

## CHAPTER 4 ESTABLISHING NEW MARINE PROTECTED AREAS IN THE SOUTH-WEST MARINE REGION

Australia is committed to the development of a National Representative System of Marine Protected Areas (MPAs). The primary goal of the National Representative System of MPAs is to establish and manage a comprehensive, adequate and representative system of MPAs 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. This means that:

- each distinct bioregion in Australian waters will be represented in an MPA network;
- that the design of the network should be sufficient to achieve the conservation of all major ecosystem functions and features; and
- that the network should properly represent the identified habitats and biota characteristic of each bioregion<sup>1</sup>.

Since 1998, there have been many decisions that have helped formulate the Australian Government's approach to establishing an MPA network. These include the development of a clearer understanding of how the *National Representative System of Marine Protected Areas Guidelines* will be applied by the Australian Government, drawing on the best available scientific information. More recently, the Department of the Environment, Water, Heritage and the Arts has worked with Australian Government agencies to develop a single document that provides a clear approach to MPA development: the *Goals and Principles for the Establishment of the National Representative System of Marine Protected Areas in Commonwealth Waters*.

The Goals and Principles are derived from the *National Representative System of Marine Protected Areas Guidelines* and the Australian Government's implementation experience to date, to ensure proper consideration of ecological and socio-economic requirements. The Goals and Principles do not introduce anything new, or replace existing policies.

The Australian Government considers that measures other than MPAs also play a critical role in biodiversity conservation, and that the existence and effectiveness

of those measures should be taken into account in assessing the adequacy of any MPA network.

In addition to MPAs, the Government supports the use of spatial measures, including both temporal and permanent area closures, in the management of fisheries. Fisheries-specific measures are developed according to the particular goals and circumstances of each fishery. MPAs are developed in Commonwealth waters for the purpose of general biodiversity conservation or to address threats to particular species or habitats – not to manage fisheries. MPAs may lead to improved fisheries performance and fisheries closures may achieve biodiversity benefits. The Government seeks to ensure that the design of MPAs takes into account the potential for beneficial impacts on fishery resources, and that MPAs are selected and zoned to enhance or conserve fisheries wherever possible.

The Government develops and declares MPAs in the context of a commitment to minimise costs to industry under its policy on MPAs and displaced fishing: *Marine Protected Areas and Displaced Fishing* <[www.environment.gov.au/coasts/mpa](http://www.environment.gov.au/coasts/mpa)>. MPAs have long-term benefits for the environment and the economy, but, even where impacts can be minimised, they may affect some businesses in the short to medium-term. The Government recognises that a new MPA network may transfer some marine resources from current production to biodiversity conservation. Therefore, before any new MPAs are declared, it will assess the financial and economic costs and benefits of each regional MPA network and decide on the provision of any adjustment assistance to affected businesses.

The Government is committed to the establishment, through the marine bioregional planning process, of comprehensive, adequate and representative MPA networks throughout the Commonwealth marine area. These networks will include some highly protected zones (IUCN Categories I and II) and some large areas initially assigned to IUCN Category VI. This approach recognises that the MPAs are being developed in the absence of detailed information for many areas and applies a precautionary approach in determining size. Using a staged and adaptive approach to zoning is consistent with the principles of ecologically sustainable development. This approach also allows more

<sup>1</sup> For the purpose of this document, 'bioregion' means provincial bioregion as defined in the *Integrated Marine and Coastal Regionalisation of Australia Version 4.0*.



information about the specific ecological, economic and social values of an area, and the threats to those values, to be gathered. In these instances, the Government will set out clear strategies for increasing information over time, including improved knowledge of biodiversity, other environmental values, and current and prospective commercial uses of these areas.



Australian lesser noddy. Photo: Andrew Burbidge, WA Department of Environment and Conservation.

## 4.1 Goals and Principles

The Australian Government is committed to develop, by 2012, a National Representative System of MPAs. This network will be, as a whole, representative of the 41 provincial-scale bioregions recognised in Commonwealth waters. Areas suitable for inclusion in the National Representative System of MPAs will be identified during the marine bioregional planning process. The National Representative System of MPAs is being developed using the *Guidelines for Establishing the National Representative System of Marine Protected Areas* <[www.environment.gov.au/coasts/mpa](http://www.environment.gov.au/coasts/mpa)> agreed between the Australian Government, the States and the Northern Territory in 1998.

The development of Marine Bioregional Plans for each of Australia's five large-scale Marine Regions provides an opportunity to make substantial progress towards this goal. The focus is on ensuring that MPAs are developed for those bioregions that are currently not represented, or are under-represented, in MPAs.

Because the management of MPAs may require conditions to be put on the nature and extent of activities that can occur within them, the identification of areas suitable for inclusion in the National Representative System of MPAs needs to be based upon clear goals and principles. The Goals and Principles below recognise both the scientific information available and the interests of ocean users whose activities may be impacted upon by new MPAs.

This approach draws on available science while recognising from the outset that the information base is poor for some areas. Much of each Marine Region is far offshore, comprised of very deep water and has not been the subject of detailed study or data gathering. In these circumstances, the detailed and peer-reviewed data that does exist will be supplemented with information drawn from known linkages between biodiversity and the physical environment – that is, where detailed species and habitat data is lacking, surrogates for diversity (such as water depth, substrate and geomorphology) will be used.

Key inputs into the process will include:

- existing scientific information underlying IMCRA v.4.0 (e.g. bathymetry, geomorphic features, distribution of endemic biota);

- additional regional information on habitats, species distribution and ecology gathered during the marine bioregional planning process;
- data on the location and distribution of human activities in the region;
- views of ocean users and stakeholders in each Marine Region;
- consideration of the contribution that existing spatial management measures can make to the National Representative System of MPAs; and
- consideration of potential management effectiveness (e.g. feasibility of compliance).

### 4.1.1 The goals

Four goals to maximise conservation outcomes will guide the identification of areas suitable to be included in the National Representative System of MPAs. These goals apply nationally, and they will be used to guide identification of representative MPAs in all the Marine Regions (except the South-east, where the process has been completed). Additionally, a number of supporting principles will assist in determining the location, selection (when more than one option to meet the goals is available), design and zoning of suitable areas.

**Goal 1** – Each bioregion (as defined in IMCRA v.4.0, see Figure 4.1) occurring in the Region should be represented at least once in the MPA network. Priority will be given to bioregions not already represented in the National Representative System of MPAs.

*Why this goal?* Each **bioregion** has been identified because it reflects broad-scale patterns of biodiversity and evolution.

**Goal 2** – The MPA network should cover all **depth ranges** (50-5000+ m, see Figure 4.2) occurring in the Region, or other gradients of light penetration in waters over the continental shelf.

*Why this goal?* Depth is one of the main factors determining the distribution of benthic and demersal biological communities. Depth reflects certain basic physical variables – such as light penetration and pressure – that determine what types of animals and plants are found in particular locations. In Australia's north, where there is an extensive expanse of relatively shallow water over the continental shelf, it is turbidity, rather than water depth, that is the primary determinant of light penetration. There is a high level of certainty

that different types of biological communities will be associated with different depths or with different levels of light penetration.

**Goal 3** – The MPA network should seek to include examples of **benthic/demersal biological** features (e.g. habitats, communities, sub-regional ecosystems, particularly those with high biodiversity value, species richness and endemism) known to occur in the Region at a broad sub-provincial (hundreds of kms) scale.

*Why this goal?* While including each bioregion in the MPA network ensures that we capture some of the biological diversity at a very large-scale, where we also have good biological information it will be used to guide selection of areas for inclusion in the National Representative System of MPAs.

**Goal 4** – The MPA network should include all **types of seafloor features**<sup>1</sup> (see Figure 4.3). There are 21 seafloor types across the entire EEZ. Some bioregions will be characterised by the presence of a certain subset of features, such as continental slope or seamounts.

*Why this goal?* Different biological communities are often associated with different types of seafloor geomorphology. Ensuring that the characteristic features of each bioregion are represented is important in achieving a comprehensive and representative sample of biodiversity within the MPA network.



Warty prow fish. Photo: Marine Life Society of South Australia.

<sup>1</sup> Seafloor features here refer specifically to the geomorphic features defined by IMCRA v.4.0.



#### 4.1.2 Guiding Principles

##### Location of MPAs

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

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

##### Selection

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 MPAs:

3. The capacity of an MPA 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 MPA network would improve administration of protection regimes).
9. Socio-economic costs should be minimised.

##### Design

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

10. Individual areas should, as far as practicable, include continuous depth transects, (e.g. from the shelf to the abyss).
11. Whole seafloor (geomorphic) features should be included.
12. Features should be replicated wherever possible within the system of MPAs, (i.e. 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 MPAs.
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 socio-economic costs.

For each area identified as a candidate MPA, specific conservation objectives will be set. Area-specific conservation objectives will reflect the four goals. For example, they may relate to the integrity of bioregional characteristics (Goal 1) or, of specific large-scale biological features (Goal 3) that the area aims to represent. They may also relate to other relevant principles, such as the integrity of habitat important for a threatened species (Principle 4).

## Zoning

Because zoning of MPAs (i.e. the allocation of appropriate management regimes to different zones) has the potential to affect the socio-economic costs associated with the establishment of any protected area, the Australian Government recognises the importance of addressing zoning considerations as early as possible in the process. The following **zoning principles** will be applied in developing the regional systems of MPAs:

17. Zoning will be based on the EPBC Act/World Conservation Union (IUCN) categories of protection (see Box 4.1).
18. The regional MPA network will aim to include some highly protected areas (IUCN Categories I and II) in each bioregion.
19. Zoning will be based on the consideration of the threat that specific activities pose to the conservation objectives of each MPA.
20. Zoning of MPAs 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.

### Box 4.1 IUCN Categories assigned under the EPBC Act for Marine Protected Areas

Under the EPBC Act, marine reserves must be assigned to an IUCN category. These IUCN categories are:

- Strict nature reserve (IUCN Ia): Managed primarily for scientific research or environmental monitoring;
- Wilderness area (IUCN Ib): Protected and managed to preserve its unmodified condition;
- National Park (IUCN II): Protected and managed to preserve its natural condition;
- Natural Monument (IUCN III): Protected and managed to preserve its natural or cultural features;
- Habitat/species management area (IUCN IV): Managed primarily, including (if necessary) through active intervention, to ensure the maintenance of habitats or to meet the requirements of specific species;
- Protected landscape/seascape (IUCN V): Managed to safeguard the integrity of the traditional interactions between people and nature; and
- Managed resource protected area (IUCN 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.

See <[www.iucn.org/themes/wcpa/theme/categories/what.html](http://www.iucn.org/themes/wcpa/theme/categories/what.html)>.



Large sponges with small sponges, ascidians, bryozoans and octocorals. Central Western Province, 93 m deep. Photo: CSIRO.

## 4.2 Regional specifications for identifying representative MPAs in the South-west Marine Region

### 4.2.1 Meeting the goals in the South-west

To achieve the four goals for the establishment of the National Representative System of MPAs in the Region, the following set of regional specifications have been developed, drawing on available biophysical information. Much of this information is available in more detail in this Bioregional Profile or in the associated web-based products.

#### Specifying Goal 1 (bioregions)

The network of representative MPAs in the South-west Marine Region will represent each of the seven bioregions as defined by IMCRA v.4.0 (Figure 4.1).

Of these, the Central Western Province and the Southwest Transition are wholly contained within the South-west Marine Region (Table 4.1). The Great Australian Bight Shelf Transition, the Southwest Shelf Province, and the South-west Shelf Transition are not

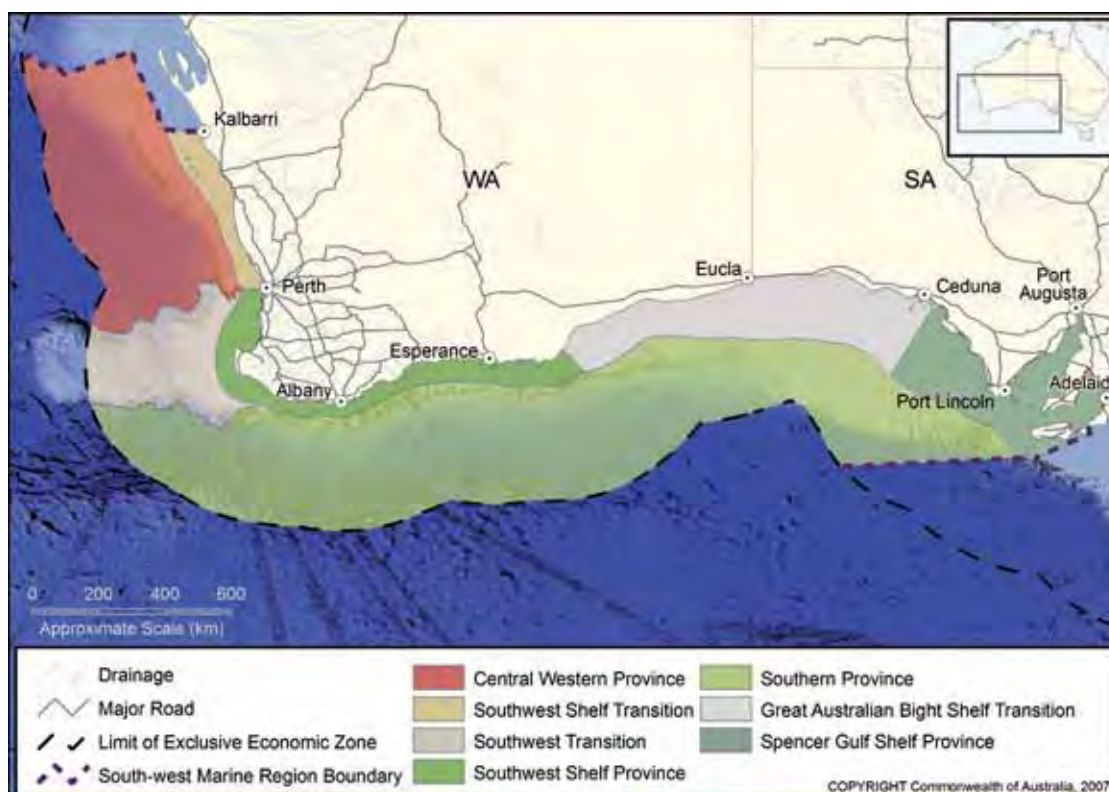
represented in any other planning Regions, however some of their area is within State waters. The Spencer Gulf Shelf Province straddles State waters and the waters of the South-east Marine Region. The Southern Province, although mostly within the Region, also straddles waters of the South-east Marine Region (see Table 4.1).

The Great Australian Bight Shelf Transition and Southern Province are represented in an existing MPA, the Great Australian Bight Marine Park (see Chapter 3.3 for details). The Spencer Gulf Shelf Province is represented in the Murray Commonwealth Marine Reserve, established as part of the South-east Marine Region network of MPAs.

In identifying new areas in the Region suitable for inclusion in the National Representative System of MPAs, priority will therefore be given to areas representative of the following bioregions:

- Central Western Province;
- Southwest Transition;
- Southwest Shelf Transition; and
- Southwest Shelf Province.

Figure 4.1 Bioregions of the South-west Marine Region



**Specifying Goal 2 (depth ranges)**

The range of depths that occur in the South-west Marine Region should be represented in the network of representative MPAs. Water depths in the South-west Marine Region range from 10-5900 m (Figure 4.2). The Region has more than 25 per cent of its area occurring in water depths of less than 150 m, with over 50 per cent of the area occurring in depths greater than 4000 m. This is a large proportion in comparison to the entire EEZ (only 35 per cent of the total EEZ has water

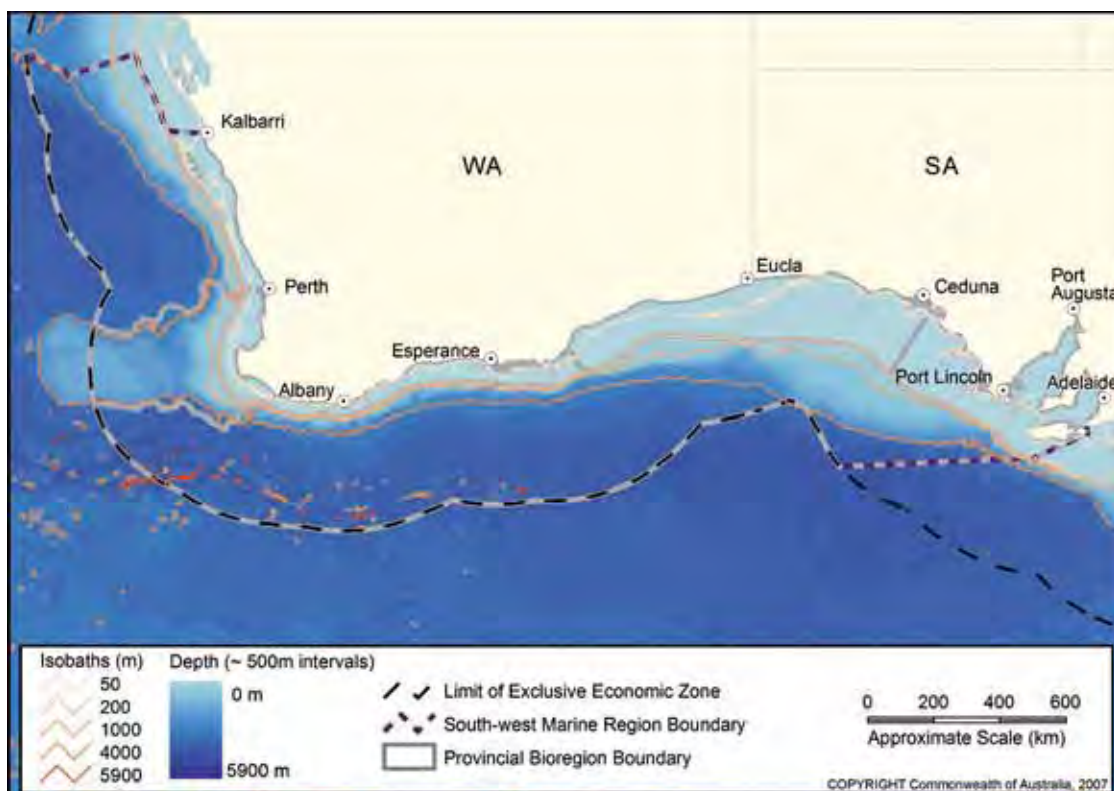
depths greater than 4000 m). The depth range and area of each bioregion in the Region is shown in Table 4.1.

Some of the Region’s bioregions occur exclusively on the continental shelf and as such do not display a significant variation in depth relative to the Region as a whole. Within such bioregions other factors that may affect the distribution of biota and habitats will be considered in the design of the MPA network.

**Table 4.1** Depth and area of each bioregion

Bioregion	Total area (km <sup>2</sup> )	Percentage of the bioregion contained within the Region	Depth range (m)
Spencer Gulf Shelf Province	133 160	39	10 - 200
Southern Province	770 270	85	200 - 5900
Great Australian Bight Shelf Transition	146 547	93	10 - 200
Southwest Shelf Province	73 772	78	10 - 200
Southwest Transition	101 055	100	200 - 5190
Southwest Shelf Transition	32 809	81	10 - 200
Central Western Province	268 460	100	200 - 5795
<b>Total</b>	<b>1 526 074</b>	<b>85</b> (approx. 1.3 million km <sup>2</sup> )	<b>10 - 5900</b>

**Figure 4.2** Depth ranges in the South-west Marine Region



**Specifying Goal 3 (large-scale biological features)**

The network of MPAs in the South-west will seek to include examples of known large-scale benthic and demersal (i.e. associated with the seafloor) biological features. Due to a range of factors, including the remoteness of the Region, its environment is one of the least studied in Australia. With the exception of the benthic communities living across the continental shelf of the Great Australian Bight (which are represented in the Great Australian Bight Marine Park), little is known about other large-scale biological features that may exist within the Region. During the bioregional planning process, available biological datasets will be assembled, to assist in identifying other large-scale biological features that may be suitable for inclusion within this representative system.

**Specifying Goal 4 (seafloor features)**

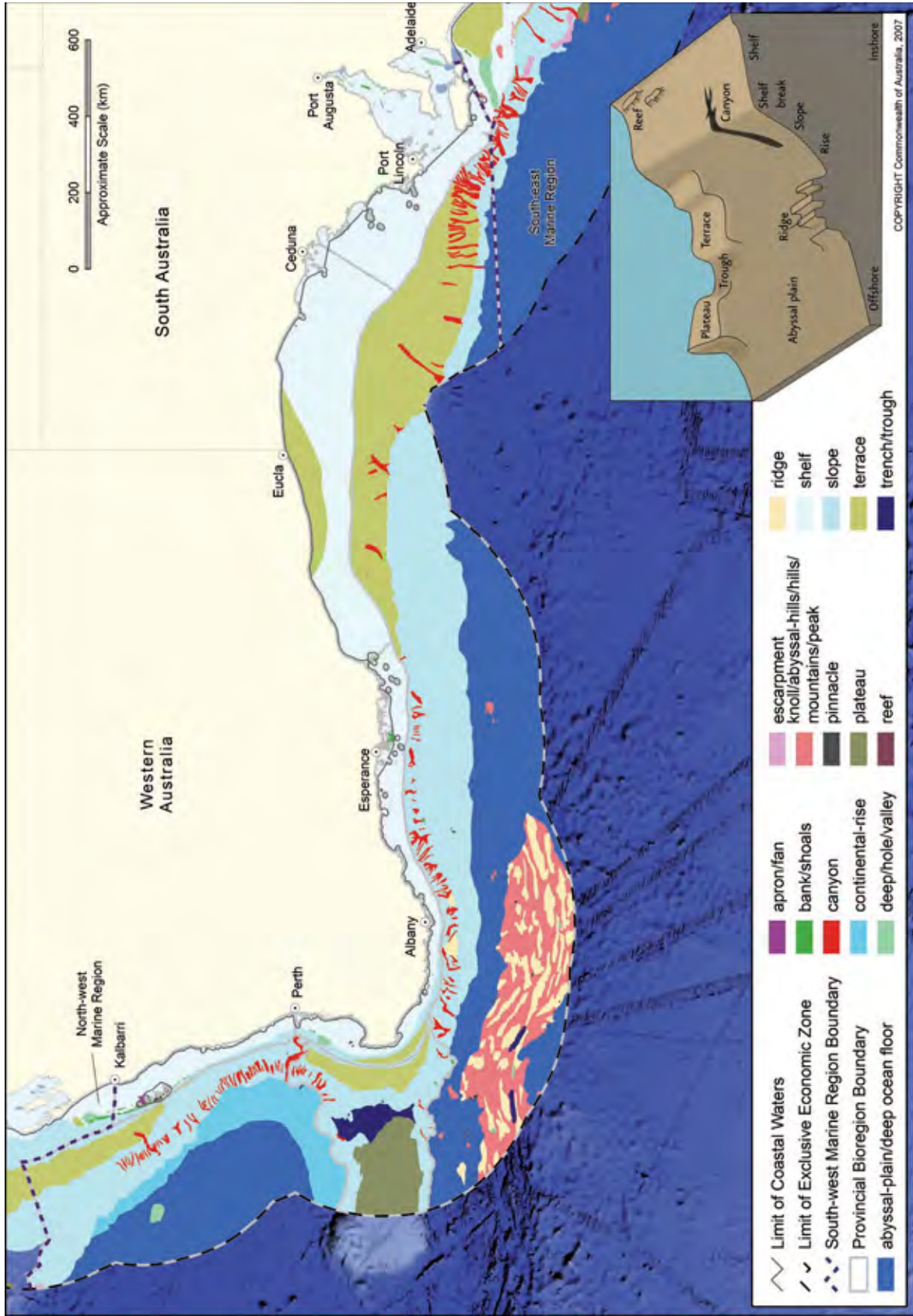
The South-west network of MPAs will seek to include representative examples of the 15 seafloor features (geomorphic features) identified in the Region (see Figure 4.3).

Some geomorphic features have very few occurrences. As a result, the placement of MPAs may be influenced by the location of such regionally unique features.



Tam o'Shanter (pancake) sea urchin on fine sediments. Southern Province, 707 m deep. Photo: CSIRO.

Figure 4.3 Geomorphic features (seafloor features) of the South-west Marine Region



This is also available as a separate map in the envelope in the back cover of this book.



## 4.2.2 Applying the principles in the South-west

This section outlines considerations relevant to the regional application of the location, selection, design and zoning principles as listed in Chapter 4.1. Note that only those principles that require a regional specification (i.e. require input of regionally specific data) are considered below. In any given Marine Region, there may be different options for MPAs that meet the four goals for the establishment of a representative network.

### Existing spatial management measures (Principle 1)

According to the principles outlined in Chapter 4.1, the first step in determining the approximate location of suitable areas will be to consider the occurrence, extent and purpose of existing spatial management arrangements, such as existing protected areas and/or sectoral measures, with a view to assessing their ability to contribute to a representative network in the Region. Spatial management arrangements in the South-west include closures for commercial and recreational fishing and areas managed for conservation objectives.

### Threats to the Region's conservation values (Principle 3)

Current and future activities may pose a threat to the Region's marine environment and conservation values. A key function of Marine Bioregional Plans is the identification of potential threats, so that decision-makers

are aware of long-term implications of management. An analysis of the threats to the key ecological features identified in the Region (see Chapter 3) will take place during the next stage of the planning process. Those key ecological features subject to threats that are not currently managed and can best be mitigated through spatial management will be considered for inclusion in the proposed network of MPAs.

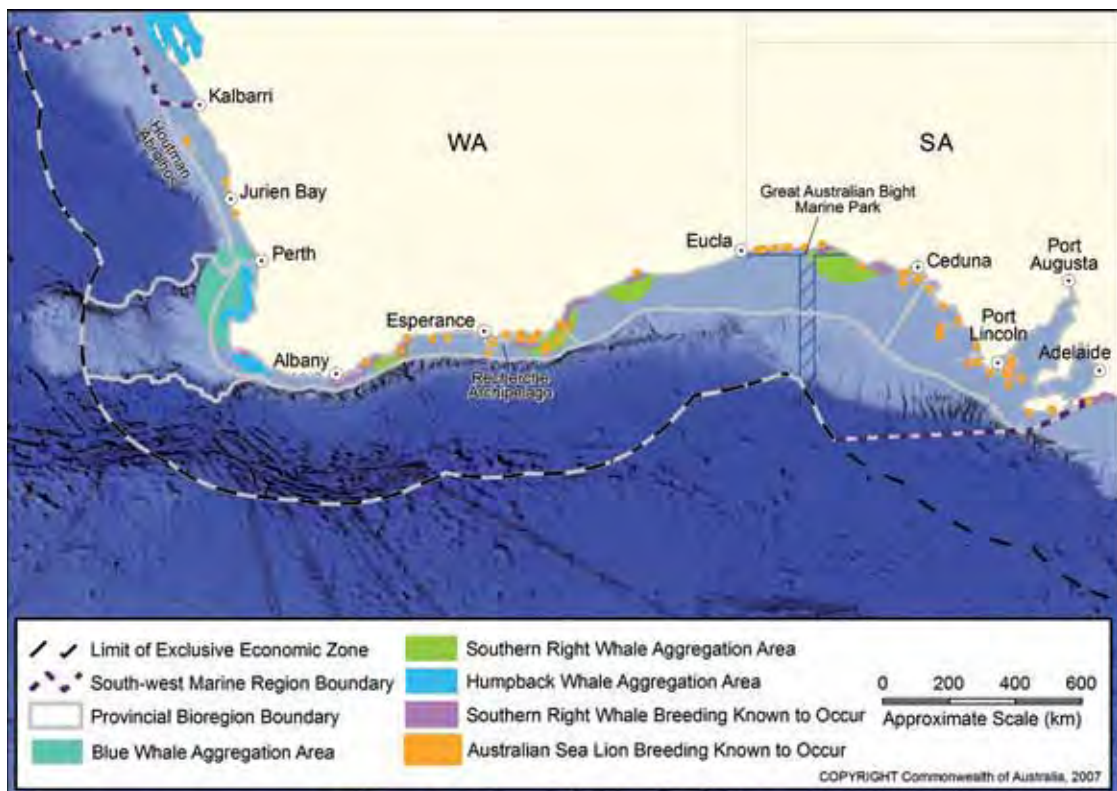
### Habitat and aggregation areas of threatened or migratory species (Principle 4)

While there are no habitats in the South-west Marine Region listed in the *Register of Critical Habitats* under the EPBC Act, this Bioregional Profile identifies several sites of significance to threatened and migratory species that reside in, or transit through, the Region. A map of known aggregation areas and habitats for whales and Australian sea lions is at Figure 4.4 and further details are included in the Species Group Report Cards at Appendix D.

### Ecologically important pelagic features (Principle 5)

Seven of the 17 key ecological features identified in the Region pertain to the pelagic environment (i.e. open waters) and have a consistent and definable spatial distribution, such as the eddy fields off the west coast. In accordance with Principle 5, these will be considered in selecting MPAs in those instances where multiple

**Figure 4.4** Whale aggregation areas and Australian sea lion breeding sites in the South-west Marine Region



options exist that meet the four goals. The pelagic features of key ecological significance are shown in Figure 3.1.

### Small-scale (tens of kilometres) benthic/demersal ecosystems (Principle 6)

Ecosystem structure and functioning have been considered and described in this Bioregional Profile at broad regional and bioregional scales. Where available, finer-scale data and information, such as information on meso-scale bioregions, will be considered to explore options that meet the four goals.

### Small-scale distribution of sediment types and sizes (Principle 7)

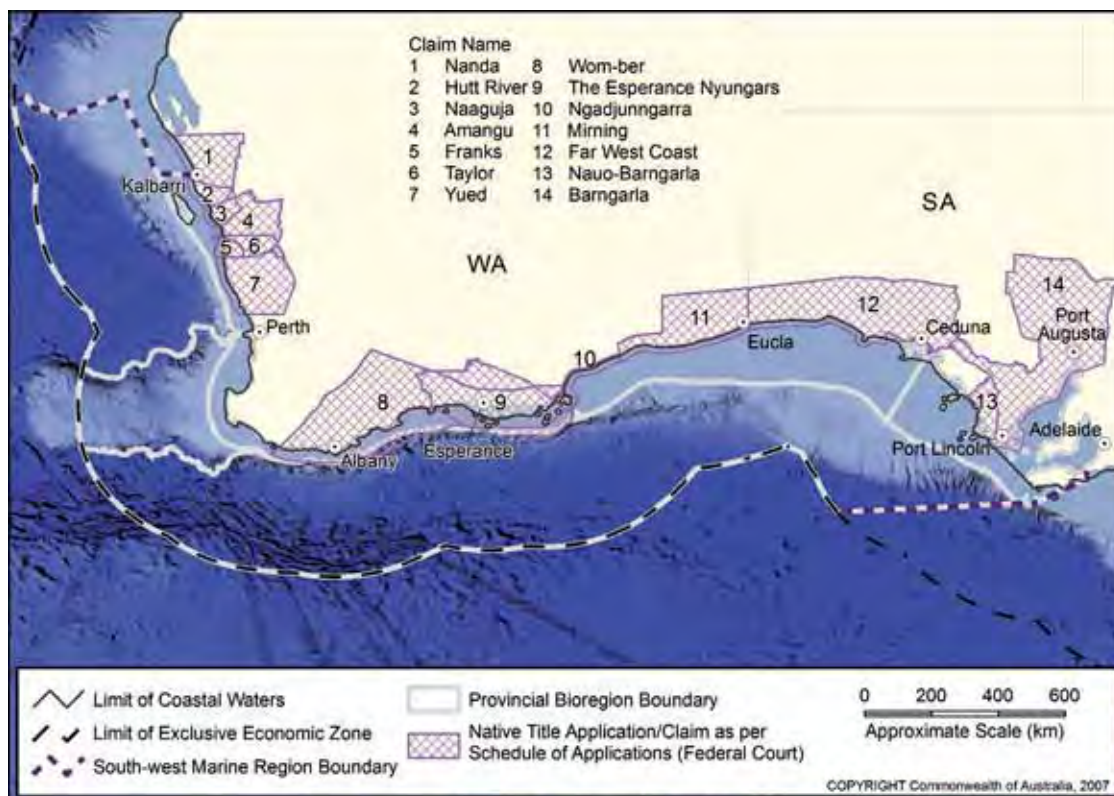
Scientists know that sediment type and size strongly influence the species and communities that are found on and near the seafloor. In the deeper parts of the Region, the types of sediments associated with different plants and animals are unknown. It is reasonable to expect that by including multiple and diverse types of sediments within an MPA, a larger variety of organisms will be protected. In those instances where different options to meet the four goals exist, data derived from a sediment study undertaken in collaboration with Geoscience Australia will be used during the selection of candidate MPAs, aiming to include areas that cover a broader range of sediment types.

### Socio-economic factors (Principles 9 and 16)

The Australian Government is seeking to minimise any socio-economic costs associated with the displacement of activities and resource access that might result from the establishment of MPAs. The potential impacts on current users will be considered throughout the process, and particularly during the selection stage and at the design stage. This Bioregional Profile provides a snapshot of information about the key commercial and recreational activities that take place in the Region. Further detailed data on distribution, intensity and value of marine uses and resources will be gathered in consultation with State Government agencies and relevant stakeholders throughout the process.

Socio-economic aspects of establishing new MPAs may include consideration of native title rights and interests (see Section 227 of the *Native Title Act 1993*). Coastal Aboriginal peoples in the South-west Marine Region consider their sea country to encompass waters from the coastline to the horizon and sometimes beyond. (See Appendix B for a description of the native title regime in Australia). There are currently 14 native title applications (11 in Western Australia and three in South Australia) that extend into Commonwealth waters of the South-west Marine Region (Figure 4.5).

**Figure 4.5** Native title claims in the Region





Australian sea lions at Seal Bay on Kangaroo Island. Photo: Allan Fox and the Department of the Environment, Water, Heritage and the Arts.

### 4.3 Process for establishing new Commonwealth marine reserves in the South-west Marine Region

The identification of new MPAs in the South-west, in contribution to the National Representative System of MPAs, will occur during the next stages of the marine bioregional planning process (see Chapter 6).

#### Step 1

A proposed MPA network will be developed by the Department of the Environment, Water, Heritage and the Arts in accordance with the Goals and Principles and regional specifications outlined in Section 4.2. During this time, stakeholders will be consulted by the Department. Stakeholder participation will ensure that the Department has accurate and comprehensive details of the current uses and interests in the Region. This will help ensure that the impact of proposed MPAs on current users of the Region will be minimised. The Department will also seek expert scientific advice to ensure the proposed network is underpinned by all relevant data and best available knowledge.

#### Step 2

The proposed MPA network will be agreed by Government and released in a Draft Plan for a 90 day period of statutory public consultation. During this time, the Department will make available all relevant data and will facilitate information sessions to assist members of the public who wish to make a representation to the Government in relation to the proposed MPA network or other aspects of the Draft South-west Marine Bioregional Plan.

#### Step 3

After consideration of public submissions, advice from the Department, and agreement by the Government, the Final Plan will be released. It will contain a network of candidate MPAs to be declared as marine reserves. Marine reserves will be declared in accordance with the relevant sections of Part 15 of the EPBC Act.

Chapter 6 provides further information about how the marine bioregional planning process (including identification of protected areas) will unfold in the South-west Marine Region following the release of this Bioregional Profile.

## Key references and further readings

Australian and New Zealand Environment and Conservation Council, Task Force on Marine Protected Areas (ANZECC TFMPA), 1998, *Guidelines for Establishing the National Representative System of Marine Protected Areas*, Environment Australia, Canberra, <[www.environment.gov.au/coasts/mpa](http://www.environment.gov.au/coasts/mpa)>, accessed 15/05/07.

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World Conservation Union, 1994, *Guidelines for Protected Area Management Categories*, IUCN, <[www.iucn.org/themes/wcpa/pubs/guidelines.htm](http://www.iucn.org/themes/wcpa/pubs/guidelines.htm)>, accessed 15/05/07.

## Legislation

Available from the Commonwealth of Australia Law website <[www.comlaw.gov.au](http://www.comlaw.gov.au)>.

*Environment Protection and Biodiversity Conservation Act 1999* (Cth).

*Native Title Act 1993* (Cth).

## Map data

### 4.1 Bioregions of the South-west Marine Region

Department of the Environment and Heritage (2004): Collaborative Australian Protected Areas Database - CAPAD  
 Department of the Environment, Water, Heritage and the Arts (2006): Commonwealth Marine Planning Regions  
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 Geoscience Australia (1998): Australia, TOPO-2.5M Topographic Data  
 Geoscience Australia (2004): Gazetteer of Australia  
 Geoscience Australia (2005): Australian Bathymetry and Topography  
 Geoscience Australia (2006): Australian Maritime Boundaries (AMB) v2.0  
 Projection: Geographics, Datum: GDA94  
 Produced by the Environmental Resources Information Network (ERIN) Australian Government Department of the Environment, Water, Heritage and the Arts. COPYRIGHT Commonwealth of Australia, 2007.

### 4.2 Depth ranges in the South-west Marine Region

Department of the Environment, Water, Heritage and the Arts (2006): Commonwealth Marine Planning Regions  
 Department of the Environment, Water, Heritage and the Arts (2006): Integrated Marine and Coastal Regionalisation of Australia v4.0 - Provincial Bioregions  
 Geoscience Australia (1998): Australia, TOPO-2.5M Topographic Data  
 Geoscience Australia (2004): Gazetteer of Australia  
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### Figure 4.3 Geomorphic features (seafloor features) of the South-west Marine Region

Department of the Environment, Water, Heritage and the Arts (2006): Commonwealth Marine Planning Regions  
 Department of the Environment, Water, Heritage and the Arts (2006): Integrated Marine and Coastal Regionalisation of Australia v4.0 - Provincial Bioregions  
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 Geoscience Australia (2004): Gazetteer of Australia  
 Geoscience Australia (2004): Geomorphic Features of Australia's EEZ  
 Geoscience Australia (2005): Australian Bathymetry and Topography  
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### Figure 4.4 Whale aggregation areas and Australian sea lion breeding sites in the South-west Marine Region

Department of the Environment, Water, Heritage and the Arts (2006): Commonwealth Marine Planning Regions  
 Department of the Environment, Water, Heritage and the Arts (2006): Integrated Marine and Coastal Regionalisation of Australia v4.0 - Provincial Bioregions



Department of the Environment, Water, Heritage and the Arts (2006):  
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 Produced by the Environmental Resources Information Network (ERIN)  
 Australian Government Department of the Environment, Water,  
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**Figure 4.5 Native title claims in the Region**

Department of the Environment, Water, Heritage and the Arts (2006):  
 Commonwealth Marine Planning Regions  
 Department of the Environment, Water, Heritage and the Arts (2006):  
 Integrated Marine and Coastal Regionalisation of Australia v4.0 -  
 Provincial Bioregions  
 Geoscience Australia (1998): Australia, TOPO-2.5M Topographic Data  
 Geoscience Australia (2004): Gazetteer of Australia  
 Geoscience Australia (2005): Australian Bathymetry and Topography  
 Geoscience Australia (2006): Australian Maritime Boundaries (AMB) v2.0  
 WA Landgate (2007): Schedule Native Title Claims of WA  
 National Native Title Tribunal (2007): Schedule of Native Title  
 Applications (Excluding QLD and WA)  
 Projection: Geographics, Datum: GDA94  
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LPG tanker in Fremantle's outer port. Photo: Fremantle Port Authority.