

Management of Marine Parks and Reserves

Report 14: June 2016

Executive summary

Introduction

This audit assessed how effectively marine parks and reserves (MPRs), established under the *Conservation and Land Management Act 1984* (CALM Act), are managed and protect the marine environment. We focused on the establishment and management of MPRs by the Department of Parks and Wildlife (DPaW). We also examined the role of the Department of Fisheries (DoF) who also deliver management activities in MPRs.

Background

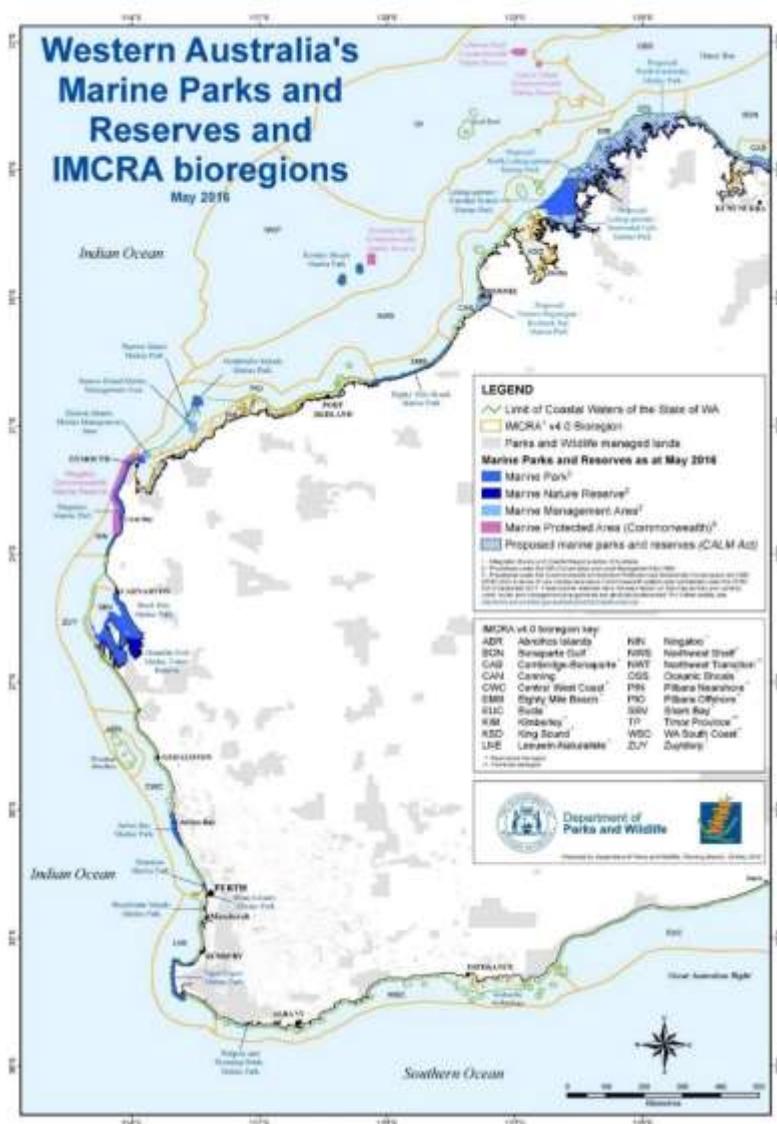
The Western Australian (WA) coastline spans over 12,500 kilometres and has some of the most unique and biodiverse marine environments in the world. This includes the renowned Kimberley coast in the north, the world heritage areas of Ningaloo Reef and Shark Bay on the Gascoyne coast, the South West Capes and the southern coastline into the Great Australian Bight. Just over 90% of Western Australians live within 50 kilometres of the coast and our coastal areas support a diverse and sometimes competing range of recreational and commercial activities.

Since the introduction of the CALM Act, 16 MPRs have been established covering about 2.5 million hectares or nearly 20% of WA's coastal waters:

- 13 marine parks to provide for the conservation and restoration of the natural environment, the protection of indigenous flora and fauna, and preservation of features of archaeological, historic or scientific interest. Marine parks also provide for recreational and commercial use where these activities do not compromise conservation values
- 1 marine nature reserve for conservation and scientific research. Although low-impact tourism may be permitted, no recreational or commercial fishing, aquaculture, pearling, petroleum drilling or production is allowed in these areas
- 2 marine management areas that manage and protect the marine environment so that it may be used for conservation, recreational, scientific and commercial purposes.

MPRs in WA state waters start at the coast and extend 5.5 kilometres from shore. In 2014-15 DPaW and DoF spent around \$12.8 million on establishing and managing MPRs.

Four new marine parks are planned by the middle of 2017 (Figure 1). These are an outcome of the *Kimberley Science and Conservation Strategy*, and if established, will double the size of the network to more than 5 million hectares. It is also intended that all Kimberley marine parks will have joint management arrangements with traditional owners.



Source: DPaW

Figure 1: Western Australian MPRs (established and proposed)¹

The New Horizons policy² has guided the establishment of MPRs since 1994 and aims to create a comprehensive statewide system of multiple-use MPRs. Amendments to the CALM Act in 1997 gave effect to the policy and established the framework in law.

Strategic objectives have been adopted which balance conservation with recreational, commercial, scientific and educational uses. The establishment of MPRs requires consultation with communities and stakeholders, and concurrence of the Minister for Fisheries, Minister for Mines and Petroleum, and the Minister for Environment. This approach aims to provide a system of MPRs that allows for multiple uses.

Marine parks must be zoned using 1 or more of 4 zone types (general use, special purpose, sanctuary and recreation) to manage usage. Management areas do not have to be zoned and

¹ The Integrated Marine and Coastal Regionalisation of Australia (IMCRA v4.0) is a spatial framework for classifying Australia's marine environment into bioregions that make sense ecologically and are at a scale useful for regional planning. These bioregions are the basis for the development of a National Representative System of Marine Protected Areas (NRSMPA). WA has 19 bioregions, Oceanic Shoals (OSS) is not in state waters.

² Government of Western Australia (1994). New Horizons in Marine Management. Department of Conservation and Land Management, Perth.

marine nature reserves are no take areas. These arrangements are detailed in individual management plans:

- general use areas cover around 1.5 million hectares (approximately 60%) of the MPR network and allow commercial and recreational fishing and other extractive activities
- special purpose areas cover over 450,000 hectares (approximately 18%) and allow more specific uses that are compatible with a conservation purpose for that area
- no take areas (i.e. marine nature reserves and marine park sanctuary areas) cover about 300,000 hectares of the MPR network and provide the highest protection for marine habitats and wildlife by excluding commercial, recreational fishing and other extractive activities. The area covered by sanctuary areas will increase to about 500,000 hectares (approximately 20%) when the zoning for Eighty Mile Beach, Lalang-garram/Camden Sound and Ngari Capes is in place. Sanctuary areas will then cover about 4% of WA's coastal waters
- recreation areas amount to around 60,000 hectares (approximately 2%) across the MPR network and allow for recreation activities (e.g. boating and recreational fishing). Recreational fishing must be compatible with other recreational purposes for the area. Activities such as commercial fishing, aquaculture, pearling and exploratory drilling are not permitted in these areas.

In 1998 the Commonwealth, State and Territory governments committed to establishing a National Representative System of Marine Protected Areas (NRSMPA) by 2012. The primary goal of the NRSMPA is to establish and effectively manage a comprehensive, adequate and representative system of MPRs:

- a comprehensive system is when all major bioregions have MPRs within them. In WA, 19 major bioregions have been identified in state coastal waters and a comprehensive, adequate and representative system will consist of a network of MPRs throughout the state
- adequate refers to the number, size, configuration, connectivity and level of protection of the MPRs within a bioregion
- MPRs need to be representative of the ecosystems within the bioregions. This means that all species of plants and animals found in WA waters will be represented somewhere in the MPR system.

Once established, 10-year management plans drive strategies and activities in MPRs (there are 12 management plans covering the 16 MPRs). These focus on ecological values (e.g. water quality, coral, finfish) and social values (e.g. seascapes, Aboriginal culture and heritage, marine nature-based tourism). Selected key values are key performance indicators (KPIs) of management effectiveness.

The Marine Parks and Reserves Authority (MPRA) oversaw the development of policy and management plans for each MPR and assessed implementation. In May 2016 the MPRA merged with the Conservation Commission to become the Conservation and Parks Commission.

DPaW is the lead agency responsible for the establishment and management of MPRs under the CALM Act. DoF is responsible for managing and regulating fishing, pearling and aquaculture in MPRs in accordance with the *Fish Resources Management Act 1994* (FRM Act) and the *Pearling Act 1990*. DoF is also responsible for administering marine reserve compensation processes under the *Fishing and Related Industries Compensation (Marine Reserves) Act 1997*.

Audit conclusion

WA has made good progress towards establishing a representative network of MPRs since 1994. Thirteen out of the 19 marine bioregions in WA will have MPRs once all Kimberley marine parks are established. Although a small number of ecological values are rated as being in an unsatisfactory condition, and there is increasing pressure on the marine environment, the overall health of MPRs is good.

The WA network is not yet comprehensive, adequate and representative as envisaged under the NRSMPA. Six bioregions do not have MPRs. Some MPRs have small sanctuary zones and there is a risk that these do not provide adequate protection for all representative habitats.

WA has a good practice system for managing MPRs based on developing, implementing and reviewing management plans for each. The majority of plans are comprehensive and outcome based, and the assessment process is robust.

There have been gaps in establishing MPRs and in implementing management plans. Additional restrictions on fishing in 6 MPRs and on other uses in another 4 have not been put in place, delaying enhanced protection measures. As the network has grown, DPaW has been unable to implement all key management strategies or monitor all values. Action in response to recommendations from MPRA reviews has in some cases not been timely.

Individually these issues do not present a significant immediate risk to the health of MPRs, but that risk will increase if these issues persist, particularly as the network expands, and pressures on the marine environment increase. To respond effectively, DPaW needs to prioritise funding and resources to emerging risks.

Key findings

Good progress has been made establishing MPRs but the network is not yet complete

WA has established 16 MPRs in 10 of the 19 bioregions identified under its commitment to the NRSMPA. Establishment of MPRs in a further 3 bioregions in the Kimberley is expected by the middle of 2017. Kimberley marine parks will cover about 25% of Kimberley waters, and double the size of the network to about 5 million hectares, about 40% of WA's coastal waters.

WA's network of MPRs is not yet comprehensive, adequate and representative:

- 6 bioregions do not have MPRs. Candidate areas were identified in these bioregions in 1994, but no timeline exists for establishing these MPRs. The south coast bioregion is also under-represented in the network
- MPRA assessments for Jurien Bay (2008), Shark Bay/Hamelin Pool (2010), Marmion (2012), and Shoalwater Islands (2014) have highlighted that sanctuary zones are too small and may not be providing adequate protection, as representative examples of all different habitat types are not included. The MPRA recommended zoning reviews in the assessments, but no timeframes have been set. Similar concerns have been raised in relation to Lalang-garram/Camden Sound. Its management plan recommends a zoning review after 5 years (in 2018).

There have been significant changes which affect the management of MPRs since the New Horizons policy was last updated in 1998. These include, the State committing to the NRSMPA, collaborative management arrangements between DPaW and DoF have improved and the MPRA and its scientific advisory committee no longer exist. DPaW should review New Horizons to ensure it remains a contemporary strategy for establishing and managing MPRs into the future.

Establishing MPRs can take a long time. It involves extensive planning, community and stakeholder consultation, and statutory processes. Negotiations and agreements to balance competing interests understandably take time, but establishment processes that stretch over many years delay the

introduction of protection measures. Delays can also undermine community and stakeholder support for MPRs:

- since 1997 the average time taken to plan, establish MPRs and approve management plans is about 6 years
- Lalang-garram/Camden Sound took 4 years while Ngari Capes took 10 years
- Dampier Archipelago Marine Park and Regnard Marine Management Area are yet to be established 16 years after planning started.

Zones in 4 MPRs and fishing restrictions in 6 are yet to be implemented, delaying the full level of protection:

- gazettal of fishing restrictions in Montebello Islands, Barrow Island and Rowley Shoals in 2008 and 2009 were revoked in all but the sanctuary zones in 2011. This was because prohibiting specific types of fishing in recreation and special purpose zones went beyond the power of the CALM Act, and some prohibited fishing activities did not reflect existing fisheries legislation
- problems with the CALM Act also delayed the gazettal of zoning in Ngari Capes, Lalang-garram/Camden Sound and Eighty Mile Beach. Although the management plans were approved in 2013 and 2014, the zoning schemes are not yet in force. This means activities that should be prohibited in zones are still allowed. For example, people can still fish in proposed sanctuary areas
- gazettal of seagrass and wildlife habitat protection zones in the Swan Estuary Marine Park are still to occur despite management plan approval in 2000. DPaW advised that resourcing constraints are the cause for the delay.

CALM Act amendments proclaimed in May 2016 provide the legislative basis for putting the zones and fishing restrictions in place.

Overall MPRs are in a good condition

Annual performance assessment reports in 2014-15 indicated that MPRs are in good condition and generally managed well. About 85% of the 164 ecological and social values had high management effectiveness ratings.

Walpole-Nornalup, Swan Estuary, Lalang-garram/Camden Sound, Rowley Shoals and Ngari Capes had high management effectiveness ratings for all values. Only 8 out of 164 values were in an unsatisfactory condition. Although there were some gaps in data, we found no evidence to dispute DPaW assessments. Performance assessments for each MPR are in Appendix 1.

A good management framework for MPRs is in place

DPaW has developed modern outcome-based management plans for the majority of MPRs. These plans set out objectives, prioritised management strategies, performance measures and targets for the management of ecological and social values in each MPR. This reflects good practice as it enables the assessment of management effectiveness.

There is a robust process for assessing the implementation of management plans. This involves annual, periodic (approximately every 5 years) and 10-year assessments. The MPRA had provided independent advice on the effectiveness of the MPRs in protecting the marine environment.

There is good cooperation between DPaW and DoF which assists the protection, monitoring and delivery of compliance activities within MPRs. This includes a memorandum of understanding between the agencies, an interdepartmental committee and the use of collaborative operational plans.

Both DoF and DPaW conduct patrols in MPRs to ensure compliance with zoning restrictions, permitted uses and other regulations. Both agencies encourage voluntary compliance through education and awareness raising activities. Between 2011-12 and 2014-15 the number of DoF detected offences (infringement warnings/notices and prosecutions) has increased significantly from 501 to 1,079. Ninety-two percent of offences in 2014-15 were in Marmion, Jurien Bay, Ngari Capes, Shoalwater Islands and Ningaloo. Key reasons for the rise in detected offences are increased visitation and a more risk based approach to patrols, although the total number of patrols in Shark Bay/Hamelin Pool, Shoalwater Islands and Ningaloo in particular have declined.

Not all aspects of the management framework have been implemented in all MPRs

Implementing management plans for 16 MPRs is a large and complex task and some management activities have not been implemented. While this does not present a significant immediate risk to the health of MPRs, the risk will increase if these issues persist:

- five of the 12 management plans are more than 10 years old. Although plans remain in force until replaced by new approved management plans, the 3 oldest are not outcome based (Marmion, Shark Bay/Hamelin Pool, Swan Estuary), and the MPRA believed the plans do not adequately address changing pressures and management priorities in these MPRs
- two MPRA assessments of MPRs were overdue and some recommendations from previous assessments have not been actioned in a timely way. Periodic assessments for Montebello/Barrow islands and Walpole-Nornalup are overdue by 3 years and 1 year respectively. Nine of 40 (22%) annual MPRA recommendations are yet to be actioned by DPaW. Two significant recommendations were from 2007-08. These were the development of new outcome-based plans and zoning reviews for Shark Bay/Hamelin Pool, Jurien Bay and Marmion
- key management strategies are critical for achieving objectives to protect ecological and social values. Ninety-one percent of key management strategies were implemented across all MPRs in 2014-15. The remaining 9% have not commenced
- in 2014-15 DPaW reported that it had insufficient data for 33% of ecological and social values. Over time this can reduce the level of confidence in management effectiveness ratings. Where little or no data is available, staff rely on their observations from patrols to help inform assessments.

DPaW's capacity to prioritise resources to risks across the MPR network is limited. The main constraints are tied funding to a specific MPR and no clear process for prioritising funding and resources across the MPR network. These limit DPaW's responsiveness to changed pressures and conditions and is a longer-term risk as the network and pressures grow.

There is no consistent approach for tracking staff effort and management costs across all MPRs. Tracking these costs would improve DPaW's understanding of resource requirements for existing and new MPRs, and enable the Conservation and Parks Commission to assess the effort made in the implementation of MPR work plans.

Recommendations

The Department of Parks and Wildlife and Department of Fisheries should by December 2016:

1. Arrange gazettal of:
 - a. zoning schemes in Ngari Capes, Lalang-garram/Camden Sound, Eighty Mile Beach and Swan Estuary
 - b. outstanding fishing restrictions in Ngari Capes, Lalang-garram/Camden Sound, Eighty Mile Beach, Montebello Islands, Barrow Island and Rowley Shoals.

The Department of Parks and Wildlife and Department of Fisheries should by June 2017:

2. Develop a more flexible management model for MPRs that prioritises resources and funding to the most at risk areas, and where there are increasing pressures and management concerns for ecological and social values.
3. Ensure a consistent approach across all MPRs for recording staff time and costs associated with implementing management strategies and managing values.
4. Review monitoring and research programs to ensure:
 - a. resources and funding is directed to priority and at risk ecological values where there is insufficient data and knowledge gaps
 - b. performance measures and targets are developed for priority and at risk social values.

The Department of Parks and Wildlife and the Conservation and Parks Commission should by December 2016:

5. Conduct a risk assessment on the currency and adequacy of management plans that have exceeded the 10-year lifespan in order to prioritise the preparation of new management plans.

The Department of Parks and Wildlife and the Conservation and Parks Commission should by June 2017:

6. Review the New Horizons policy to ensure it remains a contemporary strategy for managing MPRs.
7. Publish a report card on the health of all MPRs on a periodic basis.