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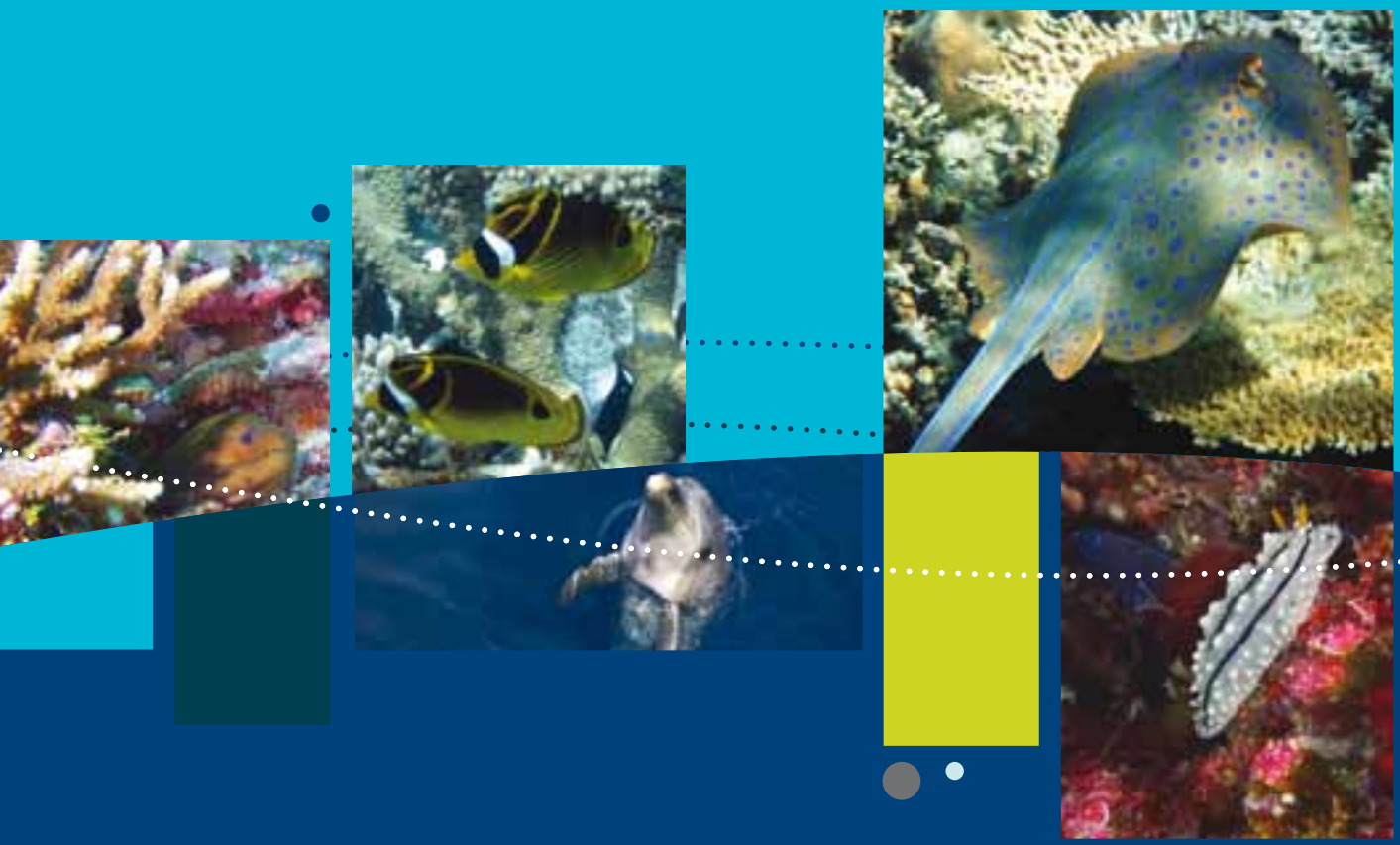
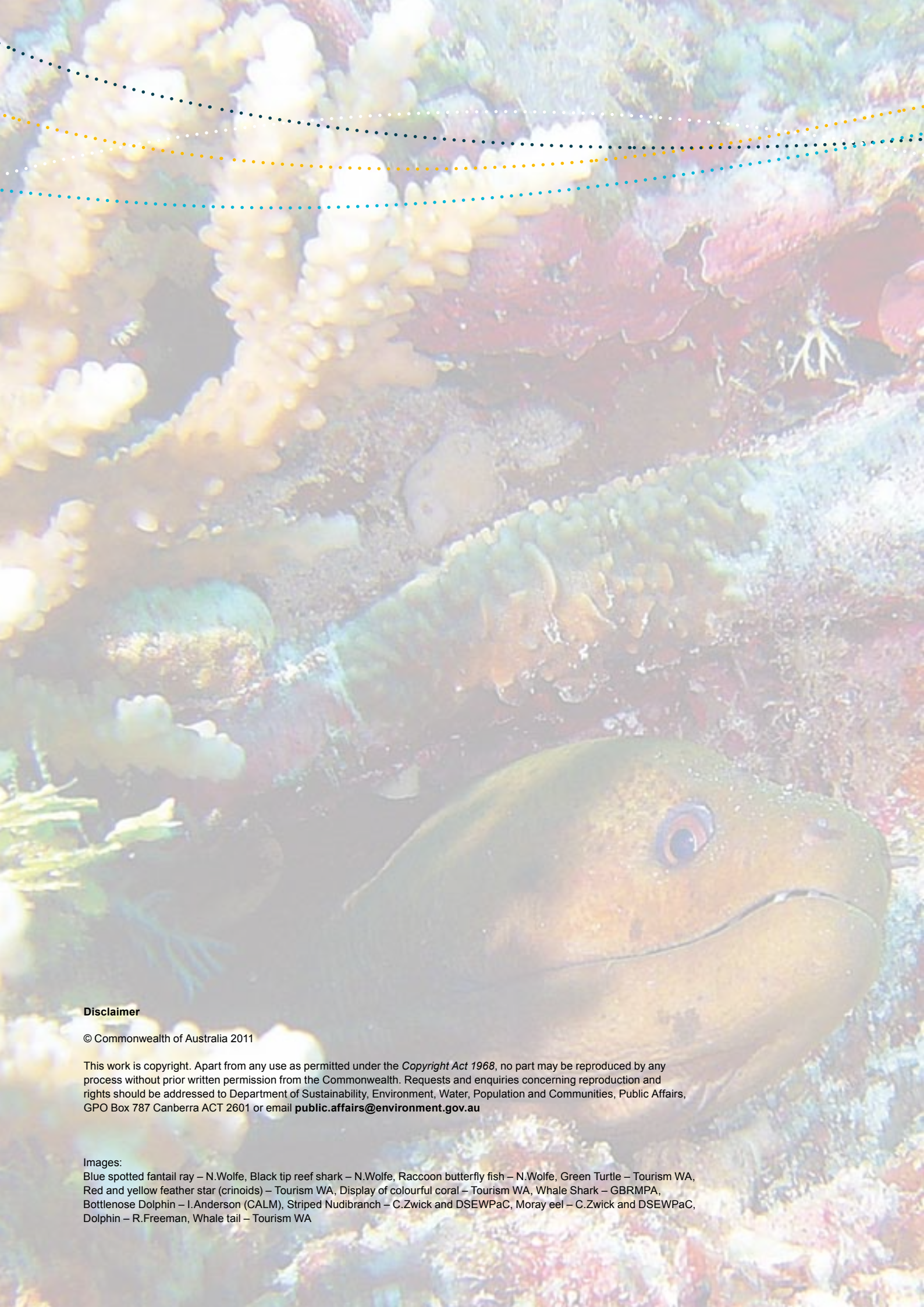


# Proposal for the North-west Commonwealth Marine Reserve Network

## Consultation paper





Images:
Blue spotted fantail ray – N.Wolfe, Black tip reef shark – N.Wolfe, Raccoon butterfly fish – N.Wolfe, Green Turtle – Tourism WA, Red and yellow feather star (crinoids) – Tourism WA, Display of colourful coral – Tourism WA, Whale Shark – GBRMPA, Bottlenose Dolphin – I.Anderson (CALM), Striped Nudibranch – C.Zwick and DSEWPaC, Moray eel – C.Zwick and DSEWPaC, Dolphin – R.Freeman, Whale tail – Tourism WA

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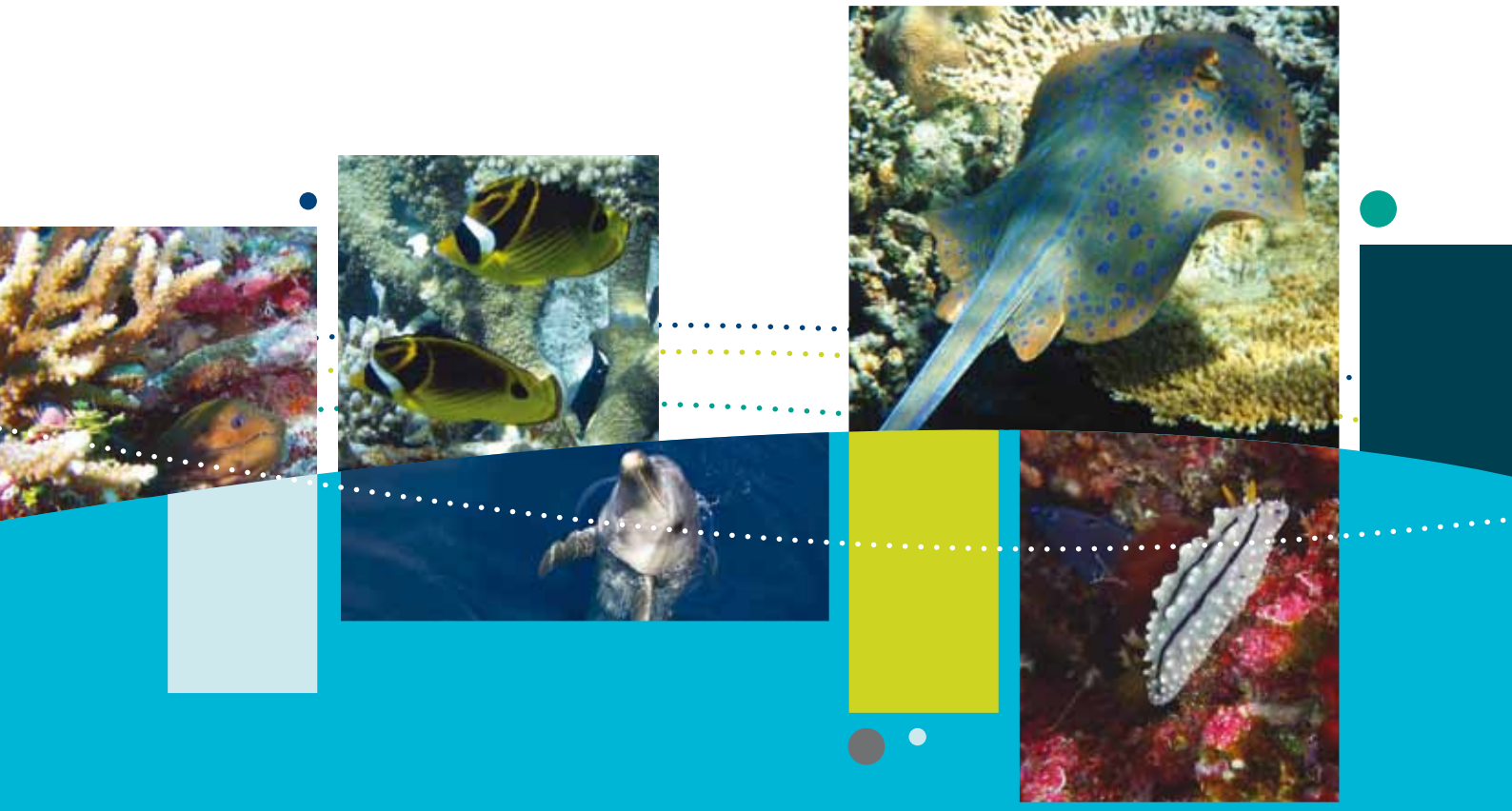

# Proposal for the North-west Commonwealth Marine Reserve Network

Consultation Paper

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# PREFACE

Australia has the third largest marine environment estate of any nation in the world. Just as precious environments on land are protected in national parks, our oceans contain many iconic, precious and fragile places that also deserve protection. Much of our marine life is found nowhere else in the world. Our nation is home to an amazing diversity of marine environments, from the tropical seas of northern Australia to the depths of the Southern Ocean. We have a responsibility to keep our oceans healthy, resilient and productive for current and future generations.

Marine bioregional plans are being prepared under the *Environment Protection and Biodiversity Conservation Act 1999* to improve the way decisions are made about the protection of marine biodiversity and the sustainable use of our ocean resources.

New Commonwealth marine reserves (also called marine protected areas or marine parks) are being identified through the marine bioregional planning process to meet the Australian Government's commitment, in partnership with the states and the Northern Territory, to establish a National Representative System of Marine Protected Areas.[1]

The marine reserve network will have no impact in the area from the territorial sea baseline (usually, but not always, the coastline) out to 3 nautical miles (5.5 kilometres) from shore—that is, in state waters. The Commonwealth marine reserves will be established in Commonwealth waters. Marine parks in coastal waters are being created by the state and Northern Territory governments. Some islands and archipelagos are also surrounded by a 3-nautical-mile (5.5-kilometre) band of state waters.

To the extent the marine reserve network intersects with native title claims, there is no intention to impact on native title rights and interests. Native title parties are especially invited to make a submission detailing how their rights may be affected (if at all).

This document has been prepared by the Australian Government Department of Sustainability, Environment, Water, Population and Communities to present a **proposal for the North-west Commonwealth Marine Reserve Network**. It provides information to assist public consultation on the proposal.

1 In 1998, the Australian Government and state and territory governments agreed to develop the National Representative System of Marine Protected Areas. In 2002, Australia joined other nations at the World Summit on Sustainable Development in committing to establish networks of representative protected areas within their maritime jurisdictions by 2012. For further information see **www.environment.gov.au/coasts/mpa/nrsmpa**.

This document also outlines the next steps involved in finalising the North-west Commonwealth Marine Reserve Network and explains the opportunities for stakeholder input.

The document is accompanied by additional information that is available on the department's website. Supporting maps, a detailed report, fact sheets and submission forms are available at **www.environment.gov.au/coasts/mbp/north-west/index.html**.

The proposal for the North-west Commonwealth Marine Reserve Network has been released concurrently with the draft North-west Marine Bioregional Plan, which is available at **www.environment.gov.au/coasts/mbp/north-west/index.html** and is also open for public comment.

# 1 OVERVIEW

Australia is a world leader in the development and management of marine reserves. These reserves exist to protect Australia's unique marine biodiversity for the benefit and enjoyment of current and future generations. The Australian Government has committed to establishing a National Representative System of Marine Protected Areas, which will set aside and protect examples of the rich variety of Australia's marine ecosystems, from tropical coral reefs of the north to temperate giant kelp forests in the south, to the unique life forms that inhabit our deep oceans.

As part of the National Representative System of Marine Protected Areas, the Australian Government is developing networks of marine reserves for each of the five large marine planning regions of the Commonwealth marine area (Figure 1.1). This area generally lies between the 3-nautical-mile (5.5-kilometre) limit of state or Northern Territory waters, and the 200-nautical-mile limit of Australia's exclusive economic zone. More information about how the proposed new reserves have been developed is available at **www.environment.gov.au/coasts/mbp/north-west/index.html**.

The marine reserve network will have no impact in state waters. The North-west Marine Region comprises Commonwealth waters from the Western Australian – Northern Territory border to Kalbarri, south of Shark Bay. It covers approximately 1.07 million square kilometres of tropical and subtropical waters. The region contains thousands of kilometres of shallow continental shelf off the Kimberley and Pilbara regions of Western Australia, but also includes Australia's narrowest continental shelf margin (off Ningaloo).

The region experiences monsoonal climate patterns with highly variable tidal regimes and a pronounced cyclone season between December and March, and is characterised by shallow-water tropical marine ecosystems with high species richness. Overall, the region is relatively shallow with more than 50 per cent of it having water depths of less than 500 metres. However, the deepest parts of the Argo and Cuvier abyssal plains within the region reach depths of almost 6000 metres. The region is home to globally significant populations of internationally threatened species and has high species diversity. The proposal for the North-west Commonwealth Marine Reserve Network includes representative examples of the habitats that support the rich biological diversity of the North-west Marine Region.

This document presents a proposal for the North-west Commonwealth Marine Reserve Network for public consultation. Comments received through the public consultation process will be taken into account in finalising the proposal. Once finalised, it will be released for public comment for at least 60 days, as part of the process required by the *Environment Protection and Biodiversity Conservation Act 1999* before Commonwealth reserves are proclaimed under the Act.

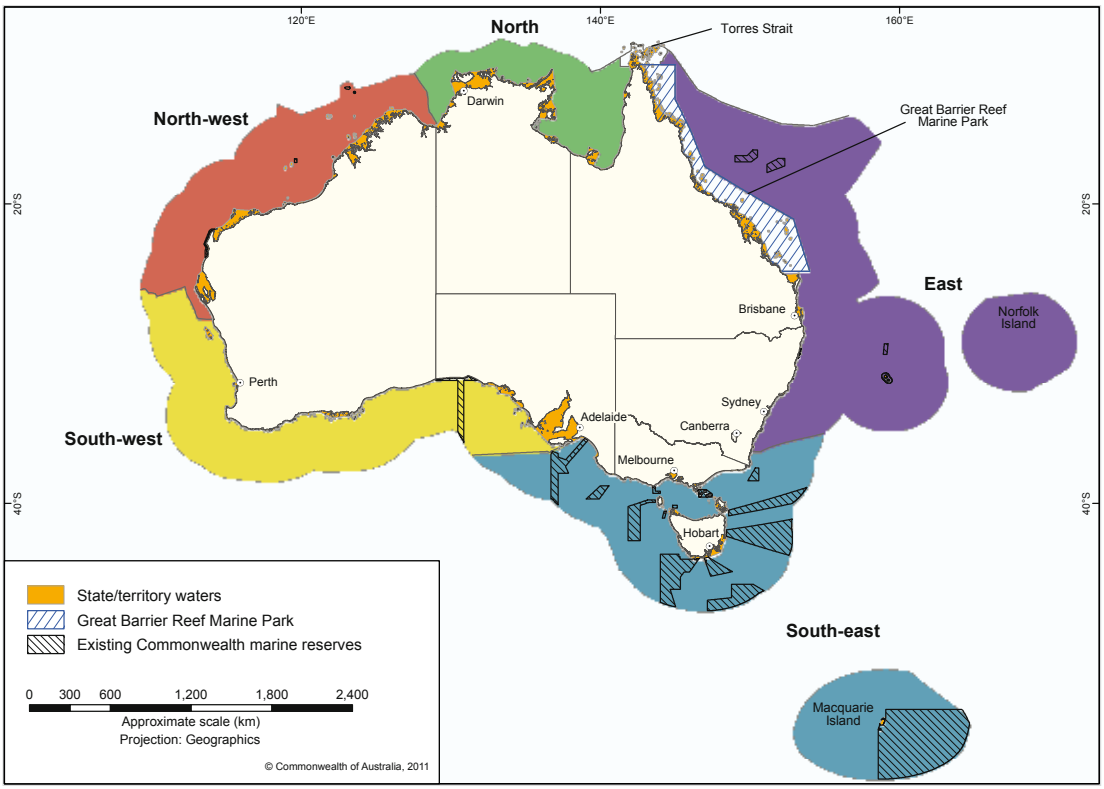


**Figure 1.1: Australia's marine planning regions and existing Commonwealth marine reserves**

The marine reserve network will not affect waters within the 3-nautical-mile (5.5-kilometre) limit of coastal waters of states and the Northern Territory. It applies to Commonwealth waters only.

# 2 HOW HAVE THE PROPOSED MARINE RESERVES BEEN IDENTIFIED?

The proposal for the North-west Commonwealth Marine Reserve Network has been designed in accordance with the *Goals and principles for the establishment of the National Representative System of Marine Protected Areas in Commonwealth waters* (see Appendix A). The goals and principles provide direction to ensure that all types of marine ecosystems are represented within the national network of marine reserves, while minimising adverse socioeconomic impacts on people who use the marine environment.

The four goals provide guidance on the features to be included in the marine reserve networks. Each regional network should include examples of:

- the different large-scale ecological systems in the North-west Marine Region which are known as provincial bioregions (goal 1)
- all depth ranges, because different biological communities live at different depths (goal 2)
- all large-scale biological and ecological features, such as the key ecological features identified through the marine bioregional planning process (goal 3)
- all types of sea-floor features—for example, pinnacles, canyons and reefs—because different ecological communities are associated with these features (goal 4).

The 20 principles guide the location, selection, design (shape and size) and zoning of the reserves.

# 3 INTEGRATING SOCIAL AND ECONOMIC CONSIDERATIONS INTO PLANNING

The proposed network has been designed with the aim of meeting the goals and principles of reserve design, while taking account of, and seeking to minimise the potential impacts on industry, communities and recreational uses. The Australian Government is committed to providing fair and reasonable assistance to industries affected by greater marine protection.

The public consultation process will clarify the potential impacts of the proposed marine reserve network on industry and other users. Initial analysis indicates that the proposed marine reserves would displace fisheries catch estimated to be worth less than 1 per cent of the gross value of production of the region's fisheries. Local displacement, however, may have larger impacts for some fisheries.

To determine the extent of impact and the flow-on effects on regional communities, a socioeconomic assessment will be conducted by the Australian Bureau of Agricultural and Resource Economics and Sciences in consultation with stakeholders and government agencies in parallel with the public consultation process. The outcomes of the assessment, together with the submissions received about the proposed marine reserve network, will inform government decisions on the final network.

# 4 PROPOSAL FOR THE NORTH-WEST COMMONWEALTH MARINE RESERVE NETWORK

The proposed marine reserve network covers an area of 377 297 square kilometres. Ten new Commonwealth marine reserves are identified in the proposal (Figure 4.1):

- Abrolhos (Wallaby extension) Commonwealth marine reserve (extending into the South-west Marine Region)
- Carnarvon Canyon Commonwealth marine reserve
- Kalbarri Commonwealth marine reserve
- Shark Bay Commonwealth marine reserve
- Gascoyne Commonwealth marine reserve
- Pilbara Commonwealth marine reserve
- Eighty Mile Beach Commonwealth marine reserve
- Kimberley Commonwealth marine reserve
- Oceanic Shoals Commonwealth marine reserve (extending into the North Marine Region)
- Joseph Bonaparte Gulf Commonwealth marine reserve (extending into the North Marine Region).

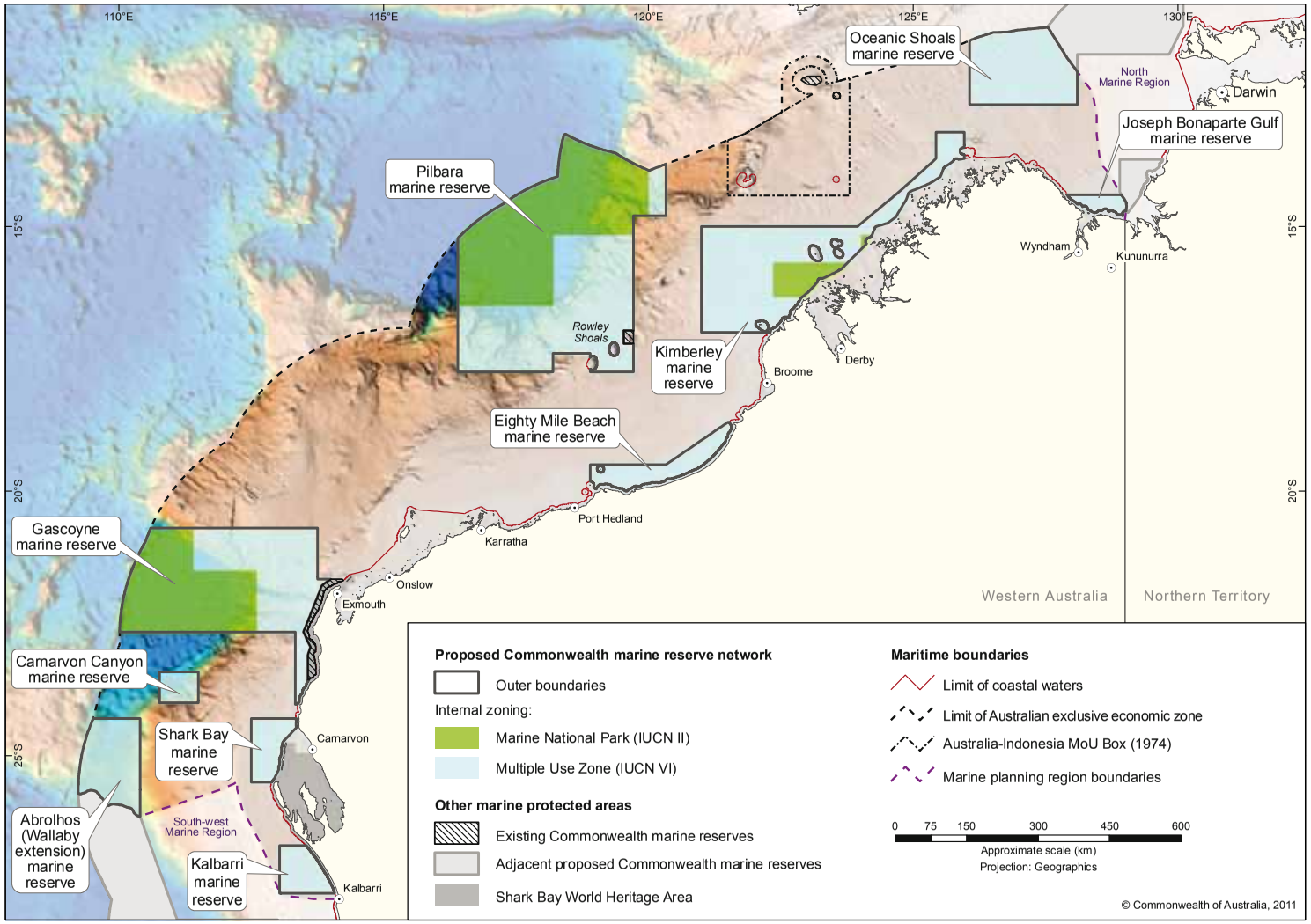


**Figure 4.1 Proposal for the North-west Commonwealth Marine Reserve Network**

The marine reserve network will not affect waters within the 3-nautical-mile (5.5-kilometre) limit of the coastal waters of Western Australia. It applies to Commonwealth waters only.

The proposed reserve network includes extensive examples of the different marine ecosystems found in the region. It also incorporates many biologically important areas, such as feeding, breeding and foraging habitats for unique and threatened species, including humpback whales and many species of seabird, dolphin and marine turtle.

A number of areas of high conservation value are covered by the proposed reserves, including the Commonwealth waters surrounding the Rowley Shoals (including the existing Mermaid Reef Marine National Nature Reserve), and Commonwealth waters adjacent to the Kimberley coast and the carbonate banks and limestone pinnacles in the far north of the region. The canyons on the continental slope between the Cuvier Abyssal Plain and the Cape Range Peninsula are associated with upwellings[2] that underpin biological productivity[3] and species aggregations and play a significant role in supporting the biodiversity of nearby Ningaloo Reef. The carbonate banks and limestone pinnacles in the Joseph Bonaparte Gulf are important feeding sites for marine turtles and support a high diversity of reef fish, sponges, corals and gorgonians (sea whips or sea fans).

The continental slope between North West Cape and the Montebello Trough is the most biologically diverse slope bioregion in Australian waters. It supports demersal fish communities with over 500 species of fish, 76 of which are endemic (found nowhere else). Deep ocean-floor ecosystems occur within the area proposed for protection, including the Wallaby Saddle and the Exmouth Plateau.

2 The phenomenon of deep ocean water rising to the surface, usually bringing nutrients that can increase biological productivity.

3 The process through which algae and seagrasses transform inorganic nutrients into organic matter through photosynthesis. The process is at the basis of the ocean's food web, as phytoplankton and algae are consumed by zooplankton and grazing organisms, respectively, and these are in turn consumed by larger and larger predators. Nutrient-rich waters promote and support productivity.

The proposed network achieves the four goals for the establishment of the National Representative System of Marine Protected Areas in Commonwealth waters by representing:

- all eight provincial bioregions and 11 meso-scale bioregions that occur in the North-west Marine Region[4]
- all but one of the 82 depth ranges within provincial bioregions
- all but three of the region's 13 key ecological features[5]
- all 19 sea-floor types in the region.

More information about the reserve network and its performance against the goals and principles is in the detailed analysis of the North-west Commonwealth Marine Reserve Network, available at **www.environment.gov.au/coasts/mbp/north-west/index.html**.

4 The provincial and meso-scale bioregions of the North-west Marine Region are identified in the Integrated Marine and Coastal regionalisation of Australia version 4.0. There are 41 provincial bioregions around Australia. They are large areas with broadly similar characteristics classified by scientists based on the distribution of fish species and ocean conditions (e.g. tropical waters). The meso-scale bioregions are smaller scale bioregions identified on the continental shelf. Additional information, such as the distribution of sponges, plant species, sea-floor features and sediments was taken into account in identifying the meso-scale bioregions.

5 The key ecological features not represented are the Glomar Shoals; Seringapatam Reef and the Commonwealth waters surrounding the Scott Reef complex (which are located in the memorandum of understanding (MoU) box, which has not been included in the process for identifying Commonwealth marine reserves; and Ashmore Reef, Cartier Island and surrounding Commonwealth waters (which are also within the MoU box and are already represented in the existing Ashmore Reef National Nature Reserve and the Cartier Island Marine Reserve).

# 5 WHAT ACTIVITIES ARE ALLOWED IN EACH OF THE RESERVES?

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) sets out the legal framework for declaring and managing Commonwealth marine reserves. It requires that, upon proclamation, each Commonwealth marine reserve must be assigned to one of the World Conservation Union's (IUCN's) internationally recognised set of seven protected area management categories.[6] Schedule 8 of the Regulations under the EPBC Act outlines the Australian IUCN reserve management principles.[7] A Commonwealth reserve proclamation can also divide a reserve into zones and assign an IUCN category to each zone.

Two types of 'zones' (using two IUCN categories) are proposed within the North-west Commonwealth Marine Reserve Network (Table 5.1):

- Highly protected or 'no-take' marine national park zones (IUCN Category II) will provide the highest level of protection for the conservation values in the region. Commercial activities, mining operations and extractive recreational activities will generally be excluded (except passage of vessels and non-extractive tourism). Non-commercial hunting and harvesting undertaken by Indigenous people consistent with their native title rights are exempt.
- Multiple use zones (IUCN Category VI) will allow a range of existing activities to continue within the reserves, but will exclude activities that carry a high risk to the conservation values of the reserves. In the North-west Marine Region, it is proposed that use of the following fishing gears and methods will be allowed within multiple use zones:
  - droplines
  - fish traps
  - trolling and hand lines
  - purse seine
  - lobster pots
  - crab pots

6 IUCN categories are based on the *Guidelines for protected area management categories* published by the IUCN in 1994. For further information, see **www.iucn.org/about/work/programmes/pa/pa_products/wcpa_categories/**

7 For further information, see **www.environment.gov.au/coasts/mpa/publications/pubs/iucn-principles.pdf**.

- pelagic longline
- pelagic gillnet
- drift diving.

Of the gear types currently in use in the North-west Marine Region, this excludes:

- demersal gillnetting
- demersal longlining
- demersal trawling.

## Table 5.1 Overview of the proposed zoning scheme for the Commonwealth marine reserve network proposal for the North-west Marine Region

| Activity | Multiple use zone (IUCN category VI) | Marine national park zone (IUCN category II) |
|---|---|---|
| Recreational fishing[a] | ✓ | × |
| Recreational scuba diving and snorkelling | ✓ | ✓ |
| Research and monitoring[b] | ✓ | ✓ |
| Tourism, including dive/snorkel tours and nature watching[b] | ✓ | ✓ |
| Mining, including petroleum exploration and development[c] | ✓ | × |
| Non-commercial indigenous harvesting and hunting (consistent with the *Native Title Act 1993*) | ✓ | ✓ |
| Shipping[d] | ✓ | ✓ |
| Charter fishing[e] | ✓ | × |
| Offshore aquaculture[e] | ✓ | × |
| Commercial fishing (except as indicated below) | ✓ | × |
| — demersal trawl | × | × |
| — demersal gillnet | × | × |
| — demersal longline | × | × |

a Recreational fishing is managed by the states. All state rules and regulations (e.g. size and bag limits) apply in Commonwealth marine reserves unless otherwise specified in statutory management plans.

b Authorisation will be required for these activities (e.g. permit or approval in marine national park zones (IUCN Category II).

c Proposed mining operations currently require approval from the Director of National Parks unless they are carried out under usage rights that existed immediately before the declaration of a reserve. Mining operations are also subject to the assessment and approval provisions of the *Environment Protection and Biodiversity Conservation Act 1999* where a proposed operation is likely to have a significant impact on the environment or on listed threatened or migratory species

d Ballast water exchange is managed under national arrangements. Restrictions may apply in sensitive areas.

e Authorisation will be required for these activities (e.g. approval or permit) in multiple use zones (IUCN category VI).

Further information on the Commonwealth zoning policy framework is available at **www.environment.gov.au/coasts/mbp/north-west/index.html**.

# 6 PROPOSED MARINE RESERVES

## 6.1 Proposed Abrolhos (Wallaby Extension) Commonwealth marine reserve

| | |
|---|---|
| **Area** | 19 009 km$^2$ |
| **Depth range** | 2000–5000 m (approx.) |
| **Major conservation values**[a] | • The entirety of one **key ecological feature** is included within the proposed reserve:<br>– Wallaby Saddle—a unique sea-floor that supports aggregations of baitfish that in turn attract large pelagic predators<br>• Examples of the deeper ecosystems of the **Central Western Transition** provincial bioregion |
| **Existing uses** | There is one fishery operating in the area: the Commonwealth-managed Western Tuna and Billfish Fishery. |
| **Types of zoning proposed** | Multiple Use Zone (IUCN Category VI): 19 009 km$^2$ |
| **Adjacent protected areas** | The proposed Abrolhos Commonwealth marine reserve in the South-west Marine Region adjoins this proposed reserve. |

a A full list of the conservation values included in the reserve is in the detailed analysis of the North-west Commonwealth Marine Reserve Network, available at **www.environment.gov.au/coasts/mbp/north-west/index.html**.

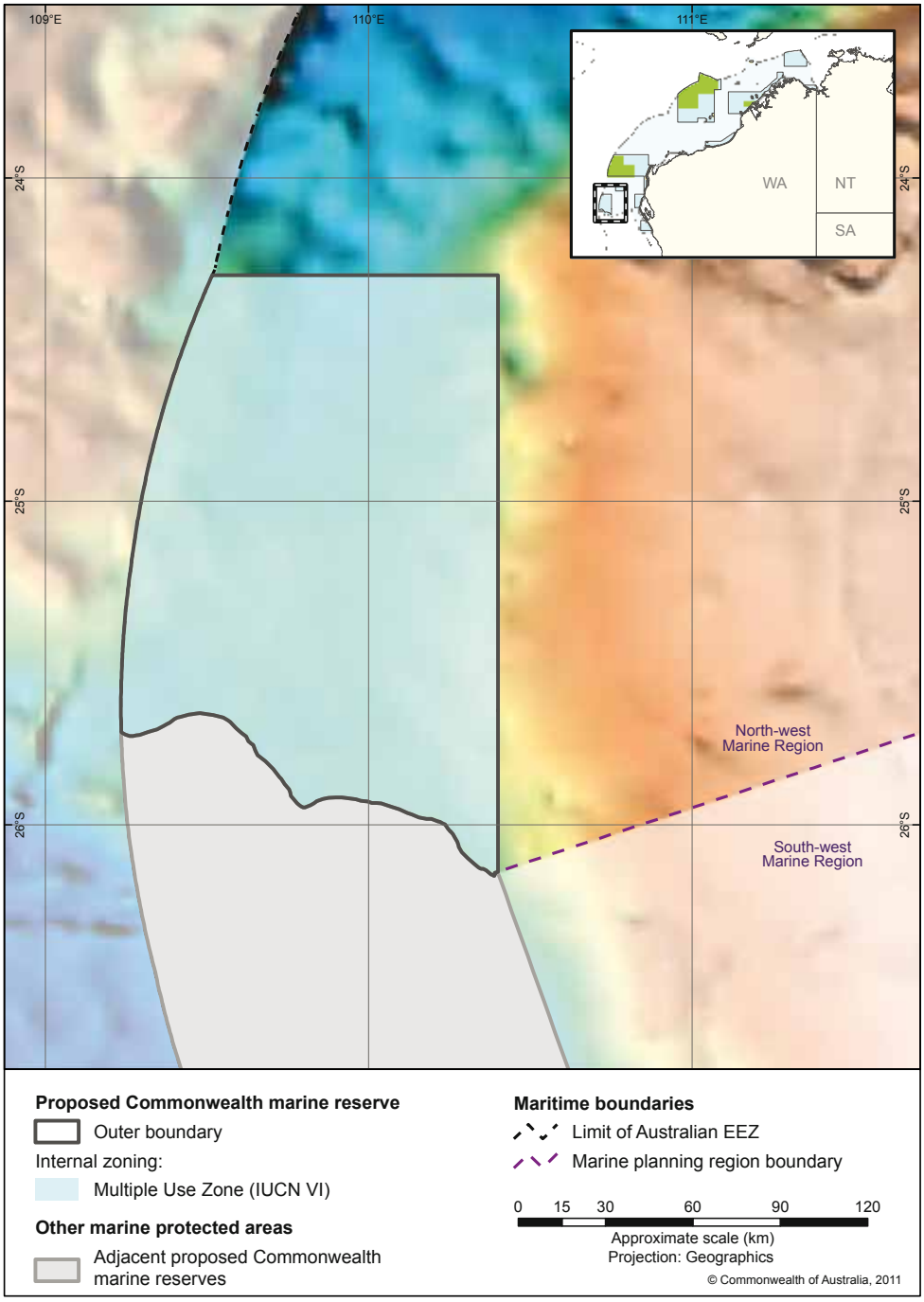


**Figure 6.1: Proposed Abrolhos (Wallaby Extension) Commonwealth marine reserve**

The marine reserve network will not affect waters within the 3-nautical-mile (5.5-kilometre) limit of coastal waters of Western Australia. It applies to Commonwealth waters only.

## 6.2 Proposed Carnarvon Canyon Commonwealth marine reserve

| | |
|---|---|
| **Area** | 4832 km$^2$ |
| **Depth range** | 1500–4000 m (approx.) |
| **Major conservation values**[a] | • Contains the whole of the Carnarvon Canyon—a single channel canyon along with representations of slope, continental rise, and deep hole and valleys<br>• The Carnarvon Canyon ranges in depth from 1500 to over 4000 metres and hence provides a wide range of habitats for benthic and demersal species<br>• Examples of the ecosystems of the **Central Western Transition** provincial bioregion – the proposed marine reserve lies within a biogeographic faunal transition between tropical and temperate species. |
| **Existing uses** | One fishery operates in the area: the Commonwealth-managed Western Tuna and Billfish Fishery.<br>Other activities in the area include shipping and petroleum exploration. |
| **Types of zoning proposed** | Multiple Use Zone (IUCN Category VI): 4832 km$^2$ |
| **Adjacent protected areas** | The proposed Abrolhos (Wallaby extension) Commonwealth marine reserve is to the south-west and the proposed Kalbarri Commonwealth marine reserve lies to the south-east of this proposed reserve. |

a A full list of the conservation values included in the reserve is in the detailed analysis of the North-west Commonwealth Marine Reserve Network, available at **www.environment.gov.au/coasts/mbp/north-west/index.html**

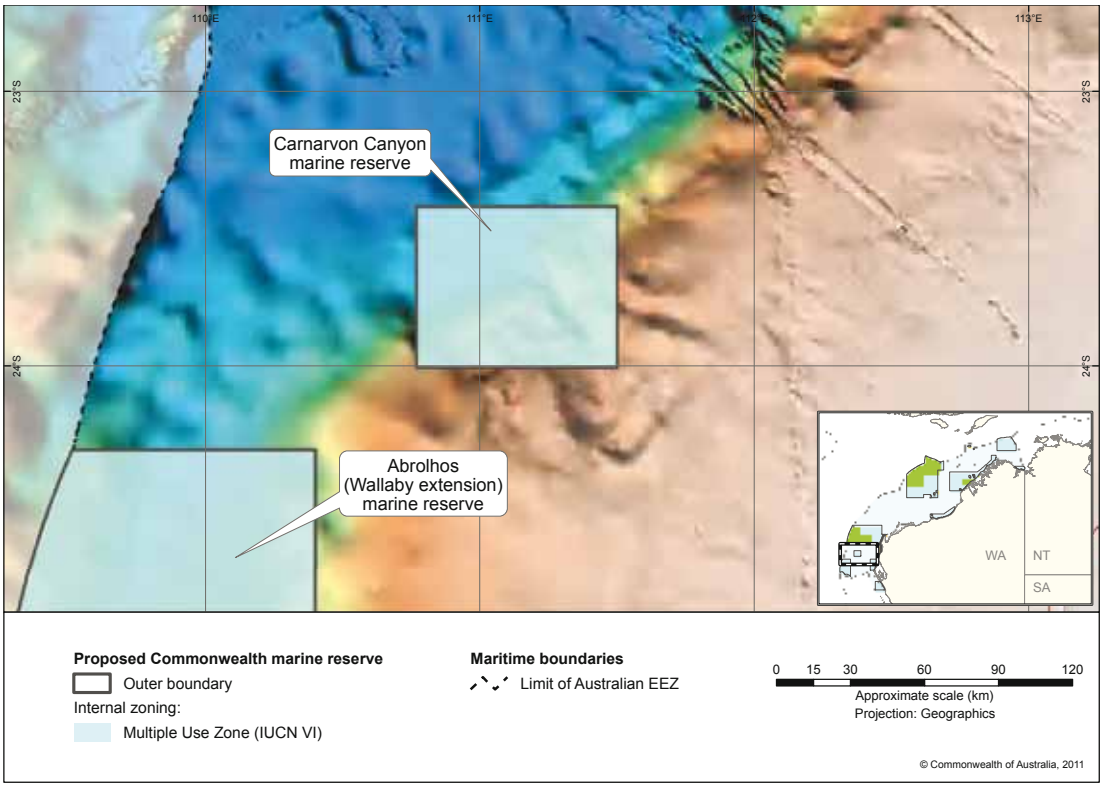


**Figure 6.2: Proposed Carnarvon Canyon Commonwealth marine reserve**

The marine reserve network will not affect waters within the 3-nautical mile (5.5-kilometre) limit of coastal waters of Western Australia. It applies to Commonwealth waters only.

## 6.3 Proposed Kalbarri Commonwealth marine reserve

| | |
|---|---|
| **Area** | 7955 km$^2$ |
| **Depth range** | 15–220 m (approx.) |
| **Major conservation values**[a] | • Important foraging and breeding areas for **wedge-tailed shearwaters**<br>• Part of the migration pathway for **humpback whales**, and **green** and **loggerhead turtles**<br>• Examples of the ecosystems of the southernmost parts of the **Central Western Shelf Province**, including the **Zuytdorp** meso-scale bioregion<br>• Coverage of the most southern representations of banks and shoals in the region, as well as terrace, slope, shelf and deep hole and valley |
| **Existing uses** | Fisheries operating in the area include the state-managed Western Rock Lobster, West Coast Demersal Scalefish, and West Coast Demersal Gillnet and Demersal Longline fisheries; and the Commonwealth-managed Western Tuna and Billfish Fishery.<br>Recreational and charter fishing are also important. Other activities in the area include shipping. There are no current petroleum activities in the area. The Nanda People's Native Title claim extends into Commonwealth waters in this area. |
| **Types of zoning proposed** | Multiple Use Zone (IUCN Category VI): 7995 km$^2$ |
| **Adjacent protected areas** | The proposed Abrolhos Commonwealth marine reserve (in the South-west Marine Region) is south of this proposed reserve. |

a A full list of the conservation values included in the reserve is in the detailed analysis of the North-west Commonwealth Marine Reserve Network, available at **www.environment.gov.au/coasts/mbp/north-west/index.html**

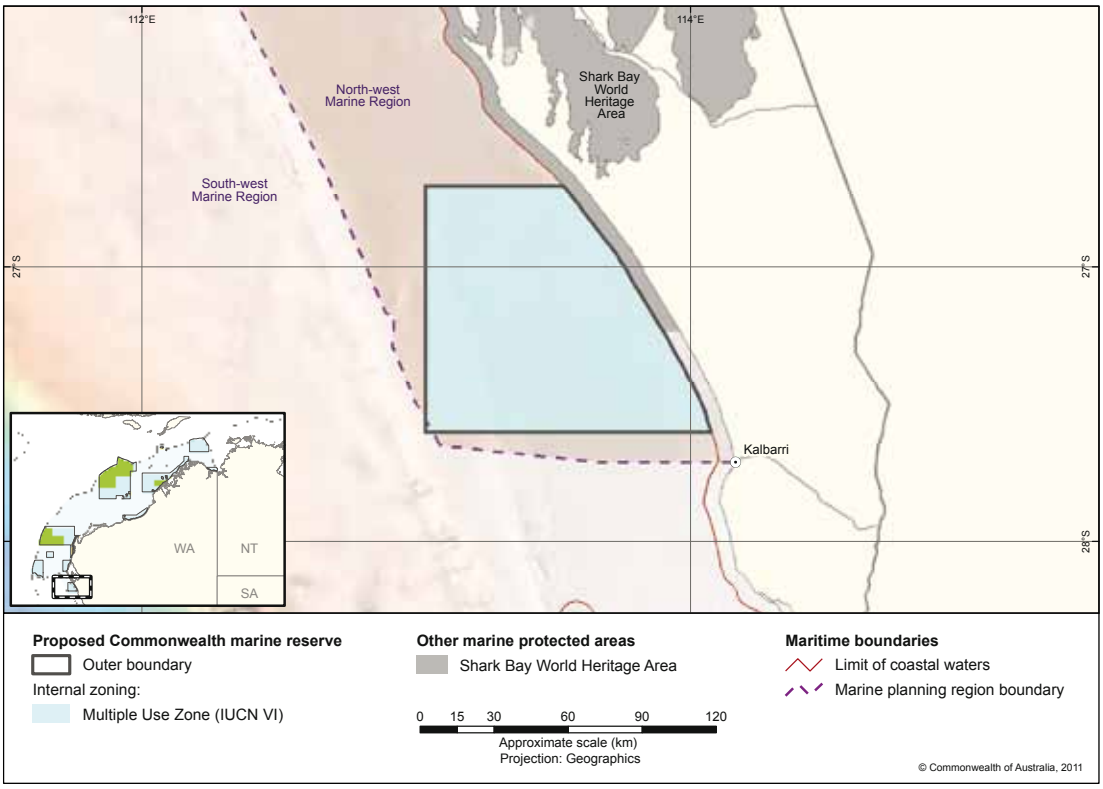


**Figure 6.3: Proposed Kalbarri Commonwealth marine reserve**

The marine reserve network will not affect waters within the 3-nautical-mile (5.5-kilometre) limit of coastal waters of Western Australia. It applies to Commonwealth waters only.

## 6.4 Proposed Shark Bay Commonwealth marine reserve

| | |
|---|---|
| **Area** | 8263 km$^2$ |
| **Depth range** | 15–220 m (approx.) |
| **Major conservation values**[a] | • Important breeding and foraging areas for several species of **migratory seabirds**<br>• Important resting area for migrating **humpback whales**<br>• Important foraging area for **dugongs**<br>• Adjacent to an important nesting area for **loggerhead turtles**—the largest in Australia<br>• Representation of two provincial bioregions: the **Central Western Shelf Province** and the **Central Western Transition** in the continental slope and shelf area, and the northern end of the **Zutydorp** meso-scale bioregion<br>• The proposed reserve also provides for connectivity between the inshore waters of the Shark Bay World Heritage Area and the deeper waters of the area |
| **Existing uses** | Fisheries operating in the area include the state-managed Western Rock Lobster, West Coast Deep Sea Crab, Shark Bay Snapper (Gascoyne Demersal Scalefish) fisheries, and the Commonwealth-managed Western Deepwater Trawl Fishery. Recreational and charter fishing are important activities. Other activities include petroleum exploration, tourism and shipping. The Gnulli Native Title claim and the Malgana Shark Bay People's Native Title claim extend into Commonwealth waters in this reserve. |
| **Types of zoning proposed** | Multiple Use Zone (IUCN Category VI): 8263 km$^2$ |
| **Adjacent protected areas** | The Shark Bay World Heritage Area is to the east of the proposed reserve. |

a A full list of the conservation values included in the reserve is in the detailed analysis of the North-west Commonwealth marine reserve network, available at **www.environment.gov.au/coasts/mbp/north-west/index.html**

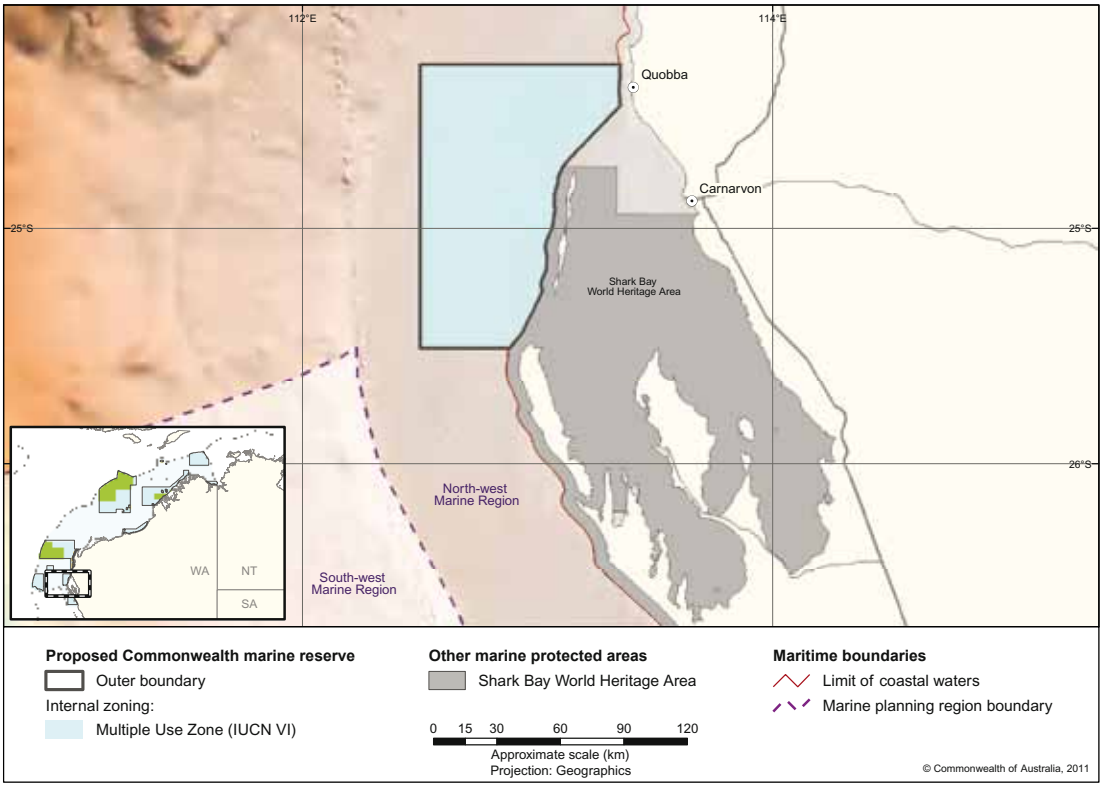


**Figure 6.4: Proposed Shark Bay Commonwealth marine reserve**

The marine reserve network will not affect waters within the 3-nautical mile (5.5-kilometre) limit of coastal waters of Western Australia. It applies to Commonwealth waters only.

## 6.5 Proposed Gascoyne Commonwealth marine reserve

| | |
|---|---|
| **Area** | 81 762 km$^2$ |
| **Depth range** | 500–5000 m (approx.) |
| **Major conservation values**[a] | • Important foraging area for **migratory seabirds**<br>• High intensity foraging area for **dugongs**<br>• High intensity foraging area for **whale sharks**<br>• Important foraging area for **hawksbill and flatback turtles**<br>• Adjacent to nursery areas for **humpback whales**<br>• Five **key ecological features** are included within the proposed reserve:<br>– ancient coastline (unique sea-floor feature and enhanced productivity)<br>– canyons linking the Cuvier Abyssal Plain and Cape Range Peninsula (enhanced productivity, aggregations of marine life and unique sea-floor feature)<br>– Commonwealth waters adjacent to Ningaloo Reef (high biodiversity, aggregations of marine life and unique sea-floor feature)<br>– continental slope demersal fish communities (high species diversity and endemism—the most diverse slope bioregion in Australia)<br>– Exmouth Plateau (unique sea-floor feature and internal wave generation)<br>• Examples of the sea-floor habitats and communities for five provincial bioregions: **Central Western Shelf Province, Central Western Shelf Transition, Central Western Transition, Northwest Province** and **Northwest Shelf Province**, as well as the **Ningaloo, Zutydorp** and **Pilbara (offshore)** meso-scale bioregions<br>• The proposed reserve also provides connectivity between the existing Ningaloo Commonwealth marine reserve and the deeper waters of the region |
| **Existing uses** | Recreational fishing and tourism are important, particularly around Ningaloo Reef. Fisheries operating in the area include the state-managed North Coast Shark, West Coast Deep Sea Crab, Shark Bay Snapper (Gascoyne Demersal Scalefish) and Pilbara Trap (North Coast Demersal) fisheries; and the Commonwealth-managed Western Tuna and Billfish, North West Slope Trawl and Western Deepwater Trawl fisheries. Defence training and extensive petroleum exploration and production and shipping also occur. The Gnulli Native Title claim extends into Commonwealth waters in this area. |
| **Types of zoning proposed** | Marine National Park (IUCN Category II): 42 395 km$^2$<br>Multiple Use Zone (IUCN Category VI): 39 367 km$^2$ |
| **Adjacent protected areas** | The proposed reserve is adjacent to the existing Ningaloo Marine Park (Commonwealth waters) marine reserve and the Western Australian Ningaloo Marine Park (along the proposed reserve's southern boundary). The Muiron Islands marine management area is to the north-east of the proposed reserve. |

a A full list of the conservation values included in the reserve is in the detailed analysis of the North-west Commonwealth Marine Reserve Network, available at **www.environment.gov.au/coasts/mbp/north-west/index.html**.

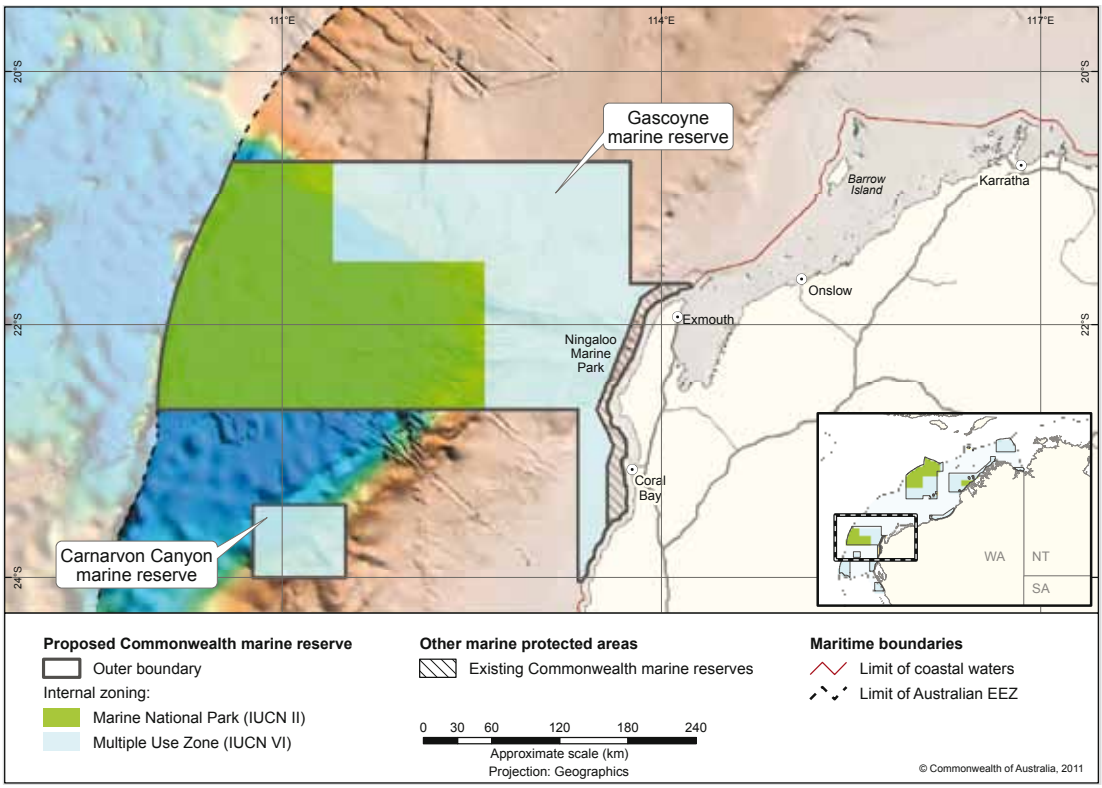


**Figure 6.5: Proposed Gascoyne Commonwealth marine reserve**

The marine reserve network will not affect waters within the 3-nautical-mile (5.5-kilometre) limit of coastal waters of Western Australia. It applies to Commonwealth waters only.

## 6.6 Proposed Pilbara Commonwealth marine reserve

| | |
|---|---|
| **Area** | 145 833 km$^2$ |
| **Depth range** | 220–6000 m (approx.) |
| **Major conservation values**[a] | • Important foraging areas for:<br>– **migratory seabirds**<br>– **loggerhead turtles**<br>• Important areas for **sharks**, which are found in abundance around the Rowley Shoals relative to areas in the region<br>• Two **key ecological features** are included within the proposed reserve:<br>– canyons linking the Argo Abyssal Plain and the Scott Plateau (enhanced productivity, feeding aggregations and unique sea-floor features)<br>– Mermaid Reef and the Commonwealth waters surrounding Rowley Shoals (enhanced productivity, feeding and breeding aggregations, and high biodiversity)<br>• Examples of the ecosystems and communities of the **Northwest Transition** and **Timor Province** provincial bioregions<br>• The proposed reserve also provides for connectivity between the existing Mermaid Reef Marine National Nature Reserve, the Rowley Shoals and the deeper waters of the region |
| **Existing uses** | Fisheries operating in the area include the Commonwealth-managed North West Slope Trawl Fishery and the Western Australian-managed North Coast Shark Fishery. Recreational and charter fishing are also important, particularly around the state waters of the Rowley Shoals. Other activities include petroleum exploration and shipping. |
| **Types of zoning proposed** | Marine National Park (IUCN Category II): 73 228 km$^2$<br>Multiple Use Zone (IUCN Category VI): 72 605 km$^2$ |
| **Adjacent protected areas** | Mermaid Reef Marine National Nature Reserve and the Western Australian Rowley Shoals marine park are encompassed within the southern part of the proposed reserve. |

a A full list of the conservation values included in the reserve is in the detailed analysis of the North-west Commonwealth marine reserve network, available at **www.environment.gov.au/coasts/mbp/north-west/index.html**.

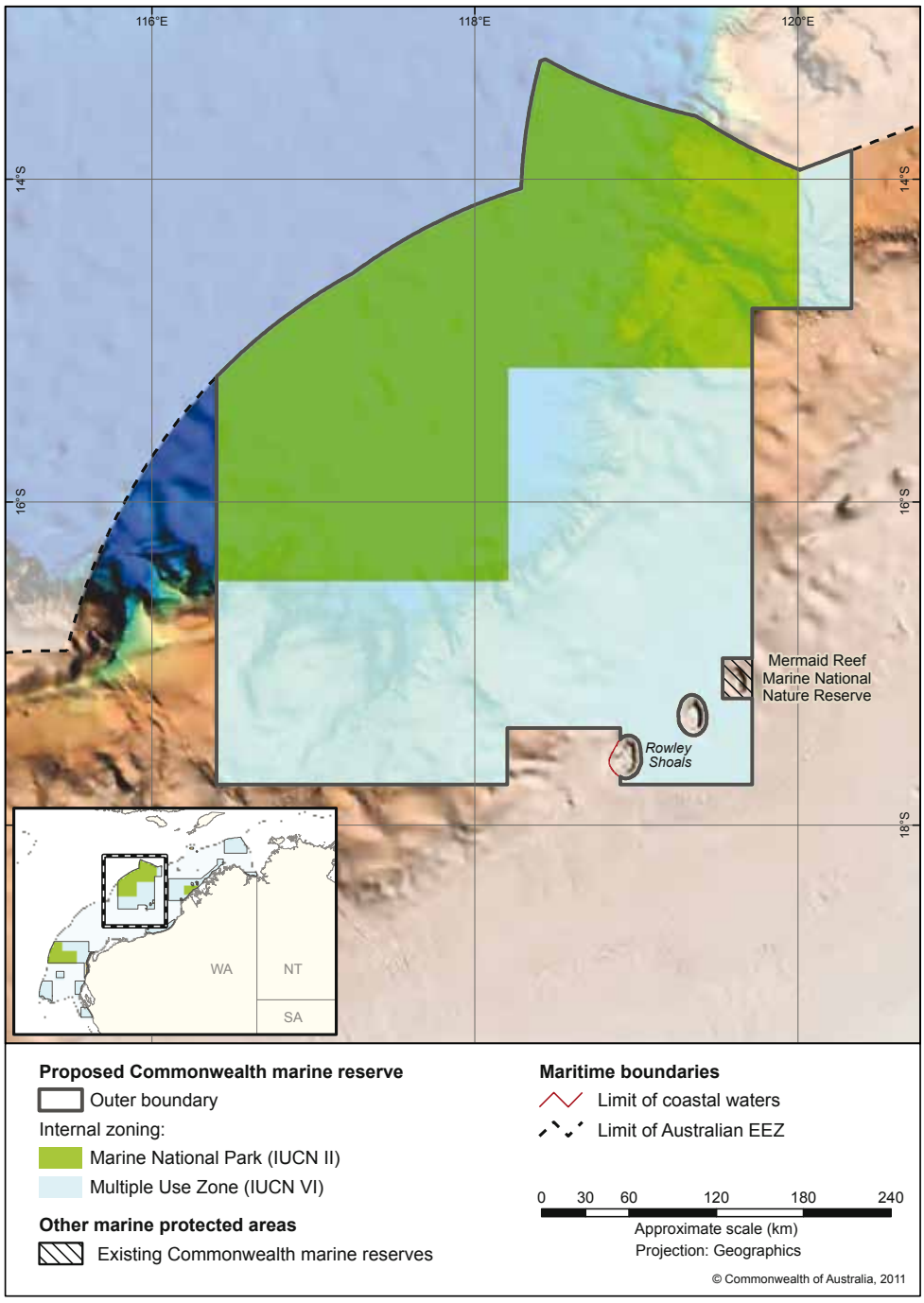


**Figure 6.6: Proposed Pilbara Commonwealth marine reserve**

The marine reserve network will not affect waters within the 3-nautical mile (5.5-kilometre) limit of coastal waters of Western Australia. It applies to Commonwealth waters only.

## 6.7 Proposed Eighty Mile Beach Commonwealth marine reserve

| | |
|---|---|
| **Area** | 12 105 km$^2$ |
| **Depth range** | 15–70 m (approx.) |
| **Major conservation values**[a] | • Important foraging areas for:<br>– **dugong**<br>– **sawfish**<br>– **migratory seabirds**<br>• An important migration route for **humpback whales**<br>• Important internesting areas for **flatback turtles**<br>• Examples of the shallow ecosystems of the **Northwest Shelf Province** provincial bioregion and the **Canning, Eighty Mile Beach, Northwest Shelf** and **Pilbara (near-shore and offshore)** meso-scale bioregions<br>• Banks and shoals, terrace and extensive shelf habitats are represented in the reserve |
| **Existing uses** | The area is critical for the pearling industry and supports a number of fisheries: the Western Australian Pilbara Trap (North Coast Demersal), the Northern Demersal Scalefish and the North Coast Shark fisheries; and the Commonwealth-managed North West Slope Trawl Fishery.<br>This area is important for recreation and charter fishing, particular in inshore (state) waters. The Ngarla and Ngarla 2 (Determination Area A) Native Title determination extends into Commonwealth waters in this area. |
| **Types of zoning proposed** | Multiple Use Zone (IUCN Category VI): 12 105 km$^2$ |
| **Adjacent protected areas** | The proposed Western Australian Eighty Mile Beach marine park is east of the proposed reserve. |

a A full list of the conservation values included in the reserve is in the detailed analysis of the North-west Commonwealth Marine Reserve Network, available at **www.environment.gov.au/coasts/mbp/north-west/index.html**

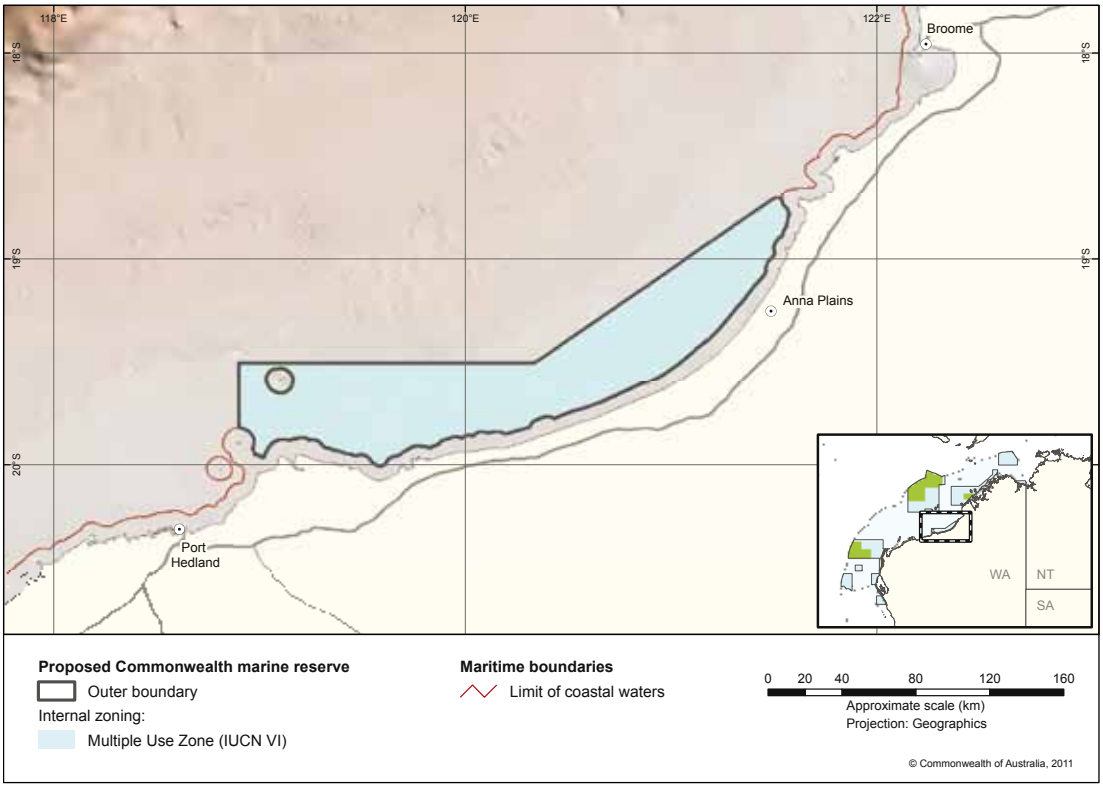


**Figure 6.7: Proposed Eighty Mile Beach Commonwealth marine reserve**

The marine reserve network will not affect waters within the 3-nautical-mile (5.5-kilometre) limit of coastal waters Western Australia. It applies to Commonwealth waters only.

## 6.8 Proposed Kimberley Commonwealth marine reserve

| | |
|---|---|
| **Area** | 62 791 km$^2$ |
| **Depth range** | 15–800 m (approx.) |
| **Major conservation values**[a] | • Important foraging areas for:<br>– **dugongs**<br>– **dolphins (Australian snubfin, Indo-Pacific humpback, Indo-Pacific bottlenose)**<br>– **migratory seabirds**<br>– **marine turtles** (green, olive ridley and flatback)<br>• Important migration pathways for **humpback whales**<br>• Adjacent to important foraging and pupping areas for **sawfish**<br>• Adjacent to important nesting sites for **green turtles**<br>• Two **key ecological features** are included within the proposed reserve:<br>– ancient coastline (unique sea-floor feature and enhanced productivity)<br>– continental slope demersal fish communities (high species diversity and endemism)<br>Examples of the ecosystems and communities of the **Northwest Shelf Province**, **Northwest Shelf Transition** and **Timor Province** provincial bioregions, as well as the **Kimberley, Canning, Northwest Shelf** and **Oceanic Shoals** meso-scale bioregions |
| **Existing uses** | Recreational and charter fishing along with tourism are important activities, particularly in state waters and around the many islands found along the Kimberley coastline. The area supports or is adjacent to a number of fisheries, including: the Western Australian-managed Kimberley Prawn, the Northern Shark (North Coast Shark and Joint Authority Northern Shark) and the Northern Demersal Scalefish fisheries; and the Commonwealth-managed North West Slope Trawl Fishery. Petroleum exploration is also a key use in the area. The Bardi Jawi, Dambimangari, and the Uunguu Native Title determinations extend into Commonwealth waters in the area. The Mayala and Nyul-Nyul Native Title claims also extend into Commonwealth waters in the area. |
| **Types of zoning proposed** | Marine National Park (IUCN Category II): 7 905 km$^2$ (7 555 km$^2$ and 350 km$^2$)<br>Multiple Use Zone (IUCN Category VI): 54 886 km$^2$ |
| **Adjacent protected areas** | The Western Australian proposed Camden Sound Marine Park and proposed North Kimberley Marine Park adjoin the proposed reserve to the east. |

a A full list of the conservation values included in the reserve is in the detailed analysis of the North-west Commonwealth Marine Reserve Network, available at **www.environment.gov.au/coasts/mbp/north-west/index.html**

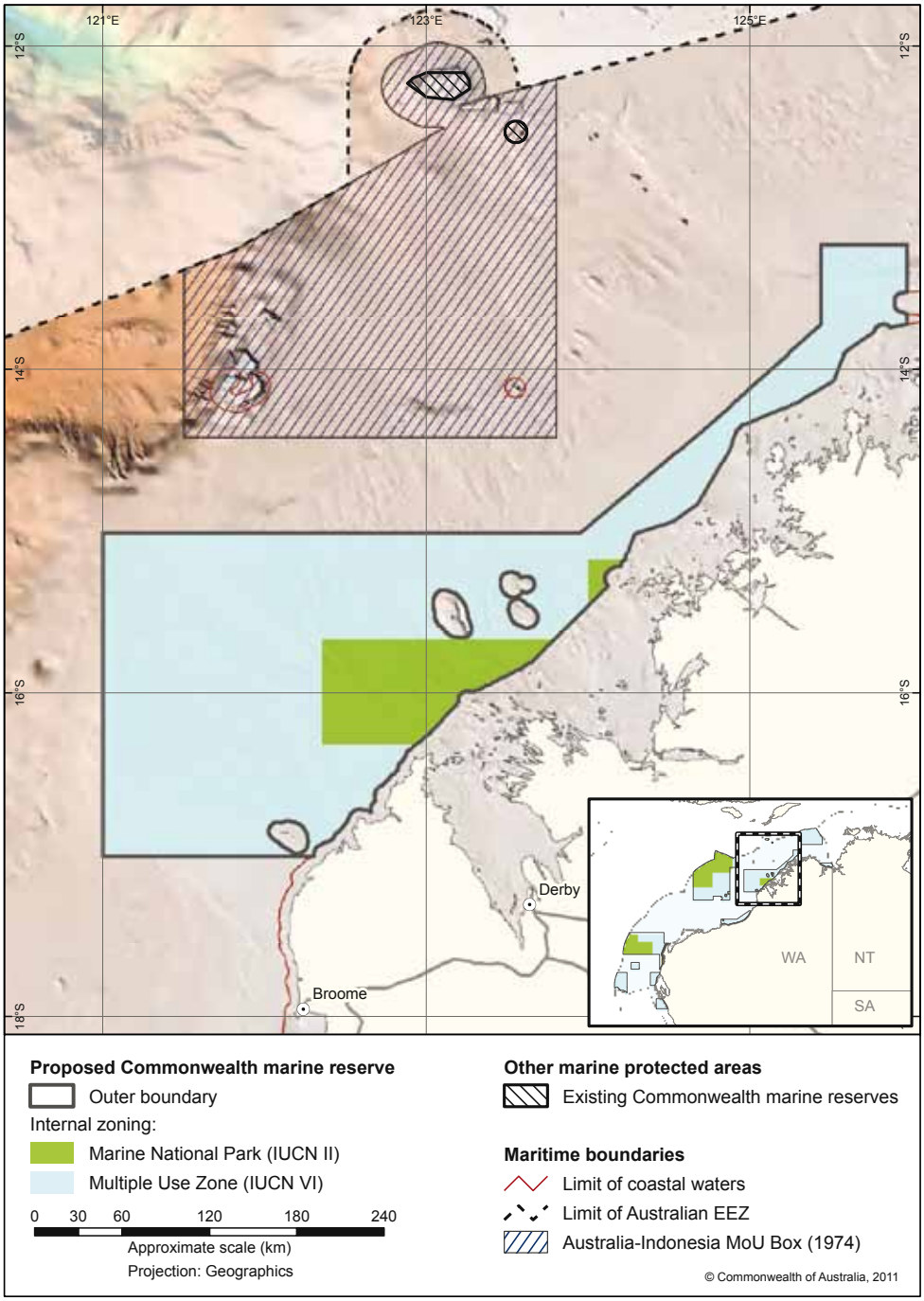


**Figure 6.8: Proposed Kimberley Commonwealth marine reserve**

The marine reserve network will not affect waters within the 3-nautical-mile (5.5-kilometre) limit of coastal waters of Western Australia. It applies to Commonwealth waters only.

## 6.9 Proposed Oceanic Shoals Commonwealth marine reserve

| | |
|---|---|
| **Area** | 31 362 km$^2$ |
| **Depth range** | 15–500 m (approx.) |
| **Major conservation values**[a] | • Important foraging area for **marine turtles** (loggerhead and olive ridley)<br>• Two **key ecological features** are included within the proposed reserve:<br>– carbonate banks of the Joseph Bonaparte Gulf (enhanced productivity, high biodiversity and unique sea-floor feature)<br>– pinnacles of the Bonaparte Basin (enhanced productivity and unique sea-floor feature)<br>• Examples of the northernmost ecosystems and communities of the **Northwest Shelf Transition** provincial bioregion and **Oceanic Shoals** meso-scale bioregion |
| **Existing uses** | Fisheries operating in the area include the Western Australian-managed Northern Demersal Scalefish and the Joint Authority Northern Shark fisheries. Other activities in the area include petroleum exploration. |
| **Types of zoning proposed** | Multiple Use Zone (IUCN Category VI): 31 362 km$^2$ |
| **Adjacent protected areas** | The proposed Oceanic Shoals Commonwealth marine reserve in the North Marine Region is adjacent to the proposed reserve to the east. |

a A full list of the conservation values included in the reserve is in the detailed analysis of the North-west Commonwealth Marine Reserve Network, available at **www.environment.gov.au/coasts/mbp/north-west/index.html**

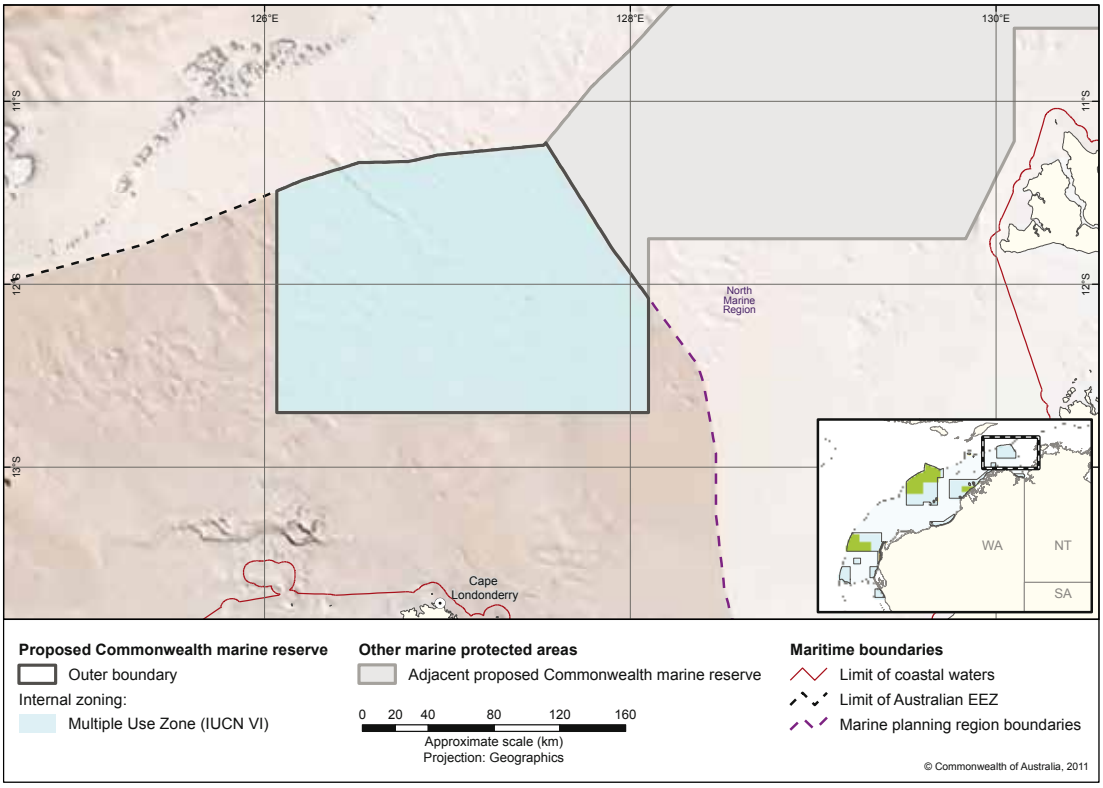


**Figure 6.9: Proposed Oceanic Shoals Commonwealth marine reserve**

The marine reserve network will not affect waters within the 3-nautical-mile (5.5-kilometre) limit of coastal waters of Western Australia. It applies to Commonwealth waters only.

## 6.10 Proposed Joseph Bonaparte Gulf Commonwealth marine reserve

| | |
|---|---|
| **Area** | 3385 km$^2$ |
| **Depth range** | 15–70 m (approx.) |
| **Major conservation values**[a] | • Important foraging areas for:<br>– **marine turtles** (green and olive ridley)<br>– **Australian snubfin dolphins**<br>• One **key ecological feature** is included in the proposed reserve:<br>– carbonate banks of the Joseph Bonaparte Gulf (enhanced productivity, high biodiversity and unique sea-floor feature)<br>• Examples of the shallow-water ecosystems and communities of the **Northwest Shelf Transition** provincial bioregion, and the **Bonaparte Gulf** and **Cambridge-Bonaparte** meso-scale bioregions |
| **Existing uses** | Fisheries operating in the area include the Western Australian–managed Joint Authority Northern Shark and the Northern Demersal Scalefish fisheries, and the Commonwealth-managed Northern Prawn Fishery. Recreational and charter fishing occur in the area, mostly within state waters. Other activities in the area include petroleum exploration. The Balanggarra Native Title claim extends into Commonwealth waters in this area. |
| **Types of zoning proposed** | Multiple Use Zone (IUCN Category VI): 3385 km$^2$ |
| **Adjacent protected areas** | The proposed Joseph Bonaparte Gulf Commonwealth marine reserve in the North Marine Region adjoins this proposed reserve to the east. |

a A full list of the conservation values included in the reserve is in the detailed analysis of the North-west Commonwealth Marine Reserve Network, available at **www.environment.gov.au/coasts/mbp/north-west/index.htm**

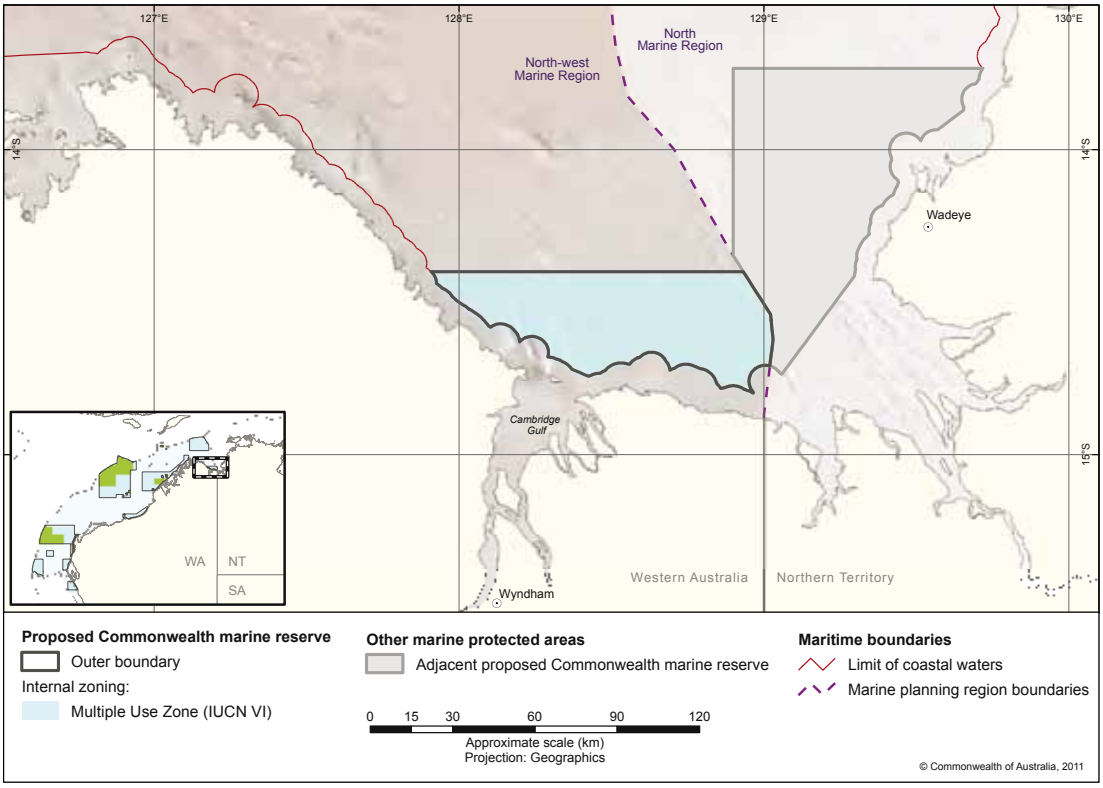


**Figure 6.10: Proposed Joseph Bonaparte Gulf Commonwealth marine reserve**

The marine reserve network will not affect waters within the 3-nautical-mile (5.5-kilometre) limit of coastal waters of Western Australia. It applies to Commonwealth waters only.

# 7 NEXT STEPS

## 7.1 Assessing the socioeconomic impacts

A socioeconomic impact assessment will be conducted in consultation with industry and relevant government agencies during the public consultation period. The outcomes of the assessment, an associated regulatory impact statement and the submissions received during the public consultation period will inform the government in finalising the network.

The *Goals and principles for the establishment of the National Representative System of Marine Protected Areas in Commonwealth waters* underscore the importance of designing the marine reserves in a way that meets conservation objectives, while minimising adverse social and economic impacts. Consultation is critical in developing the North-west Commonwealth marine reserve network, for three important reasons:

- To inform the decision-making process. The development of marine reserves may affect the interests of individuals, families, businesses and communities. It is important that the government has a good understanding of these interests.
- To update and improve the quality of information regarding the distribution of interests and values in the marine environment. Broad consultation with stakeholders will ensure that views are heard and that the data and information used to inform decisions about the final marine reserve network are up to date.
- To better understand and use the data collected. Consultation will improve our understanding of the way industry operates and therefore improve the way data and information are interpreted. This will ensure that the often complex nature of business operations, such as the relationships between fisheries and the operation of some businesses in multiple fisheries, is taken into account in decision-making.

Commercial fishing is the sector most likely to be affected by the proposed network as it is widespread across the region. Initial analysis indicates that the proposed network would displace fisheries catch worth approximately less than 1 per cent of the gross value of production of the fisheries in the region.

The proposed marine reserve network has been designed to avoid areas of highest use and value to the commercial fishing industry. However, 9 of the 16 fisheries operating in the region may be affected. The Australian Government has released a Fisheries Adjustment Policy to support the creation of new Commonwealth marine reserves.

The proposed reserve network overlaps with a number of important recreational sites; however, these areas have been zoned so that recreational activities may continue. There will be minimal displacement of recreational fishers as a result of the proposed marine reserve network.

Based on publicly available information, minimal displacement (if any) is expected for the charter fishing sector as a result of the proposed marine reserve network.

Native title rights can exist in waters over which Australia asserts sovereign rights under the *Sea and Submerged Lands Act 1973*. Native title determinations need not have been made for native title rights to exist. All the proposed Commonwealth marine reserves in the North-west Marine Region may overlap to some degree with native title. In addition, the proposed network intersects with four native title determinations and six registered native title claims. With the establishment of marine reserves the Commonwealth intends to minimise any impact on native tiles rights and interests, in consultation with native title claimants.

Petroleum production, exploration and retention leases as well as acreage releases overlap with the proposed marine reserve network. Multiple use zoning has been applied where these overlaps occur. As is currently the case, petroleum exploration and extraction activities will be subject to approval under the *Environment Protection and Biodiversity Conservation Act 1999.*

Shipping passage will be allowed in all zones within the proposed marine reserve network.

## 7.2 Finalising the network and declaration

The process for finalising the North-west Commonwealth marine reserve network includes several opportunities for the public to contribute:

- public consultation on the proposal for the North-west Commonwealth Marine Reserve Network (the current proposal)
- the formal statutory declaration process after the proposal is finalised, including a second round of public consultation
- the development of a management plan for the network—a two-stage process with opportunity for public comment at each stage.

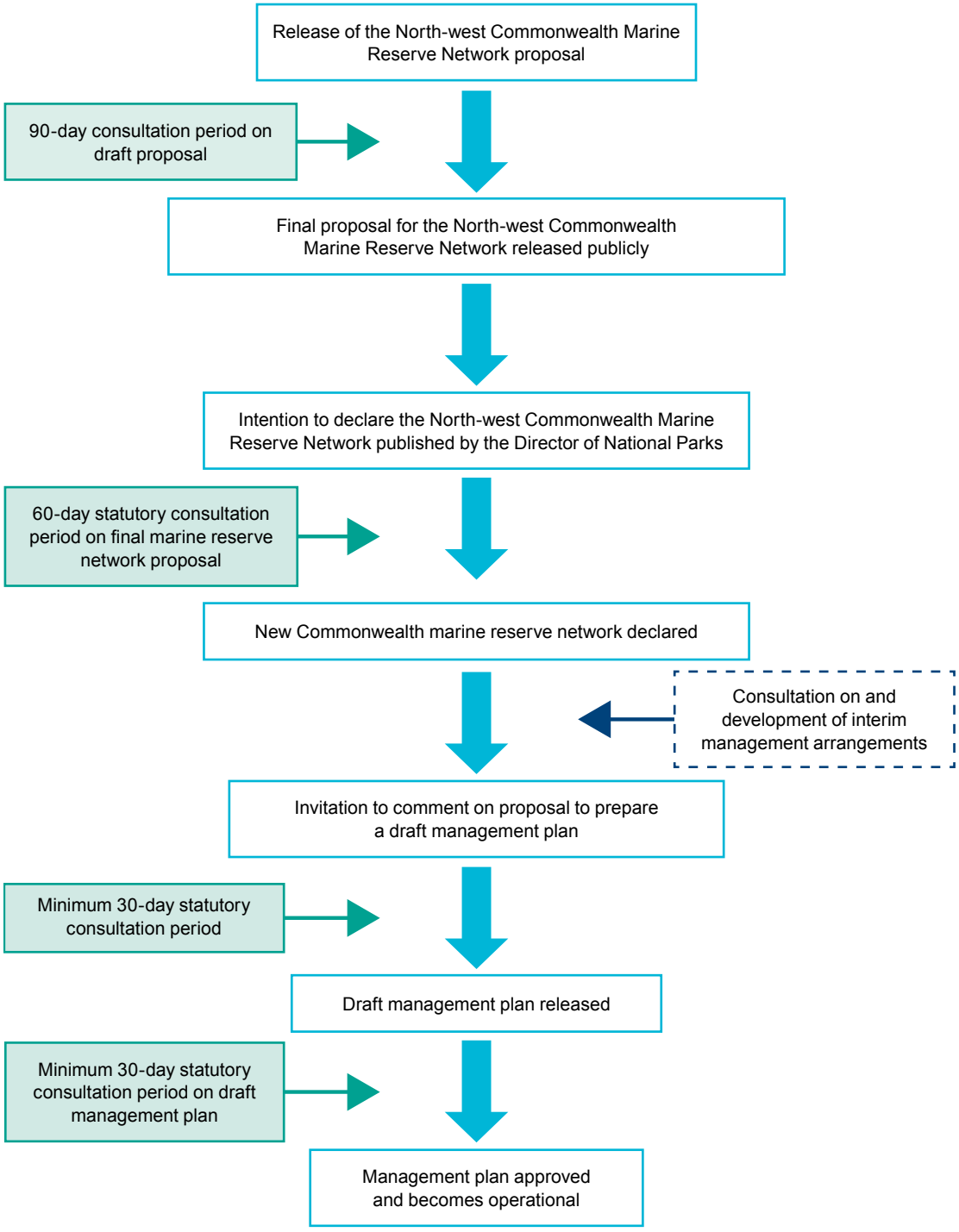


**Figure 7.1 Finalising the North-west Commonwealth Marine Reserve Network**

## 7.3 Have your say

The release of the proposal for a North-west Commonwealth Marine Reserve Network marks the start of the first formal public consultation period on both the draft reserve network and the draft North-west Marine Bioregional Plan. Stakeholders will have 90 days in which to submit comments on both the proposed network and the draft plan.

Information sessions will be held to ensure that the public has an understanding of the reserves and the potential implications for the community, and to outline areas where the Australian Government Department of Sustainability, Environment, Water, Population and Communities is seeking feedback on the proposed reserve network. An important objective of the consultation period is to obtain and refine information for use in the socioeconomic analysis being conducted by the Australian Bureau of Agricultural and Resource Economics and Sciences.

Public participation will assist the government to more fully understand the likely benefits and potential impacts of the proposed reserves, and to avoid unnecessary costs to communities and businesses affected by the proposed new reserves, and to society as a whole.

The department invites public feedback on the proposed marine reserve network and draft North-west Marine Bioregional Plan. There are three ways to submit feedback:

- on the web—complete a submission form (available on the department's website, **www.environment.gov.au/coasts/mbp/north-west/index.html**)
- by email—save the submission form from the department's website to your computer, and email the completed form and any additional information to **Submissions.Northwest@environment.gov.au**
- by post—print the submission form from the department's website and post the completed form free of charge to:

Department of Sustainability, Environment, Water, Population and Communities

MBP Submissions – North-west
Reply Paid 787
Canberra ACT 2601

Further details about the stakeholder consultation process and opportunities to be involved are available at **www.environment.gov.au/coasts/mbp/north-west/index.html**

The website also contains fact sheets on specific items of interest and answers to a number of frequently asked questions. If you have questions about how to make a submission or on any other aspects of the marine bioregional planning process please email **Northwest.MarinePlan@environment.gov.au** or telephone 1800 069 352.

# REFERENCES AND FURTHER READING


Australian and New Zealand Environment and Conservation Council Task Force on Marine Protected Areas 1998, *Guidelines for establishing the National Representative System of Marine ProtectedAareas*, Environment Australia, Canberra, viewed March 2011, <**www.environment.gov.au/coasts/mpa/publications/nrsmpa-guidelines.html**>.

Department of the Environment and Water Resources 2007, *Goals and principles for the establishment of the National Representative System of Marine Protected Areas in Commonwealth waters*, **Department of the Environment and Water Resources, Canberra, viewed March 2011, <www.environment.gov.au/coasts/mbp/publications/general/goals-nrsmpa.html>.**

Interim Marine and Coastal Regionalisation for Australia Technical Group 1998, *Interim Marine and Coastal Regionalisation for Australia: an ecosystem-based classification for marine and coastal environments*, Environment Australia, Canberra.

# MAP SOURCES

DSEWPaC 2011, Proposed Commonwealth Marine Reserves in the North-west Marine Planning Region

DSEWPaC 2011, Key Ecological Features in the North-west Marine Planning Region

DSEWPaC 2010, Collaborative Australian Protected Areas Database (CAPAD)

DSEWPaC 2010, Biomes within Australian waters

DSEWPaC 2007, Australia, World Heritage Areas

DSEWPaC 2007, Commonwealth Marine Protected Areas managed by DSEWPaC.

DSEWPaC 2006, Integrated Marine and Coastal Regionalisation of Australia v4.0

DSEWPaC 2006, Commonwealth Marine Planning Regions

Geoscience Australia 2006, Australian Maritime Boundaries (AMB) v2.0.

Geoscience Australia 2005, Australian Bathymetry and Topography.

Geoscience Australia 2004, Geomorphic Features of the EEZ

Geoscience Australia 2003, Australia, TOPO-2.5M Topographic Data

# APPENDIX A

## Goals and principles for the establishment of the National Representative System of Marine Protected Areas in Commonwealth waters

**Goal 1** – Each provincial bioregion occurring in the marine region should be represented at least once in the marine reserve network. Priority will be given to provincial bioregions not already represented in the National Representative System.

**Goal 2** – The marine reserve network should cover all depth ranges occurring in the region or other gradients in light penetration in waters over the continental shelf.

**Goal 3** – The marine reserve network should seek to include examples of benthic/demersal biological features (for example, habitats, communities, sub-regional ecosystems, particularly those with high biodiversity value, species richness and endemism) known to occur in the marine region at a broad sub provincial (greater than hundreds of kilometres) scale.

**Goal 4** – The marine reserve network should include all types of seafloor features. There are 21 seafloor types across the entire Exclusive Economic Zone. Some provincial bioregions will be characterised by the presence of a certain subset of features, such as continental slope or seamounts.

**In developing options that meet the four goals, the following location principles will be applied:**

1. Marine reserves will be located taking into account the occurrence and location of existing spatial management arrangements (for example, existing protected areas and sectoral measures) that contribute to the goals.
2. The goals should be met with the least number of separate marine reserves (that is, a smaller number of larger marine reserves rather than many small marine reserves) to maximise conservation outcomes.

**Where different options that meet the Goals exist, the following selection principles should be considered in selecting areas suitable for inclusion in the National Representative System of Marine Protected Areas:**

3. The capacity of a marine reserve to mitigate identified threats to conservation values.
4. The occurrence of spatially defined habitats for and/or aggregations of threatened and/or migratory species.
5. The occurrence of ecologically important pelagic features which have a consistent and definable spatial distribution.
6. The occurrence of known small-scale (tens of kilometres) ecosystems associated with the benthic/demersal environment.
7. Relevant available information about small-scale distribution of sediment types and sizes and other geo-oceanographic variables.
8. Occurrence of listed heritage sites (where inclusion in the marine reserve network would improve administration of protection regimes).
9. Socioeconomic costs should be minimised.

**Once the broad location of marine reserves has been determined, the following design principles should be applied to further refine the size and shape of individual marine reserves:**

10. Individual areas should, as far as practicable, include continuous depth transects (for example, from the shelf to the abyss).
11. Whole seafloor features (such as geomorphic features) should be included.
12. Features should be replicated wherever possible within the system of marine reserves (that is, included more than once).
13. Size and shape should be orientated to account for inclusion of connectivity corridors and biological dispersal patterns within and across marine reserves.

14. Boundary lines should be simple, as much as possible following straight latitudinal/longitudinal lines.

15. Boundary lines should be easily identifiable, where possible coinciding with existing regulatory boundaries.

16. The size and shape of each area should be set to minimise socioeconomic costs.

**The following zoning principles will be applied in developing the regional systems of marine reserves:**

17. Zoning will be based on the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)/the World Conservation Union (IUCN) categories of protection.

18. The regional marine reserve network will aim to include some highly protected areas (IUCN Categories I and II) in each provincial bioregion.

19. Zoning will be based on the consideration of the threat that specific activities pose to the conservation objectives of each marine reserve.

20. Zoning of marine reserves will seek to ensure that the conservation objectives of the area are protected, taking into account a precautionary approach to threats as well as the relative costs and benefits (economic, social and environmental) of different zoning arrangements.

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