Factors that contribute to the establishment of marine protected areas in Western Australia

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3. **CASE STUDY OVERVIEW**

This chapter provides a brief synopsis of the five case study areas to provide relevant background and to inform the chapters that follow. This includes a brief overview of the ecological and social values in each area, and brief summary of the planning process and legal steps taken to establish MPAs.

3.1. **JURIEN BAY**

The Jurien Bay Marine Park is located within the Central West Coast marine bioregion, with its southern boundary located approximately 200 km north of Perth (Figure 4). This bioregion is a zone of biogeographical overlap, with a mix of tropical and temperate species. This is caused by the south flowing Leeuwin Current, which brings tropical waters south, and the north flowing Capes Current, bringing cool temperate waters north close to the coast. The nearshore seabed topography is complex, with elongate limestone reefs parallel to the shore forming part of the largest continuous temperate limestone reef in Australia, and containing numerous emergent rocks, islands and inter-tidal rock platforms that provide protection for lagoonal environments (CALM and MPRA 2005). Marine wildlife is rich, and includes 14 species of cetaceans, a variety of sea and shorebirds, and one of the main breeding sites for the Australian sea lion, *Neophoca cinerea*.

The socio-economic settings of the area at the time of its consideration as an MPA were dominated by fishing activities, with commercial western rock lobster (*Panulirus cygnus*) the mainstay of the local economy, and the highest economic value of any single species commercial fishery in Australia. In 2003 140 commercial rock lobster fishing boats worked in the Jurien Bay area, catching approximately 1.6 million kg of live lobster (CALM and MPRA 2005). Commercial wet-lining, abalone, shark netting, beach seining for mullet and collecting of specimen shells and aquarium fish also occurred. At the time of the planning process aquaculture operations were a small but potential growth industry.

Recreational fishing is a popular activity in the region for local and city-based fishers undertaking line, spear and net fishing, as well as diving and potting for western rock lobster. The area is popular for water sports, including SCUBA diving, surfing, snorkelling, water-skiing and windsurfing, with ecotourism seen as an important future industry given local attractions and the accessibility to Perth.
Jurien Bay was recommended as a potential MPA in July 1994 (MPRSWG 1994) and was further supported in the Central West Regional Strategy (WA Planning Commission 1996). The government announced its intention to establish an advisory committee to consider the proposed Jurien Bay MPA on 3 January 1997 and the
committee was formed in August 1997. Importantly, the Jurien Bay proposal was the first MPA to be considered after a seven-year hiatus, and the first under the revised legislative and policy framework for MPA establishment.

The advisory committee met seven times between October 1997 and August 1999 before providing its advice and a draft IMP to the Minister for the Environment on 11 February 2000. The Marine Authority considered the Jurien Bay draft IMP and formalised its advice to the Minister for the Environment on 7 March 2000 recommending the release of the IMP developed by the advisory committee with some minor changes.

Between April and August 2000 government approvals were obtained for the release of the IMP and NOI as required under the CALM Act, and on 3 October 2000 a NOI to create the Jurien Bay Marine Park was published and the IMP released for public comment. The Marine Authority considered the proposal and provided its statutory advice on 8 May 2001 as required under Section 14(6)(c) of the CALM Act, recommending the creation of the MPA. An order legally creating the MPA was published on 26 August 2003. Government announcements were met with support from commercial fishing groups, along with strong criticism from recreational fishing and conservation groups.

In accordance with the CALM Act, a copy of the gazettal order was tabled in both Houses of Parliament. This legislative process provides the opportunity of either House of Parliament to vote to disallow the order therefore annulling the creation of the MPA. A Motion for Disallowance to disallow the orders creating the park was put forward by a Greens MP on 12 November 2003 in the Legislative Council. The disallowance motion was not carried, and the park orders therefore fulfilled their passage through Parliament and the park was legally created. The management plan was gazetted on 1 July 2005, with management zones legally created under the CALM Act on 21 October 2005 and legislation to implement new fishing restrictions gazetted on the 23 December 2005.

3.2. Montebello Complex

The Montebello, Lowendal and Barrow Island complex lies approximately 1,600 km north of Perth (see Figure 5). The Montebello Islands complex consists of 265 distinct, low-lying islands and islets. The Lowendal Island group contains more than
40 limestone islands, islets and rocky stacks, and Barrow Island is a large island attaining a height of 62 metres with steep, undercut limestone shores with inter-tidal limestone pavements (CALM 2004).

The area is representative of the range of habitats, flora and fauna found in the Pilbara Offshore Marine Bioregion, which is characterised by limestone islands on a wide continental shelf (ANZECC 1998). The area has exceptional habitat and species diversity dominated by tropical species, with strong connections to the north by the Leeuwin Current and the Indonesian Through Flow. Macroalgae-dominated limestone reef and sub-tidal reef platforms/sand mosaics dominate the area, with coral reef, mangroves and sand habitats also significant. Six species of mangroves are found in the area, representing a unique offshore mangrove community considered globally significant (CALM 2004). The area is significant for fauna, with six species of marine turtle recorded, with nesting of green, hawksbill and flatback, and occasionally loggerhead turtles. Seven species of toothed whale, three species of baleen whale and dugongs have been recorded in the area, with the islands being significant for seabird species (CALM 2004).

The Montebello/Barrow Islands are remote, with no permanent residential population or towns, with the exception of accommodation for petroleum workers on Barrow Island. The petroleum industry is the dominant use, with the larger Carnarvon Basin being Australia’s most important petroleum region. At the time of the MPA planning process (2000/01) petroleum production from the Montebello/Barrow area was estimated at $498m (CALM 2004). At the time, aquaculture of the pearl oyster, *Pinctada maxima*, was an important economic value of the area, with two leaseholders, one of which estimated pearl production worth $20m in 2001.

Commercial fishing activities (principally fish trap and line) was a relatively minor contributor (CALM 2004) and commercial tourism use of the area was low and seasonal, with no permanent tourism accommodation on the islands and access via a small number of charter vessels. Recreational usage was low, given the distance offshore, difficulty of access and absence of support facilities (e.g., fuel, water, moorings, etc.).

Three areas in the Montebello/Barrow Island region were recommended for consideration as MPAs (MPRSWG 1994), and in December 1997 the Minister for the Environment announced that the government would formally consider these
An agreed ‘study area’ was confirmed with agreement on consultative mechanisms to support the planning process (MPRA 2000b).

Figure 5 Locality of the Montebello/Barrow Islands MPAs as gazetted in 2005 (CALM 2004)

The Minister requested nominations for participation in an advisory committee for the proposed MPAs in May 1999, and the committee was formally announced by Minister for the Environment in June 2000. The committee commenced its deliberations in 2000 and met five times (a total of 8.5 meeting days) in developing proposed MPA categories, boundaries, zoning and a management plan.

Key policy and legislative issues arose in the committee process relating to the operation of petroleum actives in MPAs, resulting in the industry opposing further progress until these were resolved, and triggering the formation of a working group comprising government and petroleum industry representatives in 2002 to address these matters. The working group commenced on 15 March 2002 and held six meetings, with the final meeting held on 27 May 2003, and produced a number of key documents addressing legislative and policy uncertainty. Once the working group resolved these issues to the satisfaction of the industry, the advisory committee formalised its advice to the Minister for the Environment. This advice included a
revised draft IMP that incorporated some changes as a result of the working group discussions.\textsuperscript{18}

The Marine Authority considered the advice of the committee and the working group and provided formal advice under s14 of the CALM Act to the Minister for the Environment on 24 July 2003, recommending that formal public comment be sought on proposals for three MPAs.\textsuperscript{19} On 17 February 2004 the NOI and IMP were released for formal public comment in accordance with the CALM Act. The Marine Authority considered the public submissions to the IMP, and on 12 August 2004 provided a report in accordance with 14(6)(a) of the CALM Act recommending the creation of the Montebello/Barrow Islands Marine Conservation Reserves.\textsuperscript{20}

The Barrow Island MMA, the Montebello Islands Marine Park, and the Barrow Islands Marine Park were legally established on 10 December 2004,\textsuperscript{21} including some significant changes to the proposed management zoning recommended by the Marine Authority. An approved management plan for the three MPAs was formally approved on 10 April 2007.\textsuperscript{22} These three MPAs are collectively considered in this thesis as the ‘Montebello Complex’.

3.3. DAMPIER ARCHIPELAGO

The Dampier Archipelago and Cape Preston are located 1,650 km north of Perth (Figure 6) and lie in the Pilbara Nearshore marine bioregion (ANZECC 1998). The Dampier Archipelago has 12 major islands and 30 smaller islands, rocky reefs, coral reefs and shoals, including large inter-tidal areas. It varies in depth from up to 5 metres deep near the mainland coast to 15–20 metres deep around the islands, then descending to more than 30 metres outside of the Archipelago. The sea floor consists of extensive limestone pavements and large sheets of shell gravel, sand and mud.

Marine habitats in the Dampier Archipelago/Cape Preston region are extremely varied due to the complex geomorphology and oceanography, including soft sediment habitats (sand, mud and silt), macroalgal covered limestone reefs, coral reefs, mangals, beach and rocky shores. The marine biota is primarily tropical, with many endemic marine species with a diverse soft sediment in-fauna and a unique faunal assemblage associated with coral reef habitats with a diverse coral fauna comprising 216 species and 57 hermatypic coral genera (CALM 2005). The area is very significant for marine wildlife, with five species of marine turtle, numerous
cetacean species, dugong, and islands supporting large seabird colonies (CALM 2005). The area is characterised by a large tidal range, resulting in highly turbid water in areas close to the coast.

The area has a strong Indigenous heritage, with a pre-history of Aboriginal habitation dating back to at least 20,000 years. Aboriginal people in this area have a strong association with the sea, with traditional activities such as hunting of dugongs and turtles, and there are a number of native title claims over the waters and coastline of the MPA.

Figure 6 Location of the proposed Dampier Archipelago/Cape Preston MPA (CALM 2000a)

Karratha and Dampier are the major population centres located adjacent to the proposed MPA, with populations in 2000 estimated at 11,300 and 1,800 respectively (CALM 2000a). The Pilbara region is the centre of mining and industry development in WA, with Dampier a major exporting base for the State’s minerals, oil and gas, with the largest port by tonnage in Australia in 2000 that saw 82.5 million tonnes of products worth in excess of six billion dollars exported (IRC Environment 2002), comprising 47 per cent of WA’s exports, and 14 per cent of Australia’s exports (mainly iron ore, liquefied natural gas and salt). The Pilbara region is the state’s most
productive petroleum area, producing 99.3 per cent of the state’s oil and 92.2 per cent of the state’s gas, with the petroleum industry the state’s most valuable commodity, worth $10,600m per annum in 2000/01 (CALM 2000b).

The major commercial fishing activities in the area are prawn and finfish trawling, finfish trapping and wet-lining, shell collecting and aquarium fish and coral collecting. Recreational fishing is a very significant activity, and the area has a high social value, with its sheltered waters providing a range of opportunities for the local community who target a range of marine species. The area is also very important for recreation and tourism, with charter boat companies operating out of Dampier providing fishing, diving, snorkelling, swimming and island tours.

The Dampier Archipelago and Cape Preston areas were identified for consideration as a marine conservation reserve (MPRSWG 1994) and in December 1997 the Minister for the Environment announced that the government would consider these areas. Following ministerial, agency and Marine Authority discussions a ‘study area’ was set (MPRA 2000a) generating debate over the scope of the process.

The Marine Authority provided its statutory advice on 29 August 2003. From late 2003 to the end of 2004 the government considered a range of issues and concerns raised by marine stakeholders, local political representatives, ministers and agencies with respect to the proposal. The Minister for the Environment considered the advice of both the Marine Authority and the advisory committee, and then directed the conservation agency to undertake an additional round of consultation with Sector Reference Groups (SRGs) prior to government approval of the IMP. Following this extra round of consultation, the Marine Authority considered the submissions, reconsidered the proposal and provided an unchanged advice to the Minister for the Environment on 4 Feb 2004.
Following extensive government consideration, decisions were announced by the Minister for Fisheries and the Local Member for Burrup on 10 December 2004. The NOI to create the Dampier Archipelago Marine Park and Cape Preston MMA was published in the *Gazette* on 11 January 2005, along with the release of the *IMP for the Proposed Dampier Archipelago Marine Park and the Cape Preston Marine Management Area* for the statutory three-month public comment period. The proposal released by the government was significantly changed from that recommended by both the committee and Marine Authority, with no consultation on these changes. Significant changes were made to the proposed management zoning following consultation with recreational fishing representatives, reducing proposed sanctuary zones and adding a new commitment to prohibit all commercial fishing in the western part of the Archipelago, with the exception of marine aquarium and coral collection, which would be phased out within three years.

At the request of the Minister for the Environment, the advisory committee reconvened in February 2006 to review the public submissions received. The committee considered the submissions and provided their advice on 10 April 2006, reiterating their original advice, recommending that the zoning be returned back to what they originally recommended, and expressing concern about the planning process and changes that were made to the committee’s original recommendations. The Marine Authority considered the advice from the committee and supported gazettal, but recommended that the zoning scheme be amended in line with the committee recommendations.

The five-year period from 2006–2011 involved further work and government consideration of a range of tenure matters related to the establishment of the MPA. While the conservation agency continued to undertake planning actions to pursue the gazettal of the proposed MPA, no government announcements have been made, and no statutory actions have been undertaken since 2006.

### 3.4. Ningaloo Marine Park

Ningaloo Reef is the largest fringing coral reef in Australia, covering 290 km from Northwest Cape to Red Bluff (see Figure 7), and is located in the Ningaloo Marine Bioregion (ANZECC 1998). It incorporates diverse marine life, including corals (217 species), diverse fish fauna (500 species), marine turtles (four species, of which three nest in the area), whale sharks, dugongs, whales and dolphins (MPRA and CALM
2005b). The marine communities include coral reefs, mangroves, algae and filter-feeding communities, and due to the low rainfall and minimal pollutant sources, has very high water quality. These values have resulted in Ningaloo being regarded as the State’s ‘premier marine conservation icon’ (MPRA and CALM 2005b).

Figure 7 Location map of the Ningaloo Marine Park (MPRA and CALM 2005b)
The Ningaloo Marine Park (NMP) was gazetted as an A class marine park in 1987. The region is arid and remote from large population centres, with Exmouth the only major town close to the park, with an estimated population of 2,300 in 2001. The land use adjoining the park is principally pastoral and conservation, with the Cape Range National Park and other conservation reserves adjoining the park. A management plan for the NMP was approved in 1989, and in 1994 the government announced that drilling for exploration and production would be prohibited in the NMP (Government of WA 1994b). The 1989 management plan was superseded in 2005, when a revised management plan was adopted by government.1

The Commonwealth waters adjacent to the NMP were also declared a marine park on 7 May 1987 under the Commonwealth National Parks and Wildlife Conservation Act 1975, covering an area of 258,500 ha managed under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (MPRA and CALM 2005b). The management plan for the NMP (Commonwealth Waters) was approved in 2002 and provides for Commonwealth waters to be managed as an IUCN Category II Reserve (National Park) with principles set out in the Environment Protection and Biodiversity Conservation Regulations 2000.

Extension of the NMP to encompass the complete Ningaloo Reef structure within the marine park (approximately 60 km extension) was recommended in 1994 (MPRSWG 1994) and in 1998 the Marine Authority recommended this be a high priority.35

The Marine Authority resolved in April 2001 to formally support the review of the NMP management plan and to recommend consideration of a southern extension to the Park.36 Formal support from government for commencing the Ningaloo planning process was received in April 2003. In April 2003 the conservation agency formally commenced the preparation of the draft management plan for NMP and proposed extension of the Park.

The Marine Authority released a framework document in 2003 for public comment to provide the conservation agency, the Coral Coast Parks Advisory Committee (CCPAC), and key community stakeholders with guidance for the planning process.

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1 Note: The review of the 1989 NMP management plan, including the proposal for a significant extension of the marine park between 1999 and 2005 is the focus of this research. It does not include the consideration of the adjacent Muiron islands MPA.
(MPRA 2003). Community input into the review was assisted by the CCPAC, which was an established community committee for the NMP and the Cape Range National Park. The membership was revised and a new committee appointed, with an amended terms of reference to provide community input and feedback on the review of the NMP management plan and proposed extension.\(^{37}\)

The revised CCPAC met for the first time in July 2003, and commenced consideration of the issues associated with the Ningaloo review. The conservation agency subsequently developed a ‘first draft zoning scheme’ to act as starting point for community discussions and released this in December 2003 for public comment.\(^{38}\) The committee provided advice to the conservation agency and Marine Authority. This completed the CCPAC’s role in providing advice on the proposals, having met for four days over a period of eight months.

The Marine Authority considered the CCPAC advice in March 2004, and they provided their statutory advice to the Minister recommending release of the draft management plan for public comment in May 2004.\(^{39}\)

Ministerial approvals were obtained in July 2004, and the release of plans for the statutory three-month public comment period occurred on 26 July 2004. The statutory public submission period closed on 29 October 2004. The Authority provided its formal advice on 8 November 2004, supporting the plan as released for public comment, with some minor changes to the zoning scheme to provide some concessions to address recreational fishing concerns.

Orders amending the boundary of the NMP were gazetted on 30 November 2004.\(^{40}\) Associated with the extension of the NMP, a joint announcement by the Premier, Minister for the Environment and the Minister for Fisheries made public the government’s final decisions on zoning for the park, specifically increasing the sanctuary zones to 34 per cent of the NMP.\(^{41}\)

The management plan was formally gazetted by the Minister for the Environment on 14 January 2005.\(^{42}\) The new boundaries of the park were gazetted on 30 November 2004, and the management plan gazetted by the Minister on 14 January 2005.\(^{43}\) The legal orders to implement the new zoning arrangements were gazetted on 21 January 2005,\(^{44}\) and legal orders implementing the new restrictions applying to recreational and commercial fishing were gazetted on 9 September 2005.\(^{45}\)
3.5. Capes

The proposed Geographe Bay–Capes–Hardy Inlet MPA (i.e., ‘the Capes’) lies approximately 250 km south of Perth (see Figure 8), in the Leeuwin-Naturaliste Bioregion (ANZECC 1998). This marine bioregion is characterised by high energy heavy swell affected shores along a narrow continental coast, with rocky headlands interspersed by long sweeping beaches between Perth and Black Point (DEC 2006).

Figure 8 Location of the proposed Capes MPA
The south-west Capes is one of the most diverse temperate marine environments in Australia, with high finfish diversity, internationally significant seagrass diversity occurring at depths greater than 40 metres, significant numbers of marine mammals and a complex arrangement of inter-tidal and sub-tidal reef environments (DEC 2006).

The Capes area has one of the fastest growing populations in Australia, and significant visitation by tourists. The major socio-economic values of the Capes MPA are commercial fishing (abalone, finfish and rock lobster), marine-based commercial tourism and marine recreation (fishing, swimming, surfing, diving and snorkelling, boating) and it has significant Indigenous value (DEC 2006). The Capes area was recommended as a possible MPA in 1994 (MPRSWG 1994), and in December 1997 the Minister for the Environment announced that the Capes region was a priority area for consideration.

The conservation agency recommended to the Minister for the Environment that an advisory committee be formed to consider the Capes MPA proposal, noting the Marine Authority’s support in March 2002 and in March 2003 the Minister for the Environment announced the intention to form the committee, with it being formed in August 2003.

The advisory committee met for the first time on 3–5 September 2003, and met eight times (15 meeting days) over a 12-month period to develop the full MPA proposal. It provided its advice to the Minister for the Environment on 18 August 2004 and recommended the creation of a marine park over the area in accordance with the draft IMP and zoning developed by the committee. The committee met a further two times following provision of this advice; once to inform the committee members of the impending IMP release (September 2006), and a further meeting following the public submission process (March 2007).

The Marine Authority reviewed the Capes draft IMP developed by the committee and, at the request of the Minister for the Environment, undertook an additional round of consultation with key marine stakeholder groups on 9 September 2004 to assess the degree of stakeholder and community support. The Marine Authority provided its formal advice recommending release of the IMP for public comment on 30 September 2004. The Marine Authority subsequently wrote to the Minister for the Environment on 27 June 2005 recommending that priority be given to the
consideration and release of the Capes proposal.\textsuperscript{50} The Chair of the advisory committee wrote to the Minister for the Environment on 10 April 2006 expressing disappointment that the Capes IMP had not been released.\textsuperscript{51}

The Minister for the Environment obtained final approvals for public notification of the proposal on 22 May 2006, and the advisory committee met on August 2006 and were informed of certain minor adjustments made to the IMP as recommended by conservation and fisheries agencies and endorsed by the Marine Authority.

The Minister for the Environment released the IMP for the statutory public submission period on 6 September 2006.\textsuperscript{52} The public submission period closed on 15 December 2006, and 257 submissions were received.\textsuperscript{53} The advisory committee met on 30 March 2007 to consider the key issues arising from the public submissions.\textsuperscript{54} The advisory committee were informed that it was the government’s intention to create the ‘Capes’ Marine Park by the end of 2007.\textsuperscript{55} The committee provided its advice in May 2007, supporting the establishment of the MPA\textsuperscript{56} and the Marine Authority provided its formal advice recommending the creation of the park and approval of the management plan on 7 August 2007.\textsuperscript{57}

No further statutory actions have been taken as at December 2011 to progress the establishment of the MPA.