)?
• Are there any particular places in the forest that are special to you?

2. Semi-structured Interview Guide (Local non-Aboriginal people)

• How many years have you been living in this area?
How many years have you been coming out into the forest?
• What changes have you noticed to this area over the years you've been coming out here?

In the river / bush?

Are there any differences now in the way people use the forest?
• What activities do you do in the forest?
• Why you like going out into the forest so much?
• How would you say you feel when you're in the bush?
• What is the most important aspect/aspects of the forest to you?
• Have you been involved in any groups that talk about looking after the forest/river?

Which ones?
How did you become involved with these?
What kind of things do you discuss in these groups?
Have these groups been successful in achieving what they've set out to achieve?
• Who do you think should be responsible for looking after the forest?

The forest is a pretty important place to lots of different people, who do you think should be looking after it?
• What do you think are the most important tasks for the people who look after the forest/river?

What are the most important things for the people looking after this place to do?

Now?
In the future?
• Do you have any other comments about how the forest can be looked after?
• Is there anything that stops you from doing what you want to do when you're in the forest?

Are there any regulations or rules that stop you from...(refer to activities mentioned)
• Do you see anything that might stop you carrying out your activities in the forest in the future?

Do you think the rules or regulations might change in the future? For what reasons?
• Follow-up from previous interview with particular questions.
• How would you describe the importance of the forest to the local community?
How has that changed in your lifetime?
• How do you think the local knowledge that people like you have about the forest can be included in the management process for the forest / river?
• What would you like the forest to look like in the future (say in 20 years time)?
• To finish up and to summarise your feelings;
What does this place mean to you?

3. Semi-structured Interview Guide (Government agency representatives)

Professional perspective
• What aspects of management of the Barmah-Millewa Forest is your department concerned with?
• What is the title of your position with (dept X)?
• How many years have you been in this job?
• What are the main responsibilities of your job?
• When you visit the forest with your work, what activities do you do?
• How many years would you say you've been going out into the forest?
• What changes have you noticed to this area over the years you've been going out there?

In the river / bush?
Are there any differences now in the way people use the forest?

• Speaking as an employee of department X, what is the most important aspect/s of the forest to you?
• What do you think are the most important management issues facing the forest / river?

Now?
In the future?

• Have you been involved in any groups concerned with the management of the forest / river?

Do you think these groups are achieving what they've set out to achieve?

• I understand the forest is very important to many local people, sometimes for very different reasons. How do you manage the different uses and the differences of opinion amongst the local community?

• A lot of people seem to be very attached to the forest. How do you think people's attachments to the forest affect the way the forest is managed?

• Do you find that your own experience and knowledge of the forest influences the way you carry out your management tasks?

Do you do things differently now to the way you did them when you first came here?

• Does your department value the knowledge that you've built up over the years about this place?
• How do you think the knowledge that many local people have of the forest and the river can be included with more scientific knowledge?

• Other relevant or follow-up questions

• Do you have any other comments about the management of the forest or the river?

Personal perspective

• Do you ever visit the forest or the river in a non-professional capacity?

Do you ever go out to the forest other than for work purposes, say with your family?

If so, what attracts you to the forest?

• Speaking from a personal perspective, what is the most important aspect/s of the forest to you?

• Who do you think should be responsible for managing the forest (and the river)?

The forest is a pretty important place to lots of different people, who do you think should be looking after it?

• What would you like the forest to look like in the future (say in 20 years time)?

• To finish up and to summarise on a more personal level;

What does the Barmah-Millewa Forest mean to you?

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4. Structured Visitor Interview Guide

Gender  male  female

Age group  0 - 9  40 - 49
           10 - 19  50 - 59
           20 - 29  60 +
           30 - 39

Where do you live?  Postcode:

• Are you camping in the forest or are you a day visitor?

If you are a camper, where are you camped?
If you are a day visitor, what places did/will you visit?

• How many years have you been coming to the Barmah-Millewa Forest?

• What changes have you noticed to this area over the years that you have been visiting?

In the river / bush?

Are there any differences now in the way people use the forest/river?

• Are there any special reasons why you come here?

• What would you say attracts you to this area?

Why do you choose to come here rather than other places?
Are there any special features that attract you to this area?

• What activities do you undertake in this area?
• Is there anything that stops you from doing what you want to do when you're here?
• Do you see anything that might stop you carrying out your activities here in the future?

*Do you think the rules or regulations might change in the future? For what reasons?*
• Do you have any other comments about the area?

*What do you think are the most important tasks for the people who look after this place?*