



Marine Estate
Management Authority

Marine protected areas

WITHIN THE NSW MARINE ESTATE – THEIR ROLE & PURPOSE



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More information

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Disclaimer: The information contained in this publication is based on knowledge and understanding at the time of writing (August 2017). However, because of advances in knowledge, users are reminded of the need to ensure that the information upon which they rely is up to date and to check the currency of the information with the appropriate officer of the Department of Primary Industries or the user's independent advisor.

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MINISTERS' FOREWORD

The NSW Government is committed to better management of the state's marine environment, one of our greatest natural assets that is highly valued by locals and tourists alike. The 'NSW marine estate' includes our marine waters, estuaries and coasts – that provide recreation and enjoyment, contribute to our quality of life and are of social, economic, cultural and ecological importance to the people of NSW.

Our vision for the NSW marine estate is for a healthy coast and sea managed for the greatest wellbeing of the NSW community, now and into the future.

The statement reaffirms the NSW Government's commitment to maintaining the existing comprehensive network of marine protected areas in NSW and improving their management, within holistic management arrangements for the entire marine estate. Marine protected areas are an important management tool to address priority threats, identified via a robust evidence-based threat and risk assessment, to marine and estuarine habitats and biodiversity and to the social and economic benefits we derive from the NSW marine estate.

The statement clarifies the future role and purpose of marine protected areas in marine estate management, which will be informed by the objects and requirements of the *Marine Estate Management Act* and the application of the Authority's new five-step decision-making process.

The NSW Government will ensure that there is early and effective engagement with the community on any new proposals or the review of existing marine protected areas, to better understand the costs, benefits and implications of any such decisions.

The NSW Government is pleased to endorse this policy statement, on the advice of the Marine Estate Management Authority. We look forward to continuing to work with the NSW community to deliver improved, evidence-based management of our State's marine protected area network.



The Hon. Niall Blair, MLC
Minister for Primary Industries

The Hon. Gabrielle Upton, MP
Minister for the Environment

INTRODUCTION

The Marine Estate Management Authority (the Authority) is responsible for providing advice to the NSW Government on the management of the NSW marine estate. This policy statement outlines the views of the Authority on the role and purpose of marine protected areas in managing the marine estate. This policy statement supersedes the former NSW Government policy paper *Developing a representative system of marine protected areas in NSW – an overview* (November 2001) and builds on the *NSW Government Response to the Independent Scientific Audit of Marine Parks in NSW* (March 2013) and the Authority's *Managing and the NSW Marine Estate: Purpose, Underpinning Principles and Priority Settings* (November 2013).

What is a 'marine protected area'?

For the purposes of this policy statement 'marine protected area' is a term encompassing marine parks and aquatic reserves already established or which may be established under the *Marine Estate Management Act 2014*. The term also encompasses areas of national parks and nature reserves established under the *National Parks and Wildlife Act 1974* within the boundaries of the NSW marine estate.

MARINE PROTECTED AREAS IN NSW

Current NSW marine protected areas (Figure 1) include:

- Twelve aquatic reserves – which cover around 2,000 hectares of the NSW marine estate
- six multiple use marine parks - which cover around one third (approximately 345,000 hectares) of the NSW marine estate
- national parks and nature reserve areas occurring below the astronomical high tide level – which include around 20,000 hectares of estuarine and oceanic habitats.

In NSW, marine parks and aquatic reserves are declared under the *Marine Estate Management Act 2014* and managed by the NSW Department of Primary Industries (DPI). National park and nature reserve areas are declared under the *National Parks and Wildlife Act 1974*. The National Parks and Wildlife Service undertake the day-to-day management of these areas.

Marine protected areas currently operate by regulating activities in a prescribed area and implementing a range of non-regulatory programs (education, research etc.) that together aim to reduce the threats and risks to biological diversity, and/or to meet community values of scientific research, public appreciation and enjoyment and/or Aboriginal cultural uses.

Figure 1. The current NSW network of marine protected areas.



KEY POINTS



The NSW Government is committed to maintaining the existing system of marine parks in NSW and improving the management of the protected area network, within holistic management arrangements for the marine estate.



The NSW Government is committed to enhancing the protection of biodiversity in the gaps identified in the 2012 *NSW Independent Scientific Audit of Marine Parks in NSW* and will assess mechanisms for enhancing the protection of biodiversity in those identified gaps, namely within the Hawkesbury and Twofold Shelf marine bioregions¹ (see Figure 1 for the location of these bioregions).



The future role and functions of marine protected areas in marine estate management will be informed by the objects and requirements of the *Marine Estate Management Act 2014* and the application of the Authority's five-step decision-making process (see below).



The Authority recognises that marine protected areas are one of a number of complementary management tools that can be applied to maximise community benefits (e.g. intrinsic and bequest values, cultural heritage values, resource sharing and use) and to respond to priority threats and risks to the NSW marine estate.



When considering new, or undertaking a review of existing marine protected areas, the Authority will ensure there is early and effective engagement with the community to better understand the costs, benefits and implications of any management decisions.

CONTEXT

In 2011, the NSW Government commissioned an Independent Scientific Audit of Marine Parks in NSW (the Audit) (Beeton et al. 2012). The Audit made two overarching recommendations aimed at bringing management of the coast and seas (the NSW marine estate) under one coordinated, whole of government structure (the Authority) advised by an independent panel of experts (the Marine Estate Expert Knowledge Panel). Further recommendations included:

- the need to assess potential threats and risks to the marine estate as a driver of management responses (Rec 5)
- marine planning is required to incorporate properly constituted cost–benefit evaluations that cover all values into decision-making frameworks, and that these be in conjunction with appropriate social impact assessments, including zoning and management processes (Recs 7-9)
- that the current system of marine parks be maintained and mechanisms found for enhancing the protection of biodiversity in the identified gaps – the Hawkesbury and Twofold shelf marine bioregions (Rec 2)
- well directed research should be commissioned to address information shortcomings, ensuring social and economic data is incorporated into decision-making (Rec 4.1)
- the performance of the marine park system should be assessed against its primary objectives of conserving biodiversity and maintaining ecosystem integrity and function (Rec 4.5)
- better integration of land-use planning regulations with marine park management (Recs 9 and 11)
- local Indigenous knowledge and expertise of land and sea management to be explicitly

¹ Recommendation 2 of the NSW Independent Scientific Audit of Marine Parks in NSW (Beeton et al. 2012).

incorporated into the establishment and ongoing management of NSW marine parks (Rec 10).

- the need to take an holistic approach to the management of the marine estate (Recs A and B in Beeton et al. 2012²).

The NSW Government's response to the Audit established a coordinated, holistic, triple bottom line approach to the management of the NSW marine estate that aims to balance the environmental, social and economic benefits (termed "community benefits") derived from it (NSW Government, 2013). The NSW Government proposed the development of new legislation (the *Marine Estate Management Act 2014*), a threat and risk assessment framework to help guide the articulation of the main threats and level of risk to the social, economic and environmental benefits of the NSW marine estate (completed, MEMA 2015) and the development of a 10 year statewide strategy to respond to these threats and to inform marine estate management at the bioregion and local scale.

The NSW Government further stated that threat and risk assessments would inform marine park planning and management and that "The role of marine parks and other marine protected areas in overall management of the marine estate will be adjusted over time... to achieve the best possible alignment with other marine management programs and a significantly more coordinated... approach to managing the marine estate".

NSW MARINE ESTATE MANAGEMENT ACT 2014

The *Marine Estate Management Act 2014* (the Act) requires the NSW marine estate to be managed to:

- be consistent with the principles of ecologically sustainable development
- promote a biologically diverse, healthy and productive marine estate
- facilitate economic, social, cultural, scientific and environmental opportunities
- be informed by a statewide threat and risk assessment and guided by the Marine Estate Management Strategy
- promote the coordination of functions by public authorities
- provide for the declaration and management of a comprehensive system of marine protected areas.

The Act replaces the *Marine Parks Act 1997* and also includes the provisions for aquatic reserves, formerly contained with the *Fisheries Management Act 1994*. It focuses on management of the NSW marine estate as a whole and seeks to integrate marine parks, aquatic reserves and other management programs to deliver the overall objects of the Act.

MANAGING THE NSW MARINE ESTATE

Based on the Audit and the NSW Government response, the Authority adopted a vision for the NSW marine estate "to have a healthy coast and sea, managed for the greatest wellbeing of the community, now and into the future".

The Authority, based on advice from the independent expert panel, developed ten underpinning principles for managing the NSW marine estate and a five-step decision-making process to develop management responses which would maximise community benefits from the marine estate (MEMA, 2013), at the state, regional and local level.

The **five steps** are:

1. identify how the community benefits from the marine estate
2. assess threats and risks to benefits
3. assess management options to maximise benefits
4. implement preferred management options; and

² Further detail on the Audit's recommendations can be found in Beeton et al. (2012)

5. be accountable.

- Step 1** allows the community to define the community benefits they derive from the NSW marine estate at the statewide, regional and/or local scale, preferably using a scientifically robust social research methodology. The Marine Estate Community Survey (Sweeney Research, 2014) is an example of the application of this approach at the statewide scale. The Hawkesbury Shelf Marine Bioregion Assessment background report – Summary of Hawkesbury Shelf Community and Stakeholder Engagement (MEMA, 2016) is an example at the marine bioregion scale.
- Step 2** allows the threats and associated risk levels to those community benefits to be determined, utilising independent and departmental knowledge and expertise and incorporating community feedback. The threat and risk assessment can be used to analyse the threats and risks to biodiversity and likely flow on impacts to the social and economic values of marine parks. Existing management programs, including marine protected areas, are considered in determining risk levels.
- Step 3** involves a review of current management responses to determine if the priority threats and risks can be tolerated or where further action is needed to reduce them and to enhance community benefits.
- Step 4** involves an assessment of the management responses available to reduce the priority threats and risks to determine those that are most effective at reducing risks and are cost-effective. If marine protected areas are identified as one of the management responses that can best address the priority threats and risks, CAR³ principles will be considered in assessing the design options for these areas.
- Step 5** involves ongoing monitoring, evaluation and reporting to ensure that the design and implementation of management responses, which may include marine protected areas, are achieving their intended management objectives in maximising community benefits and reducing priority threats and associated risk levels over time. This step includes consideration of whether scientific reference sites are required for monitoring activities and management settings within the marine estate.

The application of the five-step process aims to take account of ecological threats and risks, economic and social considerations and evaluation, and improve public communication and engagement processes (MEMA, 2013). As with all management responses, including marine protected areas, their design will consider intentional and unintentional impacts on users of the NSW marine estate, including social and economic benefits derived by commercial and recreational fishing, boating, passive recreational uses (swimming, snorkelling, SCUBA diving etc.) and eco-tourism etc. These impacts (implications) are explicitly assessed when considering management responses via the application of the *Guidelines for Assessing Management Options for the NSW Marine Estate* (MEMA, 2017).

The efficiency and cost-effectiveness of marine protected areas will also be assessed against other forms of risk management responses (such as catch-and-release fishing, bag and size limits, regulation of fishing gear, fishing closures under the *Fisheries Management Act 1994* etc.).

Under the Act, the NSW Government has a statutory requirement to undertake community consultation on management plans and any proposed changes to management rules for marine parks and aquatic reserves.

³ CAR principles - Comprehensiveness: marine protected areas will include the full range of ecosystems recognised at an appropriate scale within and across each bioregion; Adequacy – marine protected areas will have the required level of reservation to ensure the ecological viability and integrity of populations, species and communities; Representativeness – those areas selected for inclusion in marine protected areas should reasonably reflect the biotic diversity of the marine ecosystems from which they derive. Source: ANZECC TFMPA (1999). Strategic Plan of Action for the National Representative System of Marine Protected Areas: A Guide for Action by Australian Governments. Australian and New Zealand Environment and Conservation Council Task Force on Marine Protected Areas. Environment Australia, Canberra.

PURPOSES OF MARINE PROTECTED AREAS

Under s.22 of the Act, the primary purpose of a **marine park** is to conserve the biological diversity and maintain ecosystem integrity and ecosystem function, of bioregions in the marine estate.

Under s.33 of the Act, the primary purpose of an **aquatic reserve** is to conserve biological diversity, or particular components of biological diversity (such as specific ecosystems, communities or species), in a specified area of the marine estate.

The secondary purposes for both are, where consistent with the primary purpose:

- to provide for the management and use of resources in a manner that is consistent with the principles of ecologically sustainable development
- to enable the park or reserve to be used for scientific research and education
- to provide opportunities for public appreciation and enjoyment
- to support Aboriginal cultural uses of the park or reserve.

BENEFITS OF MARINE PROTECTED AREAS

Depending on their design, marine protected areas can:

- conserve and enhance ecological function values of marine ecosystems
- maintain biodiversity in the marine estate
- protect unique habitats and species of high conservation value, including rare, threatened or depleted species
- conserve indirect economic benefits (intrinsic and bequest benefits) in particular areas of the marine estate
- conserve and protect Aboriginal cultural, geological and heritage sites
- provide economic opportunities for nature-based tourism and recreational activity
- help increase ecosystem resilience by limiting extraction and use
- develop community and education opportunities to discover and interact with the marine environment
- address resource use conflicts by providing designated areas for specific uses e.g. areas available for recreational fishing and no-take areas for passive users such as snorkellers, divers and swimmers
- provide reference areas for research or monitoring based on the absence of all or selected extractive activities
- assist in increasing resilience of biodiversity and habitats to climate change depending on the spatial extent, location and accompanying management regulations within the marine protected area being appropriate to the task. Increased resilience of populations in marine parks relative to non-marine park areas has been demonstrated in several cases (IUCN, 2016)^{4 & 5}
- show increased size and abundance of commonly fished species inside no-take zones, which infers direct benefit to non-extractive recreation in those areas and possible benefit to fisheries outside the sanctuaries

⁴ In relation to mitigating physical changes to ocean acidification, temperate and currents, a recent paper by IUCN states that “MPAs (marine protected areas) will have relatively little, if any, concrete and significant influence”. However, in development of the mitigation role of MPAs, the ocean is a critical carbon sink, a significant increase in large offshore marine protected areas would be required and for coastal seagrasses, saltmarshes and mangroves, MPAs which can ensure a significant reduction in fishing effort especially for species which vertically migrate, may assist with carbon sequestration over time (IUCN 2016). In relation to adaptation, IUCN suggests that MPAs can bring interested parties together to develop and implement management measures to maintain ecosystem resilience, can manage human activities to reduce pressures on the environment and provide a network for scientific observations and connectivity between habitats.

⁵ Beeton *et al.* (2012) also assessed climate change and found “The current arrangement in NSW, where marine parks are located within multiple bioregions separated along a latitudinal axis, is an appropriate precautionary planning response to the climate change threat especially if placed within the context of an approach to managing the entire NSW marine estate” (p.28).

COSTS & IMPLICATIONS

While marine protected areas have many benefits, like any new regulation or management response, they also involve costs and implications. Any future expansion of the current system of marine protected areas involving no-take areas will be supported by those sectors of the community that recognise their value in delivering the functions outlined above, but may also be contested by those stakeholders whose social, cultural and/or economic benefits are directly impacted. Trade-offs and other implications are assessed to maximise community benefits.

Costs and implications may include:

- buy-out costs to compensate commercial operators for loss of access and use
- reduction in shareholder value in commercial fisheries via the loss of access to fishing grounds
- reductions in or loss of access to locally sourced seafood
- spatial displacement of commercial and recreational fishing and recreational boating to other areas, which may result in increasing threats and risks in other localities (e.g. resource use conflict, overcrowding, reductions in fish assemblages)
- loss of enjoyment and wellbeing for those affected by restrictions on access and use
- loss of access to existing safe boating and fishing areas
- reducing Aboriginal access to cultural fishing and traditional practices, particularly in no-take areas
- disadvantaging the poor, disabled and elderly who lack the mobility to find alternative shore-based fishing access
- costs associated with the development and implementation of management plans and the introduction of new zone boundaries and management rules (management, research, education and compliance)
- costs to users to undertake commercial, research and organised activities and to obtain permits.

FINDING THE BALANCE

Marine protected areas are one management response to threats and risks to environmental, social and economic community benefits, as part of a coordinated management approach. They can directly address certain environmental, economic, and social threats, typically those that can be regulated within the boundary of the marine protected area itself. These include harvesting, loss of biomass, wildlife interactions and disturbance, fishing related marine debris, climate change and resource use conflict stressors. Some of these stressors can also be addressed by alternative and/or complementary management options such as fisheries management regulations, education programs, and land-use planning provisions.

As with any other regulatory tools, their selection as the most appropriate tool will be based on an evaluation against other possible options to determine the most effective option at reducing risk(s) and cost-effective in terms of maximising community benefits and reducing the risk level of the threat, including the level of cumulative threat. This evaluation would reflect that marine protected areas are to be established for a range of purposes provided that they are consistent with their primary purpose (conserving the biological diversity and maintaining ecosystem integrity and ecosystem function, of bioregions in the marine estate). The evaluation would take into account that, like all other risk management responses, there are strengths as to what can be achieved through marine protected areas, but there are also limits. For example, while marine protected areas are effective at managing specific threats to ecosystems, they are less effective in dealing with off-site impacts, such as land-based run-off, water pollution, litter and marine debris, erosion, legacy issues (e.g. contamination, habitat loss, reclamation), overcrowding, marine pests etc.

In selection and design of marine protected areas, the Authority will ensure there is transparent assessment of both the benefits marine protected areas provide, and their associated costs and implications.

The Authority also recognises that maximising community benefits while addressing priority threats and risks is generally best managed by applying a suite of coordinated management responses. In some cases, the most appropriate (effective and cost-effective) response to a particular threat may be through the rules and zonings that can be set in marine protected areas. Marine protected areas can be used to manage multiple threats in a particular area and this could allow other management programs to be scaled back in other areas.

In other instances, risks may be best reduced through other management responses including water quality management strategies, marine pest management, marine debris and litter reduction campaigns, habitat rehabilitation, reducing red tape and providing opportunities for improved access and use. The decision to use any particular combination of management responses should be based on the estimated degrees of risk reduction, the specifics of the community benefits and threats and risk levels identified and cost-effectiveness of the response(s) (via Steps 1 to 4 above).

FUTURE MANAGEMENT

The Authority will oversee the development of a single statutory 'management plan' for the effective management of each marine park and aquatic reserve (or reserve networks), starting with the Solitary Islands and Batemans Marine Parks. A single management plan will replace the current separate zoning and operational plans and be informed by the five-step process outlined above. Each management plan will clearly document the management objectives, and strategies including zoning, compliance, education and communications, intended to deliver on the management objectives. A stronger emphasis on performance monitoring and assessment of management activities will be a key feature of this approach.

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