

## chapter fourteen



Australian Commonwealth  
marine reserves

# Introduction

Australia has the third largest marine area of any country in the world. It contains extremely high levels of biodiversity, including the world's largest areas and highest species diversity of tropical and temperate seagrasses, the world's largest coral reef system, diverse mangrove species and high levels of endemism.

The main pressures facing Australia's marine area are fishing, introduced marine pests and diseases, tourism, recreation, pollution and sedimentation.

Australia has taken a particularly progressive approach towards the development of marine protected areas, and although the initiatives have not always been a complete success, it now has a relatively well-developed and robust network. In addition, the Commonwealth government currently has plans to develop the world's largest marine protected area in the Coral Sea, off the north-east coast of Australia.

Generally, the State and Territory governments have responsibility for the establishment and management of marine protected areas out to three nautical miles, whilst the Commonwealth government manages the area extending from the State or Territory limit to the edge of the Australian exclusive economic zone.

The key aspects of the Commonwealth government's approach to the creation and management of marine protected areas are set out in this chapter. This review has been based on a desk top study of relevant literature available from the internet including websites, reports and journal articles.

## Context

### *Economic context*

Australia's marine estate provides an estimated A\$44 billion per year in revenue. Recent analysis by the Commonwealth government identifies the following activities as the most important sources of marine revenue in Australia: offshore oil and gas exploration and production (A\$24.2 billion per year), marine tourism (A\$11.1 billion per year), boat building, repair and maintenance and infrastructure (A\$6.4 billion per year), and commercial fishing and aquaculture (A\$2.3 billion per year).<sup>1</sup>

The Australian Centre for Policy Development has estimated that marine ecosystem services provide an additional A\$25 billion per year to the Australian economy. Included in this figure is the A\$1.85 billion spent by recreational fishers on fishing-related activities and equipment. Approximately 19.5 per cent of Australians

over the age of five fish at least once a year. Also included are a range of non-market benefits, such as the contribution of the ocean to Australian culture, sport and recreation, regulation of carbon dioxide, and control of pests and diseases.<sup>2</sup>

### *History of marine protection*

There are currently 27 Commonwealth reserves in Australia (including the Great Barrier Reef Marine Park which is managed by the Great Barrier Reef Marine Park Authority). These include the south-east Commonwealth marine reserve network, which itself comprises 14 marine protected areas, covering 226,458 square kilometres. Some of the Commonwealth reserves (such as the Great Australian Bight Marine Park and the Ningaloo Marine Park) cover both State and Commonwealth waters, and so are managed through cooperative arrangements. The south-east Commonwealth reserves network was created subsequent to the completion of the south-east regional marine plan. Within the network, 42 per cent of the total area is designated 'sanctuary zone', and is managed for scientific research and passive uses. Thirty-six per cent of the network is designated 'special purpose zone' and is closed to commercial fishing. Twenty-one per cent of the network is multiple use, where low impact fishing methods and activities are permitted. The remaining one per cent comprises a 'benthic sanctuary zone' and a 'recreational use zone' where some fishing is permitted in accordance with regulations.

## **Legislative Framework**

### *Environment Protection and Biodiversity Conservation Act*

Under the Environment Protection and Biodiversity Conservation Act 1999, Commonwealth marine areas are 'matters of national environmental significance'. This means that proposed activities in the marine area which will, or are likely to, have a significant impact on the environment must be referred to the Environment Minister and must undergo an environmental assessment and approval process.

Australia's definition of a marine protected area is: "*An area of... sea especially dedicated to the protection and maintenance of biological diversity and of natural and associated cultural resources, and managed through legal or other effective means*".<sup>3</sup> Outside State and Territory waters, marine protected areas take the form of 'Commonwealth reserves.' The Governor General is authorised to create Commonwealth reserves in the marine area by the Act. The legislation also

empowers the Governor General to create ‘conservation zones’ for the purpose of protecting biodiversity in an area whilst it is being assessed for inclusion in a Commonwealth reserve.

Under the Act, the Governor General can declare a Commonwealth reserve in an area of sea that is:

- In a ‘Commonwealth marine area’ – which essentially comprises the area from the edge of State and Territory coastal waters (normally three nautical miles from the coast) out to 200 nautical miles from the coast
- An area outside Australia, which Australia has international obligations to protect under an agreement with one or more other countries

A Commonwealth reserve includes the seabed under the declared sea area. The declaration can also include in the reserve the subsoil of the seabed (to a depth stated in the declaration).

### *Declaration process*

The process leading to the declaration of a Commonwealth reserve under the Environment Protection and Biodiversity Conservation Act is shown in Figure 14.1:<sup>4</sup>

#### **Figure 14.1: Process to declare an Australian Commonwealth reserve**

1. The Director of National Parks publishes a notice inviting the public to comment on the proposal to declare a Commonwealth reserve over the area, allowing a minimum period of 60 days for comments. This notice includes a statement of the proposed name of the reserve, the proposed boundaries of the reserve and any zones within the reserve, the purpose for which the reserve is to be declared, the management category that the reserve (and any zones) will be assigned to, and the purposes for which it is intended to manage and use the reserve.
2. Any native title holders, registered native title claimants and native title representative bodies for the area are notified of the proposed declaration, and given an opportunity to comment, in accordance with the requirements of the Native Title Act 1993.
3. The Director of National Parks provides the Minister for Sustainability, Environment, Water, Population and Communities (the Minister) with a report on the Commonwealth reserve proposal. The report must include any comments received and the Director’s views on the comments.
4. If necessary a regulation impact statement examining any impacts that declaration of the proposed Commonwealth reserve would have on business is prepared.
5. The Minister considers the report from the Director of National Parks.

6. The Minister decides not to proceed and thus the declaration process ends here or the Minister is satisfied a reserve should be established and the Governor General is advised accordingly.
7. The Governor General makes a Proclamation declaring the area to be a Commonwealth reserve. The proclamation names the reserve; states the purposes for which it is declared; states the depth of any seabed included in the reserve; and assigns the reserve to a management category.
8. The Proclamation is registered on the Federal register of legislative instruments.

## Management

The management measures implemented in Commonwealth reserves, and consequently the level of protection from human activity, vary depending on the particular feature identified for protection. As a result, some areas allow multiple uses and some are no-take zones. An individual Commonwealth reserve may contain a number of different areas permitting different levels of activity.

The Environment Protection and Biodiversity Conservation Act (and the Environment Protection and Biodiversity Conservation Regulations 2000) require that each reserve, and zone within it, should be allocated to a particular management category. The Commonwealth government has essentially adopted the IUCN's set of seven management categories (although the numbering system is different). The categories are not arranged in a hierarchy of levels of protection, but describe the purpose of protection for a particular area, and the types of activity that will be permitted in that area. Figure 14.2 sets out the categories and their functions.<sup>5</sup>

The Director of National Parks is the statutory authority directly responsible for managing marine protected areas as specified by the Environment Protection and Biodiversity Conservation Act. The Director carries out his/her responsibilities assisted by Parks Australia, which is a division of the Department of the Environment. The Marine and Biodiversity Division of the Department is responsible for the management of Commonwealth marine protected areas on behalf of the Director of National Parks.

**Figure 14.2 Categories for Australian Commonwealth reserves compared to IUCN categories**

Australian Category No.	Type of Area	IUCN	Explanation
1	Strict nature reserve	Ia	Managed primarily for scientific research or environmental monitoring
2	Wilderness area	Ib	Protected and managed to preserve its unmodified condition
3	National park	II	Protected and managed to preserve its natural condition
4	Natural monument	III	Protected and managed to preserve its natural or cultural features
5	Habitat/species management area	IV	Managed primarily, including (if necessary) through active intervention, to ensure the maintenance of habitats or to meet the requirements of specific species
6	Protected landscape/seascape	V	Managed to safeguard the integrity of the traditional interactions between people and nature
7	Managed resource protected area	VI	Managed to ensure long-term protection and maintenance of biological diversity with a sustainable flow of natural products and services to meet community needs

Under the Environment Protection and Biodiversity Conservation Act, all Commonwealth reserves must have a management plan. These are prepared by the Director of National Parks, with public input, and approved by the Minister for the Environment. Management plans can last up to ten years. The plans provide for the protection and conservation of the Commonwealth reserve. They must set out how it is to be managed, what activities will be allowed within the reserve, and how they must be carried on. Management must be consistent with the relevant management principles.<sup>6</sup>

The management plan of each Commonwealth reserve generally specifies if a permit is required in order to carry out a particular activity. The Environment Protection and Biodiversity Conservation Act (and division 12 of the Environment Protection and Biodiversity Conservation Regulations) prohibits some activities being carried out in a Commonwealth reserve unless they are expressly provided for by a management plan for the area. These include actions that affect native

species such as scientific research, commercial fishing, mining operations and other commercial activities.

Permits are issued by the Director of National Parks, apart from in respect of mining, where applications must be addressed to the Governor General. The Director of National Parks also has the discretion to vary, revoke or cancel a permit.

The Environment Protection and Biodiversity Conservation Act forms an overarching framework for the management of Australia's environment and so other parts of the legislation can also be relevant to activities in a Commonwealth marine protected area. Under the Act, actions that have a significant impact on a 'matter of national environmental significance' will be subject to the assessment and approval provisions set out in the Act.

'Matters of national environmental significance' include the environment in a Commonwealth marine area and some specified threatened or migratory marine species. Applications to undertake activities which have a significant effect on the marine area, or the listed species, may therefore be subject to an additional decision-making process.

The Act provides for a number of assessment approaches, and the Commonwealth Environment Minister decides on the most appropriate one, depending on the significance of the project and how much information is already available. Each option involves considering information assembled by the proponent and comments made by the public.<sup>7</sup>

## **Commonwealth marine protected areas program**

Although the creation and management of marine protected areas within Australian waters is the responsibility of various government bodies, the Commonwealth government has put in place measures to coordinate them into a coherent marine protected area network. The 'Commonwealth marine protected areas program', initiated in 1991, is intended to develop a national representative system of marine protected areas across Commonwealth, State and Territory jurisdictions.

The primary goal of the programme is *"to establish and manage a comprehensive, adequate and representative system of marine protected areas to contribute to the long-term ecological viability of marine and estuarine systems, to maintain ecological processes and systems, and to protect Australia's biological diversity at all levels."*<sup>8</sup>

The following secondary goals are designed to be compatible with the primary goal:

- To promote the development of marine protected areas within the framework of integrated ecosystem management
- To provide a formal management framework for a broad spectrum of human activities, including recreation, tourism, shipping and the use or extraction of resources, the impacts of which are compatible with the primary goal
- To provide scientific reference sites
- To provide for the special needs of rare, threatened or depleted species and threatened ecological communities
- To provide for the conservation of special groups of organisms, e.g. species with complex habitat requirements or mobile or migratory species, or species vulnerable to disturbance which may depend on reservation for their conservation
- To protect areas of high conservation value including those containing high species diversity, natural refuges for flora and fauna and centres of endemism
- To provide for the recreational, aesthetic and cultural needs of indigenous and non-indigenous people.

The 'Marine Protected Areas Working Group' is a national committee tasked with coordinating the development of policy and planning related to the establishment of the national representative system of marine protected areas. The working group is a subsidiary body of the Natural Resource Management Ministerial Council, which was set up to promote integrated management of natural resources in ways which would not otherwise be possible because of the obstacles caused by the constitutional division of powers in Australia.<sup>9</sup> Members of the working group are from Commonwealth, State and Territory agencies responsible for marine conservation and fisheries management.

Since 1992, the working group and its predecessors have been developing a planning and policy framework to support the development of the national

representative system of marine protected areas. In addition, the group provides technical assistance to individual jurisdictions. Although the working group provides assistance with policy coordination, it remains the responsibility of each jurisdiction to identify and establish marine protected areas within waters under its control. The working group has developed a national framework for the marine protected area system.

Individual marine protected areas which are included in the national system must have the following characteristics:

- Has been established especially for the conservation of biodiversity (consistent with the primary goal of the national representative system of marine protected areas)
- Is able to be classified into one or more of the six IUCN protected area management categories reflecting the values and objectives of the marine protected area
- Must have secure status which can only be revoked by a Parliamentary process
- Contributes to the representativeness, comprehensiveness or adequacy of the national system

The working group is guided by a number of principles for identifying and developing the network. Firstly, the planning framework uses ecosystems as the basis for determining representativeness, setting out a spatial framework for classifying Australia's marine environment into bioregions that make sense ecologically, and are at a scale that is useful for regional planning.<sup>10</sup> The working group aims to ensure that the full range of ecosystems is recognised at the appropriate scale within the network, with adequate levels of protection to ensure the ecological viability of the ecosystem. The network is required to include some highly protected areas (i.e. those in IUCN Categories I and II). The working group is also guided by the notion that the processes of identification and selection of marine protected areas should include effective and high quality public consultation with appropriate community and interest groups, addressing current and future social, economic and cultural issues.

These principles are given effect in the 'guidelines for establishing the national representative system of marine protected areas',<sup>11</sup> which are intended to assist government agencies to develop their marine protected areas in a way which can

contribute to the development of the national system. The strategic plan of action for the national marine protected area system<sup>12</sup> was drafted in 2001, and sets out how the aims of the national marine protected area system will be achieved.

The basis of the plan of action was that the Commonwealth government would first identify the marine bioregions that could inform regional planning. Then each jurisdiction would develop priorities for its particular region, using analysis of gaps, values, threatening processes and other factors such as socio-economic criteria.<sup>13</sup> The jurisdictions would use these identified priorities to help them identify candidate areas within regions, consulting with other jurisdictions where appropriate. Consistency of approach is the responsibility of the working group.

The government has invested significant resources into classifying Australia's marine environment into bioregions. It uses a spatial framework called the 'integrated marine and coastal regionalisation of Australia'. The classification process sets out ecosystem boundaries and processes, and assists marine managers in understanding the specific management needs of particular ecosystems. The bioregions thus provide the basis for design of the network of marine protected areas.

## Marine bioregional planning

Since 2005, when regional marine planning was brought under the Environment Protection and Biodiversity Conservation Act, the national representative system of marine protected areas programme has been incorporated into the marine bioregional planning process. Plans for the marine area are now created as bioregional marine plans under section 176 of the Act. Under the new approach, the Minister for Sustainability, Environment, Water, Population and Communities is responsible for making marine bioregional plans for large parts of the Commonwealth's marine area, with the National Oceans Office overseeing the creation of the plans.

Section 176 of the Act provides that a bioregional plan may include provisions about:

- The components of biodiversity, their distribution and conservation status
- Important economic and social values
- Heritage values of places

- Objectives relating to biodiversity and other values
- Priorities, strategies and actions to achieve the objectives
- Mechanisms for community involvement in implementing the plan
- Measures for monitoring and reviewing the plan

In broad terms, the bioregional plans set out the Australian government's objectives for conservation and environmental management measures such as marine protected areas, listed marine species protection and sustainable fisheries. The purpose of the marine plans is to guide the Minister, sectoral managers and industry about the key issues and priorities in the region, rather than to act as a regulatory tool.<sup>14</sup>

The plans do not have the status of regulations, but the Commonwealth Environment Minister must have regard to a bioregional plan when granting environmental approvals under the Environment Protection and Biodiversity Conservation Act. These approvals are required for 'matters of national environmental significance' which include all activities which are likely to have a significant impact on the environment of Commonwealth marine areas.

In 2007 the Department of the Environment and Water Resources released goals and principles for the establishment of the 'national representative system of marine protected areas in Commonwealth waters'.<sup>15</sup> These set out four goals and principles which related to the location, selection, size, shape and zoning of marine protected areas. They are reproduced in Appendix 2.

Marine bioregional planning is being implemented in six large bioregions – the south-east, south-west, north-west, north, temperate east and coral sea marine regions. There are two major parts to the marine bioregional planning process: first, the identification of regional conservation priorities; and secondly the identification of marine reserves to fulfil the Australian government's commitment to establishing the national representative system of marine protected areas.

Regional conservation priorities are identified from an analysis of the threats to the conservation values of each marine region. The marine bioregional plans identify measures to address regional conservation priorities and are designed to facilitate better decision-making under national environment law.

The planning process involves the creation of a bioregional profile, and the development of a draft plan, which goes out for public consultation before its finalisation. The bioregional profiles describe the ecological and biophysical features and the conservation values of each region, together with the human

activities that occur there. In some regions, they also identified ‘areas for further assessment’. The purpose of these is to narrow down the areas that warrant closer examination in the reserve identification process, because they are representative of the conservation values of the region.

In May 2011 draft plans were released for five regions, (the plan for the south-east region being completed in 2004 – see Figure 14.3). Formal 90-day public consultations on the draft plans were undertaken in each region between May 2011 and February 2012. Across Australia, 245 public and stakeholder meetings were held, and 566,377 submissions were received. After considering the public submissions, together with detailed socio-economic assessments, the government released final proposals in June 2012.

A further 60-day public consultation process was then undertaken (see Figure 14.3). After the final marine bioregional plans have been approved, the proposed network of new marine protected areas will be proclaimed through a separate statutory process. The proclamation of the proposed national marine reserves network will increase the total number of Commonwealth marine reserves to 60, representing examples of all of Australia’s different marine ecosystems and habitats.<sup>16</sup> The largest of the proposals is a marine reserve covering 989,842 square kilometres of the Coral Sea. All mining and petroleum development is to be prohibited in this area, whilst a sanctuary zone in which commercial fishing is prohibited will cover approximately half of the reserve area.

Following proclamation, the Director of National Parks will be required to draft management plans for the new reserves, setting out how the reserves are to be managed and what activities will be permitted within the reserves. These plans will be subject to two rounds of public consultation, after which they are approved and become operational for a ten year period.<sup>17</sup>

### *South-east Commonwealth marine reserves network*

The south-east Commonwealth marine reserves network, established as a result of the south-east marine planning exercise, was the first temperate deep sea network of marine reserves in the world. It aims to cover representative examples of all key marine features found in the south-east Australian marine region. The network uses a slightly modified version of the IUCN management categories to indicate which activities are permitted and which are prohibited. Figure 14.4 sets out the zoning rules.

**Figure 14.3: Process to establish Australian Commonwealth marine protected areas through bioregional planning**

Step	Action
1.	Release of Commonwealth marine reserve network proposal
2.	90-day consultation on initial proposal
3.	Final proposal for Commonwealth marine reserve network released publicly
4.	Intention to declare the Commonwealth marine reserve network published by the Director of National Parks
5.	60-day statutory consultation period on final marine reserve network proposal
6.	New Commonwealth marine reserve network declared
7.	Consultation on and development of interim management arrangements
8.	Invitation to comment on proposal to prepare a draft management plan
9.	Minimum 30-day statutory consultation period
10.	Draft management plan released
11.	Minimum 30-day statutory consultation period on draft management plan
12.	Management plan approved and becomes operational

Forty-two per cent of the total marine reserve network is ‘sanctuary zone’ managed for scientific research and passive uses. Thirty-six per cent of the network is ‘special purpose zone’ and is closed to commercial fishing. Twenty-one per cent of the network is multiple use, where low impact fishing methods and other activities are permitted. The remaining one per cent comprises a benthic sanctuary zone and a recreational use zone, where some fishing is permitted in accordance with regulation.

### *Provision for indigenous rights*

Section 359A of the Environment Protection and Biodiversity Conservation Act exempts indigenous people from compliance with the restrictions in Commonwealth [marine] reserves in relation to traditional uses of the area which involve hunting or food gathering for subsistence.

The scoping and consultation process for the development of the marine bioregional plan for the north region incorporated the preparation of three ‘sea country plans’. These were prepared by groups of traditional owners, and set out the “*key aspirations of Indigenous peoples within the Northern Marine Planning*

Area.”<sup>18</sup> The plans provided a mechanism for traditional owners to provide constructive and considered input into the planning process.

**Figure 14.4: Zoning rules applying to the south-east Commonwealth marine reserves network**

Zone	Rules
Sanctuary zone	No commercial or recreational fishing or mining* activities are permitted. The area can only be used for scientific research and passive recreational activities. Vessel transit is allowed.
Benthic sanctuary zone	Some commercial and recreational fishing is permitted. However no fishing or other extractive use in the area from 500 metres below sea level to 100 metres beneath the seabed is allowed.
Recreational use zone	This zone allows for recreational and charter fishing if carried out in accordance with the relevant State fishing arrangements. It prohibits commercial fishing and mining activities.
Special purpose zone	Recreational fishing and mining activities are permitted. Charter fishing may be permitted providing the operator has applied for an approval from the Director of National Parks. Each application will be assessed on a case-by-case basis. No commercial fishing is allowed in this zone.
Multiple use zone	Recreational fishing and mining activities are allowed. Some forms of commercial fishing, excluding demersal trawl, Danish seine, gill netting (below 183m) and scallop dredge, are allowed providing the operator has registered under the approval from the Director of National Parks and abides by the conditions of the approval.

\*Mining includes oil and gas exploration and extraction and geosequestration of carbon. Where seismic surveying and transit are allowed, they are permitted under general approval from the Director of National Parks. Other mining activities are permitted on a case-by-case assessment.

## Conflict resolution mechanisms and compensation for affected parties

Section 359 of the Environment Protection and Biodiversity Conservation Act provides that any restrictions on activity put in place in a Commonwealth reserve will not affect ‘usage rights’ held by a person in relation to the land or seabed immediately before it was included in the reserve.

Usage rights are defined broadly for these purposes and include estates (i.e. a freehold or leasehold interest), privileges, authorities, licences or permits. As a result, the holder of a usage right is allowed to continue to exercise the right despite the restrictions. However, if the right expires (for example in the case of a fixed term permit) it will only be renewed with the Minister's consent. Because the wording of the provision makes it clear that the prior usage right applies to rights over *land or seabed*, it is likely to apply to mining interests and sea dumping carried out under permit, but probably does not apply to fishing rights, as these do not relate to rights over land or seabed in the obvious sense.<sup>19</sup>

The government has made some efforts to address the needs of fishers affected by the creation of Commonwealth reserves. The government's draft 'Marine protected area and displaced fishing: A policy statement' of January 2004 sets out "*the agreed Government position in relation to marine protected areas and displaced fishing effort*". First, it makes clear that there is no constitutional or legal requirement for the Australian government to provide compensation to commercial fishers impacted by new or re-zoned marine protected areas. But nevertheless, it indicates that the government is willing to consider issues of fairness and equity in relation to the impacts on individual fishers and those reliant on the fishing industry.

The policy statement adopts the beneficiary pays approach, in that it emphasises that the costs of marine protected areas are 'likely to be borne in the short term by a small group of private individuals and communities in marine-related industry sectors', while "*the public good benefits flow to all Australians from marine protected areas*". Therefore, where marine protected areas create additional requirements for the reduction of fishing effort beyond that required to achieve fisheries management objectives, the government will consider funding adjustment assistance to support the additional adjustment to fishing effort and mitigate impact on local communities.

Decisions on adjustment assistance are to be made on a case-by-case basis, following an assessment of the socio-economic impacts of the marine protected area, which will involve an industry and community consultation process. The policy states that if assistance is provided, the industry and community should also be involved in the design of the package. The policy acknowledges that where marine protected areas displace fishing activity, resulting in increased activity in the rest of the fishery, management changes required in those areas may be attributable to the creation of the marine protected area and should be taken account of in the assistance package. It also warns that, it is important to separate

the effects of fishing measures introduced to achieve fisheries management outcomes, from those related to the creation of marine protected areas. Importantly, the document makes it clear that the intention of the scheme is not to provide compensation for fishers and others whose industry is affected by the creation of a marine protected area, but to help them to restructure their industry.

The most prominent examples of applications of the policy are the rezoning of the Great Barrier Reef Marine Park in July 2004 and the creation of the Cod Grounds Commonwealth marine reserve in 2007. The process to develop the south-east marine reserve network in 2006, initially included a structural adjustment package, but ultimately this was not applied. This was because a wider adjustment package to address changes in fisheries management was being developed at the time, and this could include an element related to the creation of the marine protected area network.

### *Great Barrier Reef structural adjustment package*

When the Great Barrier Reef Marine Park zoning plan came into effect in 2004, the government announced a 'structural adjustment package' guided by the policy on displaced fishing, which was intended to assist fishers, fishery-related businesses, employees and communities adversely affected by the zoning plan. In addition, it was designed to manage, in the most cost effective manner, any displaced fishing effort that had unsustainable ecological or economic impacts

The package provided A\$213.7 million to 1,782 fishers, seafood processors and upstream providers to the fishing industry.<sup>20</sup> The package comprised seven components, of which the main two were assistance to operators wanting to exit the industry and business restructuring assistance to assist operators remaining in the industry to adjust to the new zoning arrangements. Other components included support to operators to obtain professional business advice, as well as support to fishing industry employees and to fishing communities.

Thirteen commercial fisheries were identified as being affected by the rezoning. Of these, six fisheries were considered fully fished, so that areas outside the marine protected area were deemed incapable of accommodating displaced effort without having unsustainable ecological and/or economic impacts. For these fisheries, effort reduction targets were estimated and expressed as units of effort, using the best available data.

A voluntary competitive tender was held where applicants were asked to tender a price for the purchase of their fishing entitlements (not their vessels, gear

or equipment). Tenders were evaluated according to the best value for money defined as the amount of units of effort being removed for the price sought. Preferential treatment was not given to those most affected by the rezoning, as it was assumed that fishers who chose to remain in the fishery could fish elsewhere. In total, 122 fishing licences were bought out at a cost of A\$33 million. In addition, a total of A\$195 million for the other financial assistance has been paid out, of which the biggest component has been for business restructuring.<sup>21</sup>

The structural adjustment package was reviewed in 2008 following complaints from the fishing industry that it had not compensated them adequately. The review found that, although the policy statement document was “*an excellent foundation on which to build a more comprehensive marine reserves compensation or structural adjustment policy*”,<sup>22</sup> the haste with which the package was implemented meant that the clear statements of intent and directives were only partially implemented.

Before the zoning plan was put into place there was little quantitative assessment of the impacts that it would have on industry sectors, and there was no detailed socio-economic analysis of the impacts of the package on industry after it was implemented. It was therefore difficult to quantify the impact that the zoning plan had had, apart from by listening to industry perceptions. The package was intended to assist the industries to restructure themselves after the rezoning, rather than to compensate them, but relatively little effort was made to evaluate what the industries should look like.

The review found that many of the complainants were unable to “*conceptually or financially separate the impacts of the Zoning Plan from the significant negative impacts from a number of external factors*”, and saw the package as compensation rather than as an attempt to support the structural adjustment of affected industries. In addition, businesses were reluctant to cooperate so individual applications had to be assessed on their merits, leaving the same number of operators competing for less business. Combined with a broad scope and vague goals, this meant administering the package was somewhat disorganised, with scope creep common.

The review suggested that in future “*structural adjustment associated with the development of marine protected areas should aim to effectively adjust levels of fishing effort and/or catch to account for reduced access to resources, and to minimize the impacts of displaced effort. Where available fishery management measures do not prevent activation of latent effort, structural adjustment should not be attempted until such time that the latent potential is removed. In this event, autonomous adjustment is recommended.*”<sup>23</sup>

## *Cod Grounds structural adjustment package*

The Cod Grounds Commonwealth marine reserve was declared on 10 May 2007, mainly to protect the critically endangered grey nurse shark. This marine protected area is located approximately four nautical miles from the New South Wales coast, covering a total area of approximately three square kilometres. It has been assigned to management category 1a (no take) sanctuary zone, meaning fishing is prohibited.

After the proposal for the creation of the marine protected area had been devised, the Bureau of Rural Sciences was engaged to undertake a socio-economic impact assessment of the reserve. The assessment was intended to inform the government's decision on the reserve and its management of displaced interests, consistent with the displaced fishing policy. The Bureau's report was completed in mid-2004. It identified the fishers who would lose income as a result of the creation of the Commonwealth reserve. It also found that other fisheries in the area were fully exploited, meaning that there was little capacity for displaced fishing effort to move to other fisheries. The report noted that most fishers did not want to leave the industry and that lack of skills and job opportunities in the region meant that they would find it difficult to obtain alternative employment.

On the basis of this report, the government prepared a structural adjustment package in accordance with the structural adjustment policy. It consisted of the voluntary acquisition of six fishing licences from the owner-operators that regularly fished the Cod Grounds area. Assistance was also provided to fishing cooperatives adversely affected by the creation of the reserve. No upper limit was placed on the assistance to be provided. The government originally estimated that the licence buy-out would cost A\$1.25 million and that the assistance to the fishing cooperatives would cost up to A\$600,000. However, that figure has been significantly exceeded.

## **Analysis**

### *Was it successful?*

The process to create Commonwealth marine protected areas through bioregional planning has yet to be completed. One plan for the south-east was completed in 2004. Five other plans have been completed in draft, public submissions have closed, and the government has released final proposals. These are now being

considered through the statutory process. So at the time of writing the final outcome was not clear. However, the Commonwealth government has been successful in completing draft plans for all Australia's bioregions which is a major achievement given the very large size of Australia's oceans. The entire process has taken 12 years to date (with the south-east plan process commencing in 2000).

It is less certain the extent to which the proposed marine protected areas meet the goal of achieving a *fully* representative network. The first bioregional plan, which was developed for the south-east region in 2004, fully protected 10 per cent of the region. The five draft bioregional plans released over seven years later show a wide divergence in the proportion of each region which is proposed to be fully protected. This ranges from 3 per cent in the north to 51 per cent in the Coral Sea (See Figure 14.5).

In relation to the south-west region proposals, Professor Hugh Possingham from the University of Queensland suggests that they are deficient. The area has a very high level of diversity and endemism and he argues it is more biologically important than the Great Barrier Reef. Although the proposal to protect 22 per cent of the area 'looks good on paper', in his opinion it "*misses the mark on the issue of representing all the habitats properly*". Only 3.5 per cent of the shelf area, which is heavily used by fishing, has been fully protected. Although the process drew on a large amount of data, including information on 2,000 different organisms, Possingham suggests that the government was so keen to avoid impacts on industry, that it missed out on achieving the scientific goals. In Possingham's view, the government appears to have been "*rolled by industries such as fishing and mining*".<sup>24</sup>

### ***Strong guidance for marine protected area design***

The government developed detailed guidance on the location and design of the marine protected area networks which helped to focus the process. However, despite this guidance, the imperative to minimise socioeconomic costs appears to have compromised the representativeness of the network (with only three and four per cent of the total marine area protected in the north and temperate east respectively and criticisms about the poor representativeness of the south-west proposals).

### *Flexible approach*

The more recent bioregional plans have taken a flexible approach to marine protection. A relatively large proportion of the regions' total area have been identified as marine protected areas (between 19 and 100 per cent), but with a smaller percentage of the network being fully protected. The marine protected area network has therefore been designed as a flexible marine management tool which accommodates a range of uses within the overall purpose of marine protection.

### *Top-down approach*

The approach taken to identifying the proposed networks of marine protected areas in Australia has been largely top-down. The draft proposals were developed by a government agency, the National Oceans Office, and then made available for public comment. Although stakeholders were consulted during the plan preparation process, it was very much the government agency in the driving seat. This contrasts with the approach taken in England and California where stakeholder groups very much led the task of initial identification of a network of marine protected areas, although in most cases they were unable to reach consensus.

### *Bioregional approach*

The focus of the planning process on large regions enabled the government to comprehensively plan for a very large area in a relatively short timeframe. Using bioregions as the organising principle for identifying the different planning regions also enabled the characterisation of the regions to follow scientific principles.

### *Single jurisdiction*

The planning process did not include State waters, and thereby avoided the complication of needing to reach agreement with multiple State governments. However, it also means that activities within State waters and catchments might impact on the Commonwealth marine protected area network.

## Conclusion

Australia has taken a particularly progressive approach to the development of marine protected areas. The 27 existing Commonwealth marine reserves are soon to be supplemented with a further 33 reserves, representing all of Australia's marine ecosystems and habitats. This has been undertaken within a bioregional planning framework for the entire marine area. The adoption of the IUCN marine protected area classifications provides for a comprehensive system in which a range of activities can be provided for within marine protected areas. This comprehensive framework has made it possible for the Australian government to meet its objectives.

**Figure 14.5: Summary of marine protected areas proposed under Australian Commonwealth bioregional planning**

Region	Consultation closed	No. submissions	Total area (km <sup>2</sup> )	No. of marine reserves proposed	Area proposed for marine protected area network (km <sup>2</sup> )	Area proposed for full protection (km <sup>2</sup> )
*South-east			1,600,000	14	226,458	154,046
South-west	Aug 2011	39,266	1,292,015	8	538,226	286,290
North-west	Nov 2011	19,702	1,070,000	10	377,297	123,528
North	Aug 2011	12,861	625,000	8	121,723	18,475
Temperate east	Feb 2012		1,466,792	9	371,114	63,240
Coral Sea	Feb 2012		989,842	1	989,842	507,487

\*Plan completed in 2004

# Endnotes

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