

# Chapter Six: Conclusion and Recommendations

## 6.1 Introduction

The management of natural resources within the Rangelands coastal and marine environment is the responsibility of various agencies of the State, Australian and local governments. The residents of, and visitors to, the region also have a key role in ensuring the sustainable use and management of the environment. Furthermore, given that an extensive part of the Rangelands coastal area is Aboriginal Reserve or Native Title, the local custodians and traditional owners also have an important role in natural resource management.

Across the region, there are many strategies, projects and initiatives for improved natural resource management. Many of these initiatives have been discussed in Chapters Two, Three, Four and Five. There are, however, a number of areas that are not currently being addressed (either in part or fully). This is not surprising given the remoteness of the region and the limited human and financial resources available for natural resource management.

Given the limited human capital and financial resources, arguably one of the most significant barriers to effective natural resource management in the region is the limited coordination in efforts across State government agencies, Aboriginal Land Corporations, community groups and others involved in natural resource management. The Rangelands NRM are well positioned to facilitate improved coordination of natural resource management efforts.

This study identified resource users' and managers' priority concerns regarding natural resource management in the Rangelands. As identified in this report, there are a number of management efforts underway in the region which address some priority concerns of users and managers. However, there are also a number of priority concerns that are not currently being specifically addressed.

This chapter outlines a series of recommendations about how the Rangelands NRM could have a role, in partnership with other agencies and organisations, in addressing some of these priority concerns. These recommendations were developed from the interviews with stakeholders and follow-up interviews with managers and management experts. The recommendations outlined within this chapter are in addition to those outlined in the executive summary, which were identified through community workshops and focus groups.

## 6.2 Recommendations

The following recommendations relate to policy, infrastructure development and research and monitoring. Table 6.1 provides a summary of the recommendations, and the following paragraphs provide a précis of each recommendation.

**Table 6.1 Summary of Recommendations**

<b>Recommendation</b>	<b>Location</b>	<b>Potential Partners</b>
Investigate the social and economic suitability of proposed management approaches for the East Pilbara and 80 Mile Beach area	East Pilbara Coast, 80 Mile Beach	Department of Environment and Conservation, Department of Fisheries, Indigenous Communities, Community Groups, Industry Groups
Develop educational signage and information cards to encourage users to follow Department of Fisheries and Department of Environment and Conservation regulations	Cape Keraudren Nature Reserve, 80 Mile Beach Caravan Park, Port Smith Caravan Park	East Pilbara and Broome Local Governments, Aboriginal Communities, Community Groups, Department of Environment and Conservation, Department of Fisheries
Place composting toilets and chemical toilet waste dumps at various coastal camping locations	Cape Keraudren Nature Reserve, 80 Mile Beach Caravan Park, Port Smith Caravan Park	Caravan Park Owners, East Pilbara and Broome Local Governments, Department of Conservation and Environment
Undertake works to improve the fencing around the Cape Keraudren Nature Reserve to prevent feral animals and livestock from entering the dune areas	Cape Keraudren Nature Reserve	Shire of East Pilbara, Indigenous Communities and Traditional Owners, Pastoral Station Owners
Investigate the feasibility of upgrading boat ramps at Entrance Point, Town Beach (Broome) and Catalina	Broome	Shire of Broome, Broome Port, Department of Planning and Infrastructure, Recreational Boat Users and Fishing Groups
Investigate the cause(s) of the litter problem in the coastal environment around Broome and identify strategies for addressing the issue	Broome	Shire of Broome, Roebuck Bay Working Group, Community Environmental Groups
Assist the Roebuck Bay Working Group to implement relevant aspects of their coastal management strategy	Roebuck Bay	Roebuck Bay Working Group, Australian Government Department of Environment, Water, Heritage and the Arts, Western Australian NRM Office
Investigate the environmental, social and cultural impact of banning of four wheel driving on Cable Beach	Cable Beach Broome	Shire of Broome, Department of Environment and Conservation, User Groups
Investigate community fire management and evacuation strategies along the Kimberley Coast and identify strategies for improving fire management and evacuation procedures	Kimberley Coast	Indigenous Communities, Land Commissions, Department of Environment and Conservation, Local Governments, Department of Planning and Infrastructure
Investigate the extent of feral animal damage along the coast and identify strategies for minimising this damage	Kimberley Coast	Indigenous Communities, Department of Environment and Conservation, Invasive Species Cooperative Research Centre
Facilitate the development of regional protocols for the management of Indigenous coastal land	Kimberley Coast	Indigenous Communities, Land Councils, Traditional Owners, Department of Indigenous Affairs, Western Australian Planning Commission, Local Governments, Department of Planning and Infrastructure
Facilitate the development of regional protocols for guiding future developments on Indigenous land	Kimberley Coast	Indigenous Communities, Land Councils, Traditional Owners, Department of Indigenous Affairs, Western Australian Planning Commission, Local Governments, Department of Planning and Infrastructure
Facilitate the development of regional protocols for ensuring significant non-Indigenous heritage sites along the Kimberley Coast are conserved	Kimberley Coast	Aboriginal Communities, Local Heritage Groups, Local Governments, Tourism WA, Australian Government Department of Environment, Water, Heritage and the Arts

### ***Recommendation 1***

#### **Investigate the Social and Economic Suitability of Proposed Management Approaches for the East Pilbara and 80 Mile Beach Area.**

- Description: Interview participants were concerned about the planning processes underpinning the potential establishment of marine parks and reserves in the East Pilbara and 80 Mile Beach area. Specifically, interview participants were concerned about the methods being used to identify areas of 'ecological significance' within which human uses would be heavily restricted under the proposed scheme. Interview participants were also concerned that establishing marine parks and reserves would not be an effective management approach in the area given its remoteness and also the limited resources available for enforcement.
- Location: East Pilbara Coast, 80 Mile Beach
- Proposed Action: Investigate the social and economic costs and benefits of establishing marine parks and reserves in the East Pilbara and 80 Mile Beach area. Investigate the probable effectiveness of alternate management approaches for remote areas, taking into account the demographic characteristics of the users of the area.
- Potential Partners: Department of Environment and Conservation, Department of Fisheries, Indigenous Communities, Community Groups, Industry Groups.

### ***Recommendation 2***

#### **Develop Educational Signage and Information Cards to Encourage Users to Follow Department of Fisheries and Department of Environment and Conservation Regulations Regarding Activities in the Marine and Coastal Environment.**

- Description: Interview participants identified that there were limited resources for the enforcement of recreational fishing regulations along remote stretches of the coast. They also identified that the area attracted a large number of visitors from other regions of Western Australia and interstate. Often these visitors were not familiar with local fishing regulations, or moreover, the reasons for the regulations.
- Location: Cape Keraudren Nature Reserve, 80 Mile Beach Caravan Park, Port Smith Caravan Park
- Proposed Action: Establish educational signage to provide visitors with information about recreational fishing regulations and environmentally sensitive behaviour. Provide information cards for visitors to coastal locations about how to minimise their impact on the natural environment and the long term benefits of environmentally sensitive behaviour.
- Potential Partners: East Pilbara and Broome Local Governments, Aboriginal Communities, Community Groups, Department of Environment and Conservation, Department of Fisheries

### ***Recommendation 3***

#### **Place Composting Toilets and Chemical Toilet Waste Dumps at Various Coastal Camping Locations**

- Description: As the number of visitors to coastal camping locations has increased, pressure on toilet facilities has also increased. Coupled with this issues is the increase in the number of people using personal chemical toilets and requiring locations to dump the waste from these toilets.

Location:	Cape Keraudren Nature Reserve, 80 Mile Beach Caravan Park, Port Smith Caravan Park
Proposed Action:	Establish up to four more composting toilets at Cape Keraudren Nature Reserve and establish facilities for visitors to safely empty chemical toilets at Cape Keraudren Nature Reserve, 80 Mile Beach Caravan Park and Port Smith.
Potential Partners:	Caravan Park Owners, East Pilbara and Broome Local Governments, Department of Conservation and Environment

#### ***Recommendation 4***

##### **Undertake Works to Improve the Fencing Around the Cape Keraudren Nature Reserve to Prevent Feral Animals and Livestock from Entering the Dune Areas**

Description:	Regular visitors to the Cape Keraudren Nature Reserve and nearby coastal areas noted that livestock and feral animals had caused damage to the native vegetation of the dune area. It was noted that many parts of the coastal area were fenced to prevent livestock (and restrict feral animals) from entering dune areas. However, near the Cape Keraudren Nature Reserve, there were parts of this fencing that were in disrepair or needed extension.
Location:	Cape Keraudren Nature Reserve
Proposed Action:	Assess the condition and adequacy of fencing around the Cape Keraudren Nature Reserve. Undertake works to repair and extend fencing where necessary to prohibit livestock (and restrict feral animals) from entering dune areas.
Potential Partners:	Shire of East Pilbara, Indigenous Communities and Traditional Owners, Pastoral Station Owners

#### ***Recommendation 5***

##### **Investigate the Feasibility of Upgrading Boat Ramps at Entrance Point, Town Beach (Broome) and Catalina**

Description:	As the number of people owning boats in the town of Broome has increased the pressure on the area's boat ramps has increased. Increased pressure on boat ramps has also come from an increase in the number of travellers launching private vessels at the town of Broome. There has also been an increase in the demand for facilities to support larger recreational vessels. The increased usage of the ramps has caused rapid wear of the boat ramps and increased competition for parking and associated infrastructure. There is a need to upgrade the boat ramps to cater to the increased demand. In addition there is a demand for fish cleaning facilities at these boat ramps.
Location:	Broome
Proposed Action:	Identify the nature of social, economic and environmental issues caused by overcrowding and the limited facilities at Broome's boat ramps. Investigate the feasibility of upgrading boat ramps at Entrance Point, Town Beach and Catalina.
Potential Partners	Shire of Broome, Department of Planning and Infrastructure, Recreational Boat Users and Fishing Groups

### ***Recommendation 6***

#### **Investigate the Cause(s) of the Litter Problem in the Coastal Environment Around Broome and Identify Strategies for Addressing the Issue**

Description:	Interview participants noted that there was a large amount of litter within the coastal lands around the town of Broome. Litter within these areas was identified as a threat to nesting wildlife particularly seabirds and turtles. Interview participants noted that during periods of high rainfall, litter was often washed into waterways and the ocean. Despite a 'Clean Up Australia Campaign' being launched in the Kimberley in 2007, interview participants suggested that the litter problem around the town of Broome had not improved.
Location:	The town of Broome
Proposed Action:	Investigate the causes of the litter problem (ie is it caused by visitors, squatter camps, limited rubbish disposal options and so on). Identify strategies for minimising the level of litter entering the coastal lands around Broome and develop strategies to ensure that low levels of litter in the environment are maintained into the future.
Potential Partners:	Shire of Broome, Roebuck Bay Working Group, Community Environmental Groups

### ***Recommendation 7***

#### **Assist the Roebuck Bay Working Group to Implement Relevant Aspects of Their Coastal Management Strategy**

Description:	The Roebuck Bay Working Group has developed a comprehensive Coastal Management Strategy for Roebuck Bay. To ensure the strategy is effective in the ongoing management of Roebuck Bay a detailed implementation strategy is needed. The implementation of the Coastal Management Strategy will require cooperation across State government agencies, with local council, with user groups and with Traditional Owners. External funding sources will be required to implement many of the aspects of the Coastal Management Strategy.
Location:	Roebuck Bay Working Group
Proposed Action:	Assist the Roebuck Bay Working Group to implement relevant aspects of their Coastal Management Strategy through facilitating meetings with Australian Government NRM representatives, and providing details about possible Australian Government funding sources.
Potential Partners:	Roebuck Bay Working Group, Australian Government Department of Environment, Water, Heritage and the Arts, Western Australian NRM Office

### ***Recommendation 8***

#### **Investigate the Environmental, Social and Cultural Impact of Establishing the Necessary Infrastructure Needed to Support the Ban of Four Wheel Driving on Cable Beach**

Description:	The Shire of Broome has commenced legal moves to restrict four wheel drives from Cable Beach. The residents of Broome, and regular visitors to Broome, have had a mixed reaction to the ban. While many people support the ban citing issues of public safety and environmental protection others oppose the ban suggesting that it will result in considerable unintended social, environmental and economic consequences. Those who oppose the ban suggest that there has not been enough research into the social, environmental and economic dimensions of the issue.
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Location:	Cable Beach Broome
Proposed Action:	To investigate the social, environmental and economic dimensions of four wheel driving on Cable Beach and the strategy to ban four wheel drives from Cable Beach. The objective of this action is to provide community members with more research-based evidence about the likely positive and negative impacts of the decision to prohibit four wheel drives from Cable Beach.
Potential Partners:	Shire of Broome, Department of Environment and Conservation, User Groups

### ***Recommendation 9***

#### **Investigate Community Fire Management and Evacuation Strategies Along the Kimberley Coast and Identify Strategies for Improving Fire Management and Evacuation Procedures**

Description:	Interview participants noted that fire management along the Kimberley Coast appeared to be ad-hoc and there was no strategy for fire management on coastal lands. Interview participants also noted that many communities on isolated sections of the coast were vulnerable to fire, with limited or no fire fighting equipment, and few options for evacuating the communities in the event of a fire.
Location:	Kimberley Coast
Proposed Action:	Investigate current community-based fire management approaches to highlight existing strengths and limitations. Investigate evacuation strategies and capacities of communities along the Kimberley Coast. Develop a comprehensive fire management and evacuation strategy for coastal communities in the Kimberley region building on the identified existing strengths and addressing limitations.
Potential Partners:	Indigenous Communities, Land Commissions, Department of Environment and Conservation, Local Governments, Department of Planning and Infrastructure

### ***Recommendation 10***

#### **Investigate the Extent of Feral Animal Damage Along the Coast and Identify Strategies for Minimising This Damage**

Description:	Interview participants reported that feral animals had caused, and continue to cause, damage to native flora and posed a threat to native fauna. Some feral animals also pose a threat to some significant and sacred Indigenous cultural sites. Little was known about the actual extent of the problem or the most at risk areas. This lack of knowledge restricted the effectiveness of strategies to address the issue.
Location:	Kimberley Coast
Proposed Action:	Investigate the spatial extent and nature of the threat that feral animals pose to the Kimberley coast. Identify strategies that engage local communities to minimise potential damage from feral animals.
Potential Partners:	Indigenous Communities, Department of Environment and Conservation, Invasive Species Cooperative Research Centre.

### ***Recommendation 11***

#### **Facilitate the Development of Regional Protocols for the Management of Indigenous Coastal Land**

Description:	The use and management of Indigenous land has largely been the responsibility of individual communities. There is no overarching strategy guiding management approaches and activities on coastal lands. There is also no overarching strategy guiding the use of Indigenous lands. This has resulted in management efforts being spatially disjointed and opportunities for integrated management being missed.
Location:	Kimberley Coast
Proposed Action:	Facilitate the development of regional protocols which guide management approaches and activities for Indigenous coastal land
Potential Partners	Indigenous Communities, Land Councils, Traditional Owners, Department of Indigenous Affairs, Western Australian Planning Commission, Local Governments, Department of Planning and Infrastructure

### ***Recommendation 12***

#### **Facilitate the Development of Regional Protocols for Guiding Future Developments on Indigenous Land**

Description:	Over recent years, there has been an increase in the number of buildings and associated infrastructure developed on Indigenous coastal land. In a number of cases, buildings and infrastructure associated with new tourism or cottage industry businesses have been established in locations that expert environmental planners identify as being unsuitable. For example, some buildings have been established in locations that are vulnerable to floods during severe tropical storm events. Interview participants identified a need for a comprehensive set of protocols that guided future developments on Indigenous land including setback requirements for buildings from the coast or rivers, guidelines for access, and design codes to minimise environmental impact.
Location:	Kimberley Coast
Proposed Action:	Facilitate the development of regional protocols for guiding future development on Indigenous land
Potential Partners:	Indigenous Communities, Land Councils, Traditional Owners, Department of Indigenous Affairs, Western Australian Planning Commission, Local Governments, Department of Planning and Infrastructure

### ***Recommendation 13***

#### **Facilitate the Development of Regional Protocols for Ensuring Significant Non-Indigenous Heritage Sites Along the Kimberley Coast Are Conserved**

Description:	The Kimberley Coast is home to numerous sites of significant heritage value. These sites include early colonial settlements, mission settlements, agricultural and fishing settlements, ship wrecks and plane wrecks. These sites provide physical evidence and reminders of the non-Indigenous settlement of the region. Many of these sites have very limited or no management, and are quickly deteriorating. The sites have an important heritage value and are also increasingly popular as tourist destination.
Location:	Kimberley Coast
Proposed Action:	Facilitate the development of regional protocols for ensuring significant non-Indigenous heritage sites along the Kimberley coast are conserved. This action might involve the establishment of a regional committee for heritage management and preservation.

Potential Partners: Aboriginal Communities, Local Heritage Groups, Local Governments, Tourism WA, Australian Government Department of Environment, Water, Heritage and the Arts