4.3 SOUTH-WEST COMMONWEALTH MARINE RESERVES NETWORK

The South-west CMR Network comprises 14 reserves established in 2012, which cover 508 605 km^2 from the easternmost end of Kangaroo Island, off South Australia (SA), to the waters offshore of Shark Bay in WA (Figure 4.3.1). One reserve, the Great Australian Bight CMR, incorporates the area of the previously proclaimed Great Australian Bight (Commonwealth Waters) Marine Park.

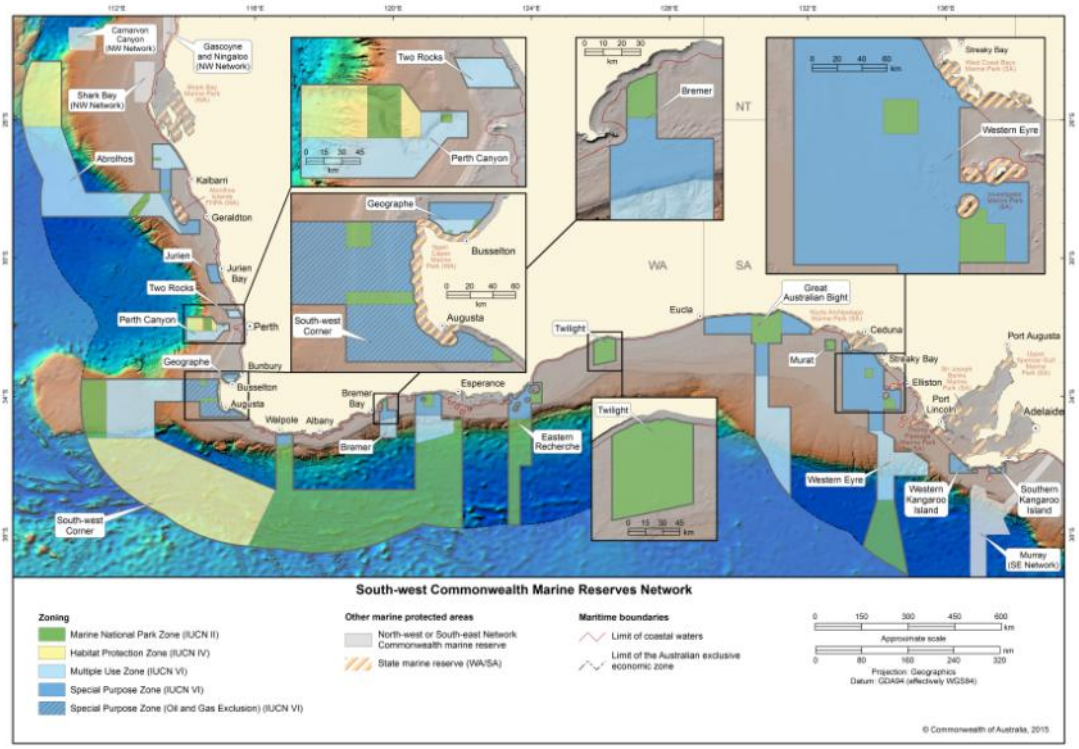

Figure 4.3.1 South-west CMR Network, as proclaimed

Issues raised during the CMR Review that were generic across the South-west CMR Network included:

- Remove destructive fishing practices from the network
- Increase the area of shelf under MNPZ protection
- Unprotected habitats—particularly the lack of MNPZs in several bioregions
- Access to all MNPZs (IUCN II) by recreational anglers
- Loss of access to inshore fishing grounds.

South-west network—outcomes

Changes to zoning are recommended for the Two Rocks, Perth Canyon, Geographe, South-west Corner, Bremer, Eastern Recherche, Twilight, Great Australian Bight and Western Eyre CMRs, while no changes are recommended for the Abrolhos, Jurien, Murat, Western Kangaroo Island and Southern Kangaroo Island CMRs. These are shown in Figure 4.3.2 and summarised in Table 4.3.1.

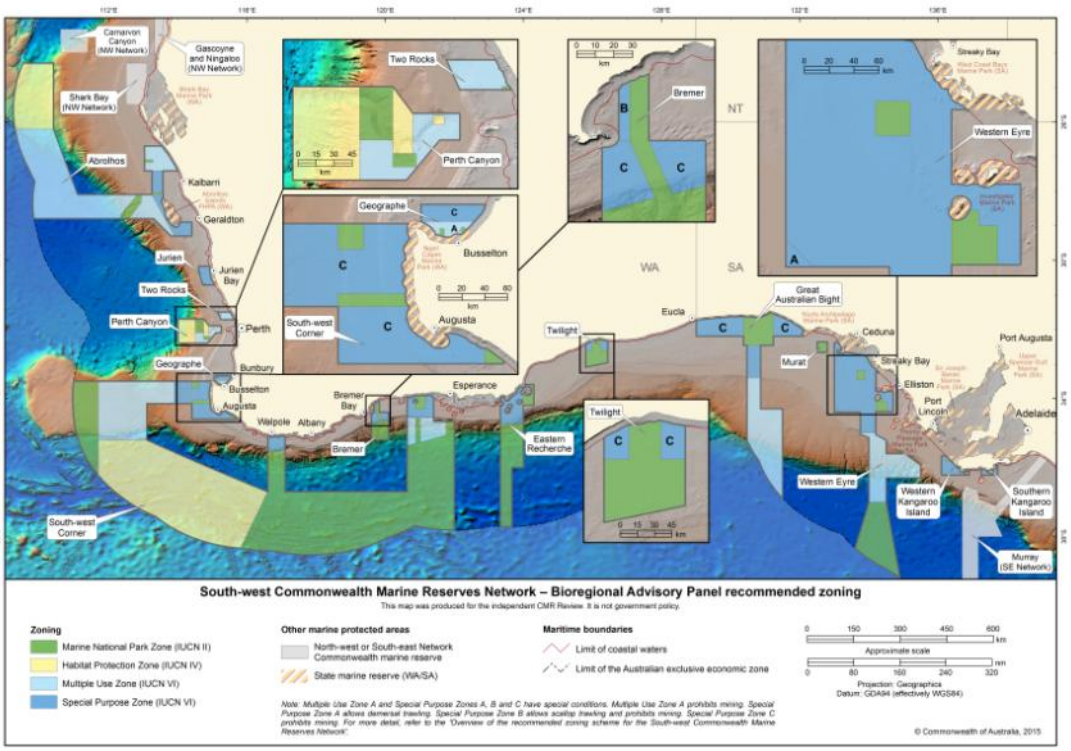

Figure 4.3.2 Recommended zoning for South-west CMR Network

Table 4.3.1 indicates how the areas of different zone types (within the outer boundaries of the network) will change between the proclaimed and recommended zoning. Overall a further 5090 km^2 is added to the area under MNPZ to comprise 36% of the network. Although there is a small decrease in the area under HPZ, this together with MNPZ, results in close to 60% of the network being afforded a high level of protection. These conservation gains are balanced by a small increase in the area of SPZ to improve access for some fisheries and the area zoned as SPZ where mining, including oil and gas activities will be prohibited is more than doubled.

Table 4.3.1 Comparison of areas of zone types between proclaimed and recommended zoning for South-west CMR Network

Zone	Proclaimed		Recommended		Difference	
	Area (km^2)	% of Network	Area (km^2)	% of Network	Area (km^2)	% of Network
MNPZ (IUCN II)	179 627	35.32%	184 717	36.32%	+5 090	+1.00%
HPZ (IUCN IV)	117 712	23.14%	116 039	22.82%	–1 673	–0.33%
MUZ (IUCN VI)	140 004	27.53%	133 950	26.34%	–6 054	–1.19%
MUZ A (IUCN VI)	Nil	Nil	291	0.06%	+291	+0.06%
SPZ (IUCN VI)	61 712	12.13%	49 214	9.68%	–12 498	–2.46%
SPZ A (IUCN VI)	Nil	Nil	204	0.04%	+204	+0.04%
SPZ B (IUCN VI)	Nil	Nil	147	0.03%	+147	+0.03%
SPZ (Oil and Gas Exclusion) /SPZ C* (IUCN VI)	9 550	1.88%	24 043	4.73%	+14 493	+2.85%
Total	508 605	100%	508 605	100%		

Note: All figures are rounded to the nearest km^2 (and therefore in some instances can appear to not add up to the totals supplied). No changes have been made to the outer boundaries and total area of the reserves. Percentages are calculated on the rounded figures.
*The proclaimed SPZ (Oil and Gas Exclusion) and recommended SPZ (C) have the same allowable activities, and are therefore reported as the same zone type.

Conservation outcomes

The recommended zoning changes will provide the following key improvements to conservation outcomes for the South-west CMR Network:

- The introduction of new or improvements to existing MNPZs in five reserves, which amounts to a small overall increase (1%) in no-take protection, including:
    - An expansion of MNPZ in the Two Rocks CMR
    - Relocation and expansion of MNPZ in the Perth Canyon CMR
    - Reconfiguration of MNPZs in the Geographe CMR
    - Expansion of MNPZ and greater protection for a significant canyon system in the South-west Corner CMR
    - Significant expansion of MNPZ in the Bremer CMR
- Exclusion of mining activities from the entire Geographe and Bremer CMRs and significant inshore areas in the Great Australian Bight CMR, together with their proclaimed exclusion in the South-west Corner CMR
- Increase in the area under MNPZ and HPZ in the Perth Canyon CMR.

Table 4.3.2 shows how the recommended zoning in the South-west network changes the representation of primary conservation features in MNPZs and HPZs, providing an indication of performance against the four primary goals.

The recommended zoning will provide increased protection to a further conservation feature in MNPZs and four conservation features in HPZs in the network. The conservation features captured in MNPZs include two additional Depth Ranges (by Provincial Bioregion), with the loss of one Biologically Informed Seascape. The conservation features newly captured in HPZs are four Depth Ranges (by Provincial Bioregion), two of which are also newly captured in MNPZs. Thirty two of the primary conservation features occur in both MNPZs and HPZs, which brings the overall number of conservation features represented in these zones to 122 (90%), an increase from 119 in the proclaimed zoning. Fourteen conservation features are not represented in either of these two zones. The changes to the representation of specific conservation features are listed in Appendix H.

Table 4.3.2 Comparison of representation of conservation features between proclaimed and recommended zoning for South-west CMR Network

Goal	Primary conservation feature	Total no. in Network	Proclaimed		Recommended	
			MNPZ (IUCN II)	HPZ (IUCN IV)	MNPZ (IUCN II)	HPZ (IUCN IV)
1	Provincial Bioregions (PBs)	9	8	4	8	4
	Meso-scale Bioregions	9	8	0	8	0
2	Depth by PB	69	53	18	55	22
3	Key Ecological Features	14	13	4	13	4
	Biologically Informed Seascapes	19	17	0	16	0
4	Seafloor Types	16	12	12	12	12
	Total	136	111	38	112	42

Note: Some features are represented in both MNPZs and HPZs; therefore the total number of features represented in both zones is not the simple sum of their occurrence in each zone.

Socio-economic impacts

Commercial fishing

The recommended zoning of the South-west Network will reduce impacts on commercial fisheries. The number of fisheries impacted by the recommended zoning will not change compared to the proclaimed zoning. Changes made in the South-west Corner, Eastern Recherche and Twilight CMRs will reduce impacts on several fisheries, including the South Coast Crustacean Fishery, the South Coast Trawl Fishery, and the Southern and West Coast Demersal Gillnet and Longline Fishery.

Recreational and charter fishing

Changes to zoning will improve access to important fishing areas in the Perth Canyon, Bremer and South-west Corner CMRs. Changes to MNPZs are unlikely to significantly

affect this sector except in the Two Rocks and Geographe CMRs, where the changes improve conservation outcomes.

Native title
In the South-west Network, the Twilight CMR is the only reserve that overlaps with a registered native title claim (that of the Western Australian Mirning people). Native title is not impacted by the proclamation of CMRs or the development and implementation of management plans for those reserves under the EPBC Act. The existence of a native title claim over sea country in the South-west Network presents opportunities for co-management with traditional owners and local Indigenous groups and for improved management outcomes. Recommendations relating to involvement of Indigenous groups and traditional owners in management of CMRs are outlined in Chapters 5 to 7 of this report.

Mining and oil and gas development
The proposals to exclude the oil and gas sector from the Geographe CMR, the Bremer CMR and part of the Great Australian Bight CMR reflects the significant community opposition to this activity articulated during the consultation and perceived risks to significant tourism and conservation values in these reserves. The exclusion for oil and gas remains for the SPZ off the Capes coast section (being the area around Cape Naturaliste to Cape Leeuwin) of the South-west Corner CMR and for the whole of the Twilight CMR.

Practicality of implementation
At a network level, the recommended changes are not expected to greatly increase the difficulty for users in complying with the zoning of the South-west CMRs. The use of only one type of SPZ across the network, with specific rules implemented in the marked areas in the Geographe, South-west Corner, Bremer, Twilight, Great Australian Bight and Western Eyre CMRs and the change to the proclaimed SPZ (Oil and Gas Exclusion) zone type in the South-west Corner CMR collectively should reduce the overall complexity of zoning at the network level. Other changes, including modifications of the MNPZs in the Two Rocks, Perth Canyon, Geographe, South-west Corner, Bremer, Eastern Recherche and Twilight CMRs and the HPZs in the Perth Canyon and South-west Corner CMRs may in some instances increase the complexity of the zoning configuration. However, this has generally been minimised through the adoption of straight north–south or east–west running boundary lines wherever possible. Specific depth contours that are important determinants of fishing grounds for commercial operators have been used to locate a number of zone boundaries across the network.

Conclusion
The recommended zoning for the South-west Network addresses the key areas of contention that arose during the consultation. It significantly reduces the socio-economic impacts on the commercial and recreational fishing sectors, although, in order to balance these impacts against conservation objectives, impacts on the sectors could not be eliminated. Zoning also takes into consideration Australian energy security considerations, for the most part avoiding areas that are of high or medium prospectivity. Overall there has been no loss of area under MNPZ but a significant reduction in the impact on commercial fisheries. Three more conservation features are contained in highly protected areas (MNPZ or HPZ) and together these two high protection zone types make up almost 60% of the network and include 122 of the network's 136 conservation features (90%).

Table 4.3.3 Overview of recommended zoning scheme for South-west CMR Network

Activity type[a]		Special Purpose Zone (IUCN VI)	Multiple Use Zone (IUCN VI)	Habitat Protection Zone (IUCN IV)	Marine National Park Zone (IUCN II)
MINING[b]	Mining (including exploration, development and other activities)	✓[c]	✓[d]	×	×
COMMERCIAL FISHING[e]	Handline/rod and reel/trolling	✓	✓	✓	×
	Hand collection	✓	✓	✓	×
	Pelagic longline	✓	✓	✓	×
	Purse seine	✓	✓	✓	×
	Mid-water trawl	✓	✓	✓	×
	Traps and pots (including crab, lobster and octopus)	✓	✓	×	×
	Demersal longline	✓	×	×	×
	Demersal gillnet	✓	×	×	×
	Demersal trawl (including fish and scallop)	×[f,g]	×	×	×
AQUACULTURE		✓	✓	×	×
RECREATION	Boating	✓	✓	✓	✓
	Scuba diving and snorkelling	✓	✓	✓	✓
	Recreational fishing (including spear-fishing)[h]	✓	✓	✓	×
COMMERCIAL TOURISM	Non-fishing related tourism (including scuba/snorkel tours and nature watching)	✓	✓	✓	✓
	Fishing related tourism (including charter fishing and fishing/spear diving tours)	✓	✓	✓	×
INDIGENOUS ACTIVITIES	Non-commercial Indigenous harvesting and hunting (consistent with the *Native Title Act 1993*)	✓	✓	✓	✓
RESEARCH		✓	✓	✓	✓
GENERAL USE	Defence	✓	✓	✓	✓
	Shipping (general transit)[i]	✓	✓	✓	✓

a. All activities require approval to be undertaken in CMRs; approvals are provided in the management plan or through class approvals or individual permits.

b. Proposed mining operations carried out under usage rights that existed immediately before the declaration of a reserve do not require approval from the DNP.

c. Mining is not allowed in the South-west CMR Network SPZs B and C.

d. Mining is not allowed in the South-west CMR Network MUZ A.

e. Commercial fishing methods not listed in the table may require assessment.

f. Demersal fish trawling is allowed in the South-west CMR Network SPZ A in Western Eyre CMR.

g. Demersal scallop trawling is allowed in the South-west CMR Network SPZ B in Bremer CMR.

h. Recreational fishing is managed by the states. South Australian or Western Australian rules and regulations (for example size and bag limits) will apply in the South-west CMR Network depending on the reserve location and unless otherwise specified in the management plan.

i. Ballast water exchange is managed under national arrangements. Restrictions may apply in some areas.

4.3.1 TWO ROCKS COMMONWEALTH MARINE RESERVE

Background

The Two Rocks CMR covers approximately 882 km^2 from the state waters boundary north of Perth and Rottnest Island to Two Rocks, extending westward across the continental shelf. It is located to the north-west of WA's Marmion Marine Park. The reserve was established in 2012 and contains two zone types: Marine National Park (<1%) and Multiple Use (>99%) (Figure 4.3.1.1).

Conservation values represented within the reserve include examples of ecosystems of the South-west Shelf Transition Province; migration areas for protected humpback whales; and foraging areas for threatened soft-plumaged petrels and Australian sea lions, and for migratory roseate terns, bridled terns, Caspian terns, wedge-tailed shearwaters and common noddies. The reserve includes three KEFs: western rock lobster habitat, the ancient coastline at a depth range of 90 m to 120 m, and the marine environment adjacent to the west coast inshore lagoons, which are key areas for the recruitment of the commercially and recreationally important western rock lobster, dhufish, pink snapper, breaksea cod, baldchin and blue groper, and many other reef species.

Recreational and charter fishing and recreational diving occur in the reserve, especially in nearshore waters, and several commercial fisheries operate in the area. They include the WA managed West Coast Rock Lobster, West Coast Demersal Scalefish, South West Trawl, and developing Octopus fisheries. No Commonwealth fisheries operate in the area.

The area is moderately to highly prospective for oil and gas and there are currently no petroleum permits overlapping the CMR.

Issues raised

In addition to the South-west CMR Network issues raised above in Section 4.3, the Two Rocks CMR was discussed in submissions, as well as in meetings with stakeholders. Issues raised included:

- Access to MNPZs (IUCN II) by recreational anglers, in particular loss of access to a popular recreational fishing ground close to a metropolitan centre
- Opportunity to develop/enhance dive tourism in the MNPZ.

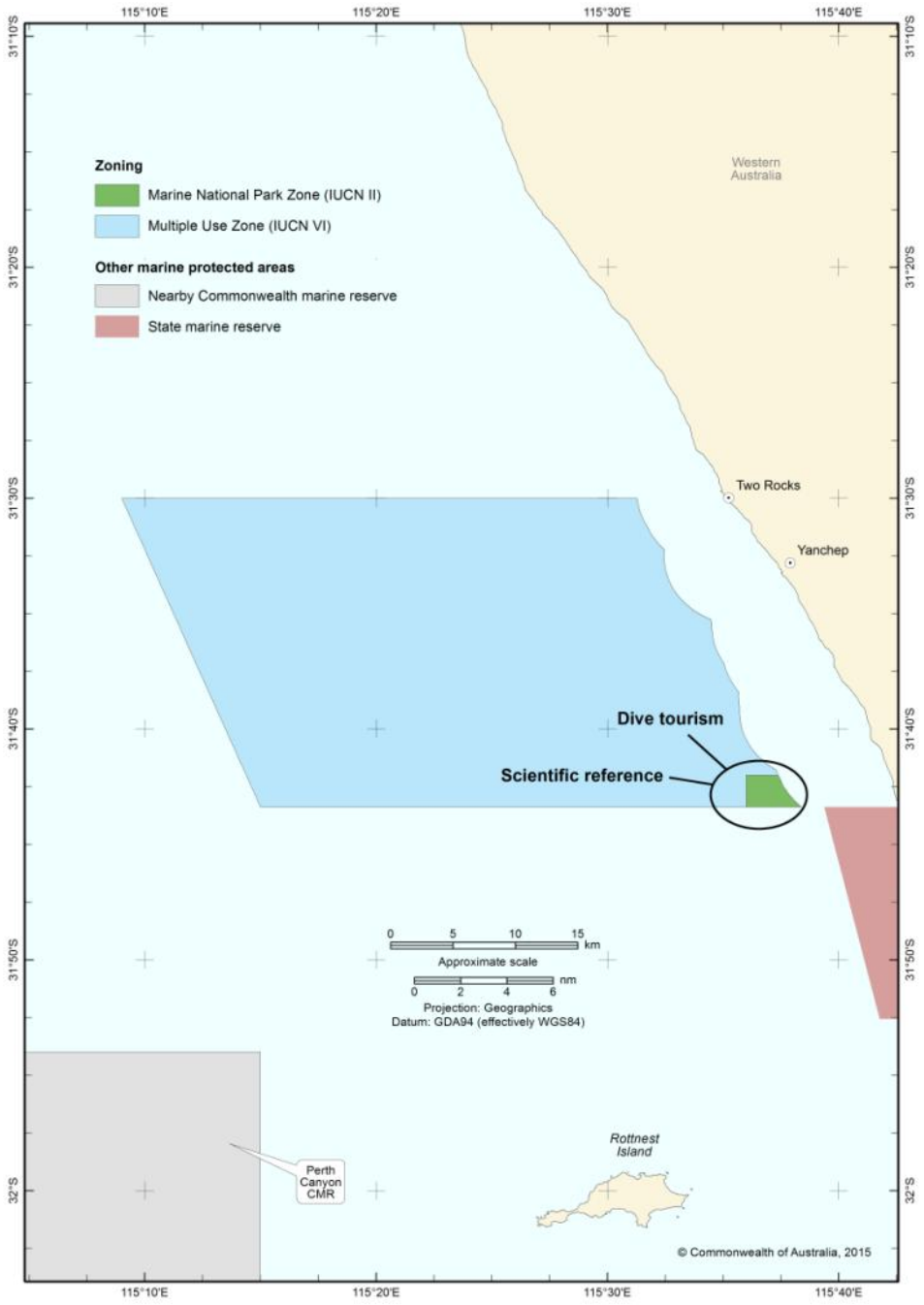

Figure 4.3.1.1 Two Rocks CMR as proclaimed, showing key issues and drivers for change identified during the CMR Review

Areas of contention

The Regional Panel determined that the MNPZ was an area of contention.

Conservation and non-extractive recreational activities

The role of the Two Rocks MNPZ as an area accessible to a burgeoning dive tourism sector was highlighted. There was a request that this area be increased to encompass a larger portion of the reef extending westwards.

Scientific studies clearly demonstrate the effect of no-take zones, which results in an increase in the average size and relative abundance of most of the sedentary reef-associated species. This benefit is readily appreciated by diving communities that seek to

experience marine life in its natural condition and unaffected by fishing. While recreational fishing representatives argued for access to the whole CMR, the value of a no-take reference area, its modest size and the number of other similar reefs in the MUZ supported the approach to retain and increase the area of MNPZ.

Recommendation

The recommendation for the Two Rocks CMR is to increase the size of the MNPZ by a westerly extension.

These changes are shown in Figure 4.3.1.2 and summarised in Table 4.3.1.1

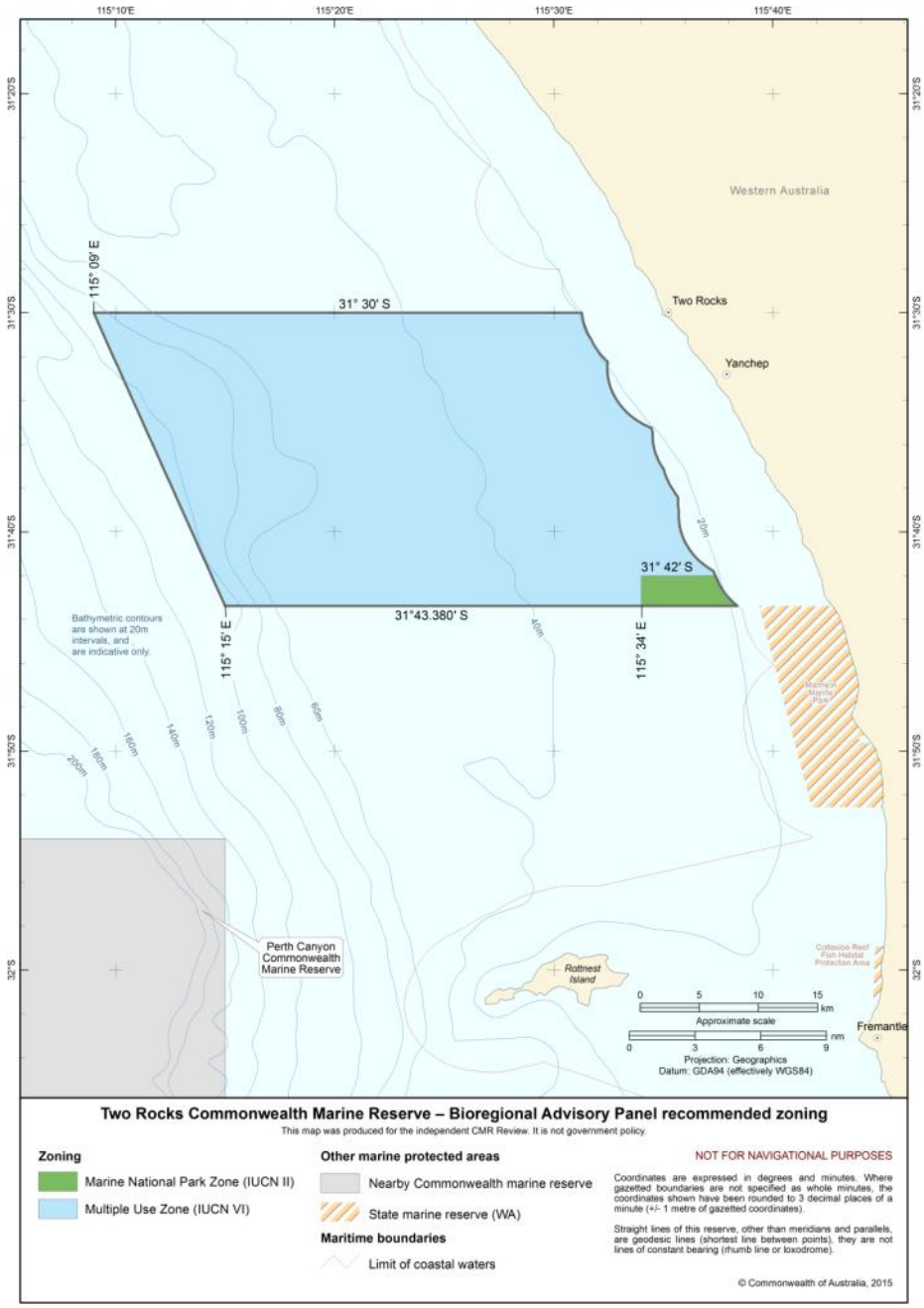

Figure 4.3.1.2 Recommended zoning for Two Rocks CMR

Table 4.3.1.1 indicates how the areas under different zone types (within the outer boundaries of the reserve) will change with the recommended zoning. The MNPZ is

doubled in size, with a corresponding loss in area of MUZ. Despite this the MNPZ is under 2% of the reserve area.

Table 4.3.1.1 Comparison of areas of zone types between proclaimed and recommended zoning for Two Rocks CMR

Zone	Proclaimed		Recommended		Difference	
	Area (km^2)	% of CMR	Area (km^2)	% of CMR	Area (km^2)	% of CMR
MNPZ (IUCN II)	7	0.79%	15	1.70%	+8	+0.91%
MUZ (IUCN VI)	875	99.21%	867	98.29%	–8	–0.91%
Total	882	100%	882	100%		

Note: All figures are rounded to the nearest km^2 (and therefore in some instances can appear to not add up to the totals supplied). No changes have been made to the outer boundaries and total area of the reserves. Percentages are calculated based on the rounded figures.

Outcomes

The recommended zoning for the Two Rocks CMR will double the small area of MNPZ, expanding it by approximately 8 km^2 to cover approximately 2% of the reserve area.

The recommended expansion of MNPZ will provide significant benefit to the scuba dive sector but will slightly decrease access for recreational and charter fishers within the Two Rocks CMR.

The recommended zoning for the Two Rocks CMR may increase the impact on some fisheries (the WA managed West Coast Rock Lobster Fishery, the West Coast Demersal Scalefish Fishery, the developing Octopus Fishery, and the Deep Sea Crab Fishery).

The expanded MNPZ abuts the WA state water boundary but otherwise adopts straight boundary lines running north–south and east–west. This configuration should not present any difficulty in compliance for users of the reserve.

The Two Rocks CMR does not overlap with any native title determinations, applications or IPAs. The reserve is adjacent to the Yued People registered native title claim and the Whadjuk People registered native title claim (which does not extend into Commonwealth waters).

The recommended increase to the MNPZ in this reserve would slightly restrict mining activities above the level of restriction set out in the proclaimed zoning. The area covered by the recommended zoning change is rated as having medium to high petroleum prospectivity.

4.3.2 PERTH CANYON COMMONWEALTH MARINE RESERVE

Background

The Perth Canyon CMR extends offshore from west of Rottnest Island into deep water off the continental shelf, and includes most of the Perth Canyon. It is located west of WA's Rottnest Island Reserve. The reserve, which was established in 2012, covers an area of approximately 7409 km^2 and contains three zone types: Marine National Park (15%), Habitat Protection (35%), and Multiple Use (50%) (Figure 4.3.2.1).

Conservation values represented within the reserve include examples of ecosystems of the Central Western Province, Southwest Shelf Transition Province, Southwest Transition and Southwest Shelf Province bioregions. The reserve includes areas of meso-scale eddies from the Leeuwin Current and deep ocean currents that rise through the canyon system and are associated with enhanced productivity and feeding aggregations. It includes habitat for western rock lobster and foraging areas for threatened soft-plumaged petrel, Australian sea lions and blue whales, as well as for sperm whales, pygmy blue whales and several species of migratory seabirds. It also overlaps with the northernmost extent of seasonal calving habitat for southern right whales and the migration path of humpback whales.

Two KEFs are represented in the reserve: the western demersal slope and associated fish communities, and the Perth Canyon, Australia's largest submarine canyon, associated with enhanced productivity and home to the largest known feeding aggregation of blue whales in Australia.

The Commonwealth Western Tuna and Billfish and Western Deepwater Trawl fisheries overlap with the reserve, as do the WA managed West Coast Rock Lobster, South West Inshore Trawl, West Coast Purse Seine, and Deep Sea Crab fisheries. The reserve overlaps with the Western Australian Metropolitan Zone Closure, which excludes commercial fishing for demersal finfish species and reduces impacts of the reserve on the region's commercial fishers.

The area is an important recreational game and charter fishing site, particularly off Rottnest Island and the northern head of the canyon (also known as the Rottnest trench).

The eastern part of the reserve is moderately to highly prospective for oil and gas resources, but there are no current petroleum permits issued.

The Royal Australian Navy's Western Australian exercise training area overlaps the reserve, as does a proposed aquaculture development zone in nearshore waters off Rottnest Island. While the reserve avoids the busiest shipping route in and out of Fremantle, shipping remains a significant activity in the area.

Issues raised

In addition to the South-west CMR Network issues raised above in Section 4.3, the Perth Canyon CMR was canvassed in detail in a large number of submissions, as well as in meetings with stakeholders. Issues raised included:

- Loss of access to a significant recreational game fishing ground over the Perth Canyon head off Rottnest Island
- Inadequate protection—specifically, blue whale feeding grounds
- Need to protect KEFs—especially upwelling associated with the Perth Canyon which is a source of nutrients and supports large aggregations of marine fauna
- Importance of the area to central place foragers

- Loss of access for commercial fisheries, including pelagic longlining.

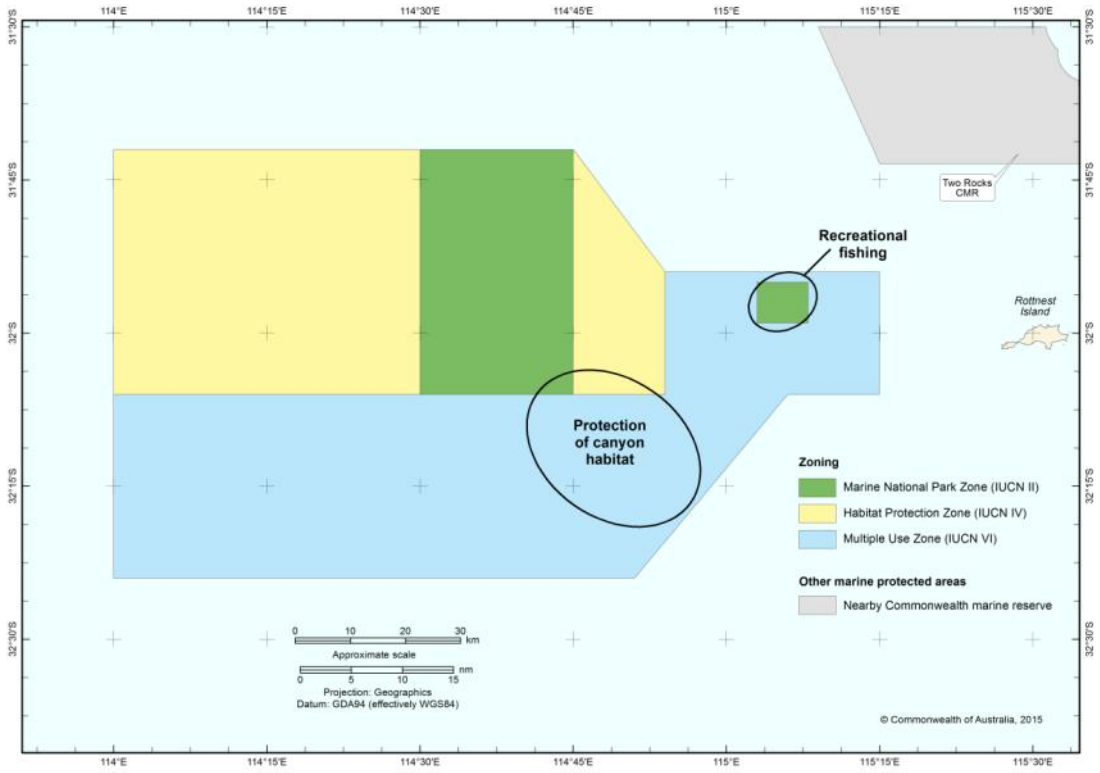

Figure 4.3.2.1 Perth Canyon CMR as proclaimed, showing key issues and drivers for change identified during the CMR Review

Areas of contention

The Regional Panel determined that the loss of access to the Perth Canyon head off Rottnest Island by recreational fishers was an area of contention.

Recreational fishing

The head of the Perth Canyon adjacent to Rottnest Island has had a long history as a key recreational fishing site. The Perth Game Fishing Club and the Fremantle Sailing Club's Game Fishing Section have staged game fishing tournaments in this vicinity for approximately 35 years, targeting marlin and other pelagic species. Most of these tournaments are conducted on a tag-and-release basis.

These fishing clubs have cooperated in the deployment of several fish aggregating devices in close proximity to the MNPZ established in 2012, which created the distinct possibility that any fish caught outside this zone could move into the MNPZ and anglers would need to cease fishing and cut their line.

The Regional Panel noted that there were three canyon heads to the Perth Canyon: the one described above, which is a shelf-incising canyon, and two others to the south of this. These canyons are a source of nutrients that support plankton and other prey species. These areas are known aggregation and feeding sites for a number of pelagic fish, cetaceans and birds. The Regional Panel also noted that the proclaimed MNPZ covered a part of the northernmost canyon head.

The advice from the ESP on recent studies in the Perth canyon was that new information supported the understanding that the Perth Canyon was an area of biological significance,

driven by localised upwelling. This occurred around canyon heads where they intersected with the Leeuwin Current and formed complex eddies that drove productivity and associated feeding aggregations of an array of species, from whales and seabirds to pelagic predators such as tuna and marlin.

The Regional Panel accepted that catch-and-release fishing was likely to have a relatively small impact on target species and other species aggregations in the area.

Recommendations

The recommendations for the Perth Canyon CMR are to:

- Change the zoning of the MNPZ over the head of the Perth Canyon off Rottnest Island to HPZ
- Create a new MNPZ over the southernmost head of the Perth Canyon, ensuring that the area protects the entire canyon head feature
- Extend the western current HPZ further south to the southern boundary of the CMR
- Extend the eastern HPZ to join the new MNPZ.

These changes are shown in Figure 4.3.2.2 and summarised in Table 4.3.2.1

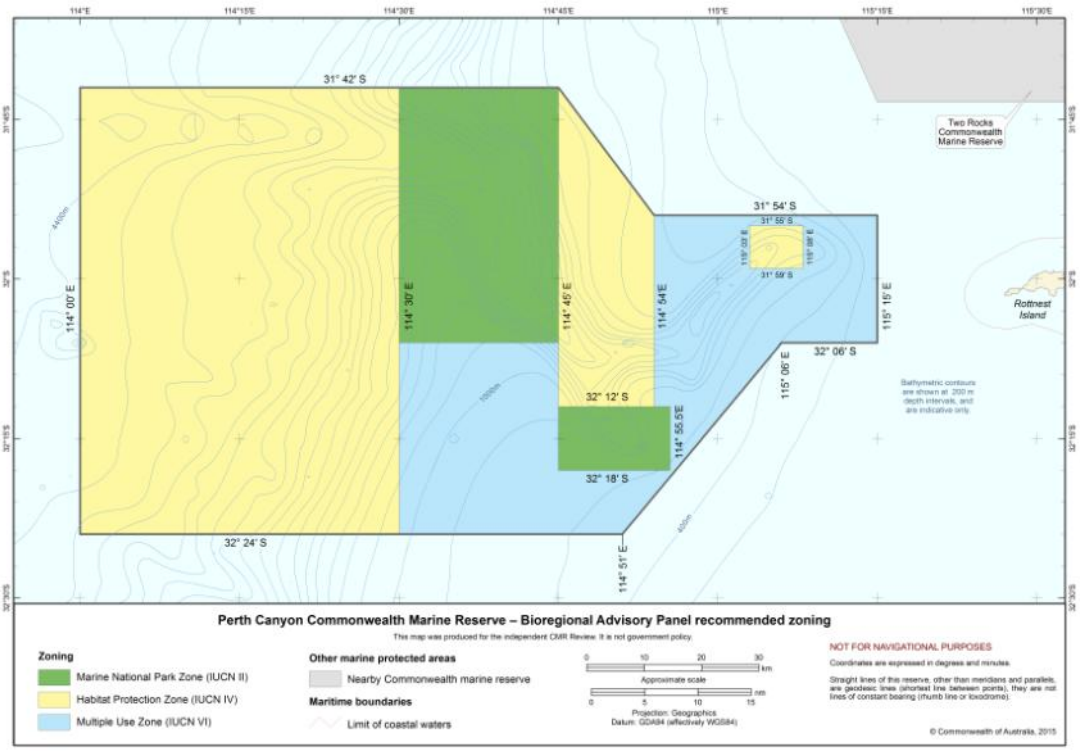

Figure 4.3.2.2 Recommended zoning for Perth Canyon CMR

Table 4.3.2.1 indicates how the areas under different zone types (within the outer boundaries of the reserve) will change with the recommended zoning. There is an increase in the area under MNPZ and a large increase in the area under HPZ. Together these zones offer a high level of protection to over 75% of the reserve. There is a corresponding reduction in the area under MUZ.

Table 4.3.2.1 Comparison of areas of zone types between proclaimed and recommended zoning for Perth Canyon CMR

Zone	Proclaimed		Recommended		Difference	
	Area (km^2)	% of CMR	Area (km^2)	% of CMR	Area (km^2)	% of CMR
MNPZ (IUCN II)	1 107	14.94%	1 232	16.63%	+125	+1.69%
HPZ (IUCN IV)	2 570	34.69%	4 352	58.74%	+1 782	+24.05%
MUZ (IUCN VI)	3 733	50.38%	1 825	24.63%	–1 908	–25.75%
Total	7 409	100%	7 409	100%		

Note: All figures are rounded to the nearest km^2 (and therefore in some instances can appear to not add up to the totals supplied). No changes have been made to the outer boundaries and total area of the reserves. Percentages are calculated based on the rounded figures.

Outcomes

The recommended zoning for the Perth Canyon CMR improves the conservation outcomes in the reserve by increasing the MNPZ to cover an entire canyon head. This is complemented by a large increase in the area under HPZ so that these two zones cover over 75% of the reserve, an increase of 26%, and provide a high level of protection to most of the canyon. The expansion of MNPZ and HPZ in the Perth Canyon CMR increases protection to two Depth Ranges (by Provincial Bioregion) in both MNPZs and HPZs, and to a further two Depth Ranges (by Provincial Bioregion) in HPZs in the South-west CMR Network (see Appendix H).

The recommended zoning improves access for recreational and charter fishers to important game fishing areas over the Perth Canyon, predominantly targeting highly mobile and migratory species such as marlin, tuna and mahi mahi.

The recommended zoning results in a marginal increase in the impact on commercial fishing.

The recommended zoning for the Perth Canyon CMR will not significantly change zoning complexity. All zoning boundary lines are straight and run north–south or east–west to aid with ease of compliance.

The Perth Canyon CMR does not overlap with any native title determinations, applications or IPAs. The reserve is adjacent to the Whadjuk People and Gnaala Karla Booja registered native title claims, which do not extend into Commonwealth waters.

The recommended expansion and reconfiguration of MNPZ and HPZ in this reserve will restrict mining activities above the level of restriction set out in the proclaimed zoning from 50% to 75% of the reserve. The area covered by these recommended zones is rated as having medium-high, medium-low and low petroleum prospectivity.

4.3.3 GEOGRAPHE COMMONWEALTH MARINE RESERVE

Background

The Geographe CMR is an inshore reserve located in Geographe Bay, adjacent to WA's Ngari Capes Marine Park, which covers coastal waters between Geographe Bay and Augusta. The reserve, established in 2012, covers an area of approximately 977 km^2. It contains three zone types: Marine National Park (4%), Multiple Use (30%), and a Special Purpose (66%) (Figure 4.3.3.1).

Conservation values represented in the reserve include examples of ecosystems of the South-west Shelf Province, foraging areas for threatened soft-plumaged petrel and migratory wedge-tailed shearwater, aggregation areas for migratory flesh-footed shearwater, and migration areas for protected humpback and blue whales. The reserve is located in Geographe Bay, which is recognised as a KEF of the South-west Marine Region. It is known for its extensive beds of tropical and temperate seagrass that provide nursery habitat for many species. The reserve also includes habitat for the western rock lobster.

The area is important to traditional owners, and the reserve is adjacent to the Harris Family native title claim, which covers 1772 km^2 of land and sea.

Recreational and charter fishing occur in the reserve and the area overlaps with several commercial fisheries. They include WA managed West Coast Rock Lobster, West Coast Demersal Scalefish, and South West Trawl fisheries, and the developing Octopus Fishery.

The area is considered to be moderately to highly prospective for oil and gas, but there are no petroleum permits in place.

Issues raised

In addition to the South-west CMR Network issues raised above in Section 4.3, the Geographe CMR was canvassed in detail in many submissions, as well as in meetings with stakeholders. Issues raised included:

- Remove gillnetting from the reserve
- Opportunity to align state and Commonwealth reserves
- Exclude oil and gas and mineral exploration
- Loss of access to popular fishing grounds in a fast-growing region of WA
- Access to MNPZs (IUCN II) by recreational anglers
- Loss of access for commercial fisheries, including commercial trawl (prawn and scallop) and gillnetting
- Increased protection for an area of special significance for cetaceans.

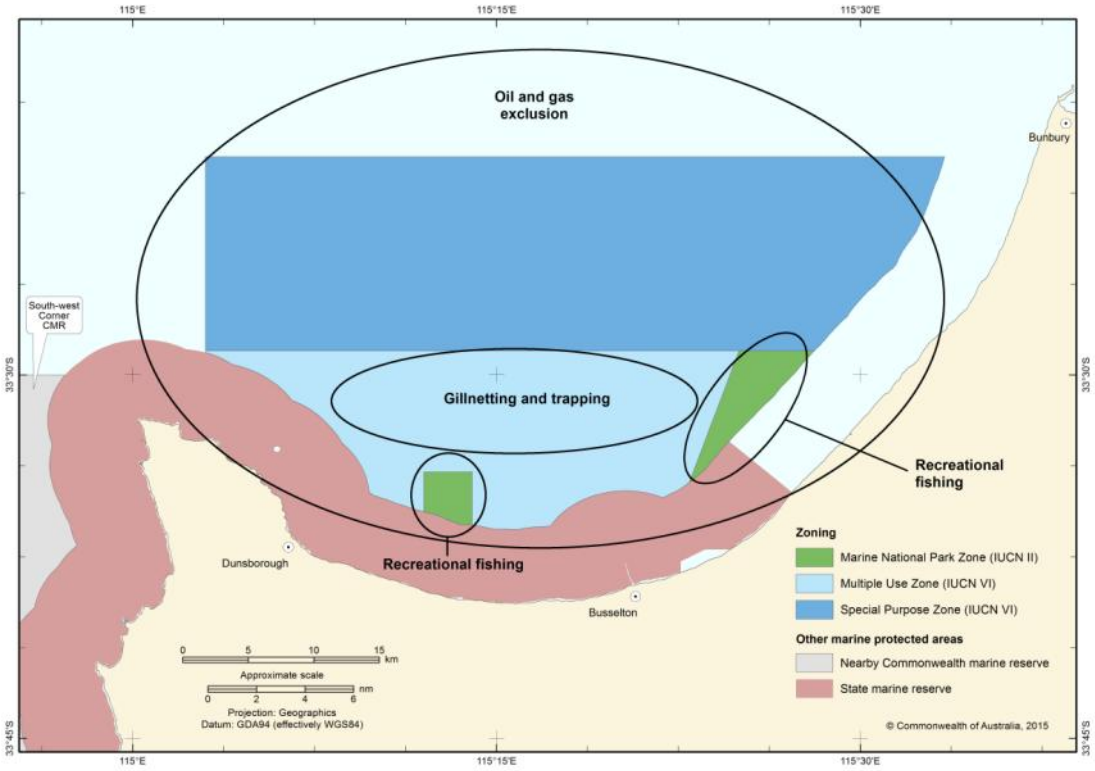

Figure 4.3.3.1 Geographe CMR as proclaimed, showing key issues and drivers for change identified during the CMR Review

Areas of contention

The Regional Panel determined that gillnetting, access by recreational fishers, protection of seagrass beds, and oil and gas were areas of contention.

Southern and West Coast Demersal Gillnet and Longline Fishery (gillnetting) and *South West Trawl Fishery (scallop trawl)*

The inshore waters of Geographe Bay are an important fishing ground for demersal gillnet operators licensed under the Southern and West Coast Demersal Gillnet and Longline Fishery, as they provide shelter under certain weather conditions.

Scallop trawling in Geographe Bay is patchy due to the unpredictable and infrequent recruitment to the area, and recent catches in the area have been low. Nevertheless, occasional recruitment pulses produce good catches.

The advice from the ESP on the FGRA for trawl fisheries, specifically demersal scallop trawling in Geographe CMR, found that the impacts of scallop trawling on soft substrates in WA, in both the South West Trawl Managed Fishery and the South Coast Trawl Fishery were both localised and minor. Current WA ESD reporting suggested that impacts on bycatch and Threatened Endangered and Protected Species were low. This suggests that scallop trawl fisheries operating on soft sediment substrates in the Geographe CMR could be considered as being 'compatible' with respect to the conservation values of the area.

The BAP noted the intense community interest in the outcome of the review, specifically in relation to perceived conservation needs, including greater protection for migrating cetaceans, the impacts of demersal fishing on sensitive benthic habitats such as seagrass beds, and the impacts of commercial fishing on key recreational species such as dhufish, grouper and snapper.

In the opinion of the BAP, strong community opposition to gillnetting and demersal trawling in the reserve, the ecological significance of the seagrass beds in the area and the ephemeral nature of scallop recruitment did not warrant any change to the exclusion of these methods from the MUZ in the Geographe CMR.

Recreational fishing
Several submissions drew attention to population growth in the region and the importance of recreational fishing to the social and economic values of Geographe Bay. Some of these submissions called for MNPZs to be opened to recreational fishing, while others felt that there was no need for two MNPZs in Geographe CMR. Further suggestions were to allow access to the eastern MNPZ, which is closer to the Busselton area.

Conservation
The advice from the ESP on the conservation values of the Geographe CMR was that the area contained important habitat and that its seagrass beds extend further into deeper water than previously thought. Protection of these extensive and potentially unique seagrass beds should be maintained or improved.

Relocation of the eastern MNPZ in Geographe CMR to better align with the adjacent MNPZ in the Ngari Capes Marine Park in Western Australian state waters would create a more substantial no-take reference area. Given the intensity of use of the CMR for recreation and some commercial harvesting, and the scientific interest and activity in the CMR, two modestly sized MNPZs offer the opportunity for replicated reference sites for future studies.

The Regional Panel considered the option of changing the MUZ to an HPZ to better protect seagrass beds and address concerns in relation to demersal fishing practices that damage this habitat, but this would exclude fisheries such as western rock lobster and octopus trapping (trigger traps) and was thus not pursued.

Recommendations
The recommendations for the Geographe CMR are to:

- Remove the existing triangular MNPZ at the eastern end of the CMR and create a new rectangular MNPZ that complements and extends the adjacent no-take zone in the Ngari Capes Marine Park into deeper water
- Extend the western MNPZ into deeper water.
- Exclude oil and gas and mining across the entire Geographe CMR in both the SPZ and MUZ.

These changes are shown in Figure 4.3.3.2 and summarised in Table 4.3.3.1.

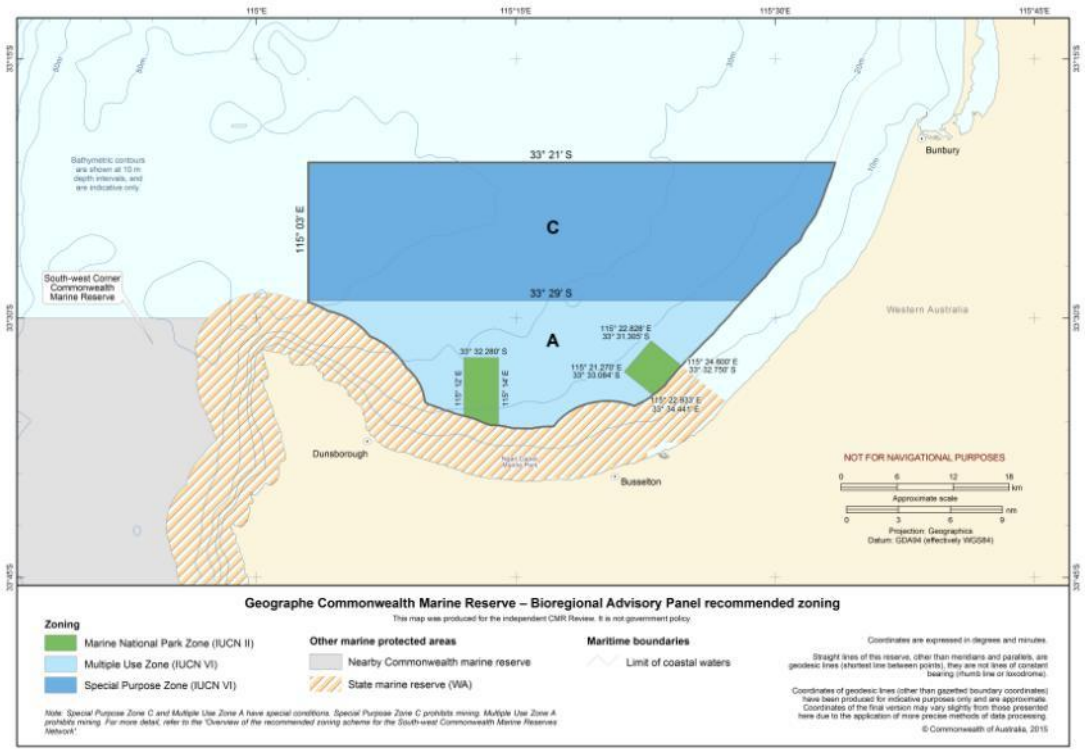

Figure 4.3.3.2 Recommended zoning for Geographe CMR

Table 4.3.3.1 indicates how the areas of different zone types (within the outer boundaries of the reserve) will change with the recommended zoning. There was no change to the area of MUZ and SPZ. The location of one MNPZ and shape of the other MNPZ were changed with no loss of MNPZ area.

Table 4.3.3.1 Comparison of areas of zone types between proclaimed and recommended zoning for Geographe CMR

Zone	Proclaimed		Recommended		Difference	
	Area (km^2)	% of CMR	Area (km^2)	% of CMR	Area (km^2)	% of CMR
MNPZ (IUCN II)	36	3.68%	36	3.68%	Nil	Nil
MUZ (IUCN VI)	291	29.79%	Nil	Nil	–291	–29.79%
MUZ A (IUCN VI)	Nil	Nil	291	29.79%	+291	+29.79%
SPZ (IUCN VI)	650	66.53%	Nil	Nil	–650	–66.53%
SPZ C (IUCN VI)	Nil	Nil	650	66.53%	+650	+66.53%
Total	977	100%	977	100%		

Note: All figures are rounded to the nearest km^2 (and therefore in some instances can appear to not add up to the totals supplied). No changes have been made to the outer boundaries and total area of the reserves. Percentages are calculated based on the rounded figures.

Outcomes

The recommended zoning addresses significant community concerns relating to the long-term protection of the conservation and recreation values of the reserve and potential impact of the oil and gas industry on the area. The exclusion of mining and oil and gas development will complement a similar zone in the South-west Corner CMR off the Capes coast. The recommended zoning for the Geographe CMR also provides better articulation between the state and Commonwealth MNPZs, resulting in an improved depth transect across seagrass and mixed reef and seagrass habitat.

The zoning will not change the level of access for recreational or charter fishers within the reserve and will not change the impact on commercial fishing compared to proclaimed zoning.

The change in configuration of the eastern MNPZ to align with the Western Australian Ngari Capes Marine Park no-take zone will be simpler for compliance by users on the water. The use of a single MUZ and SPZ and designations across the South-west CMR Network, with specific rules for areas marked 'A' and 'C' in the Geographe CMR, reduces the overall complexity of zoning at the network level.

The Geographe CMR does not overlap with any native title determinations, applications or IPAs. The reserve is adjacent to the Harris Family registered native title claim and the Gnaala Karla Booja registered native title claim, which do not extend into Commonwealth waters.

The recommended exclusion of oil and gas and mining in both the SPZ and MUZ in this reserve will increase restrictions on mining activities. The area covered by the reserve is rated as having medium-low or medium-high petroleum prospectivity.

4.3.4 SOUTH-WEST CORNER COMMONWEALTH MARINE RESERVE

Background

The South-west Corner CMR is the largest reserve in the South-west CMR Network, covering approximately 271 898 km^2 of relatively pristine and unexploited ocean environment. The reserve extends offshore from Cape Leeuwin to the edge of Australia's EEZ, including parts of the Naturaliste Plateau. It extends eastwards, capturing deep offshore habitats of the Diamantina Fracture Zone before joining state waters to the west of Esperance. The reserve, established in 2012, included five zone types: Marine National Park (47%), Habitat Protection (34%), Special Purpose (2%), Special Purpose (Oil and Gas Exclusion) (4%), and Multiple Use (14%) (Figure 4.3.4.1).

Conservation values represented within the reserve include examples of ecosystems of the South-west Transition, Southern Province and South-west Shelf Province bioregions and a diversity of seafloor features including the Naturaliste Plateau and the Diamantina Fracture Zone KEFs, both of which are believed to be associated with rich and possibly unique biological communities. Other KEFs found in the reserve include the Albany Canyon group, the Cape Mentelle upwelling, and the Commonwealth marine environment surrounding the Recherche Archipelago. The reserve supports foraging areas for threatened white sharks, Australian sea lions, Indian yellow-nosed albatross and soft-plumaged petrel, as well as migrating sperm whales, flesh-footed shearwater, short-tailed shearwater and Caspian tern. The reserve also contains calving habitat for the threatened southern right whales and migration routes for protected humpback and blue whales.

The Commonwealth Western Deepwater Trawl and Western Tuna and Billfish fisheries operate in the area, along with the WA managed West Coast Rock Lobster, South Coast Crustacean, Southern and West Coast Demersal Gillnet and Longline, West Coast Demersal Scalefish, Deep Sea Crab, South Coast Trawl, South Coast Purse Seine, and South Coast 'open access' fisheries. Recreational and charter fishing also occurs in the area, mostly in state waters.

The vast majority of the reserve is not prospective for oil and gas. There is some moderate to high prospectivity associated with the Mentelle and Bremer sub-basins. There are no permits for oil and gas within the reserve.

Several shipping routes connecting western and eastern Australia converge in the area, south of Augusta.

Issues raised

In addition to the South-west CMR Network issues raised above in Section 4.3, the South-west Corner CMR was canvassed in detail in several submissions and in meetings with stakeholders. Issues raised included:

- Loss of access/fishing prospectivity for commercial fisheries—particularly pelagic longlining, gillnetting, scalefish, trap and scallops
- Misalignment with state reserve boundaries, which creates confusion
- Fishing prospectivity—particularly with regard to tuna longlining
- Lack of protection of canyon habitat.

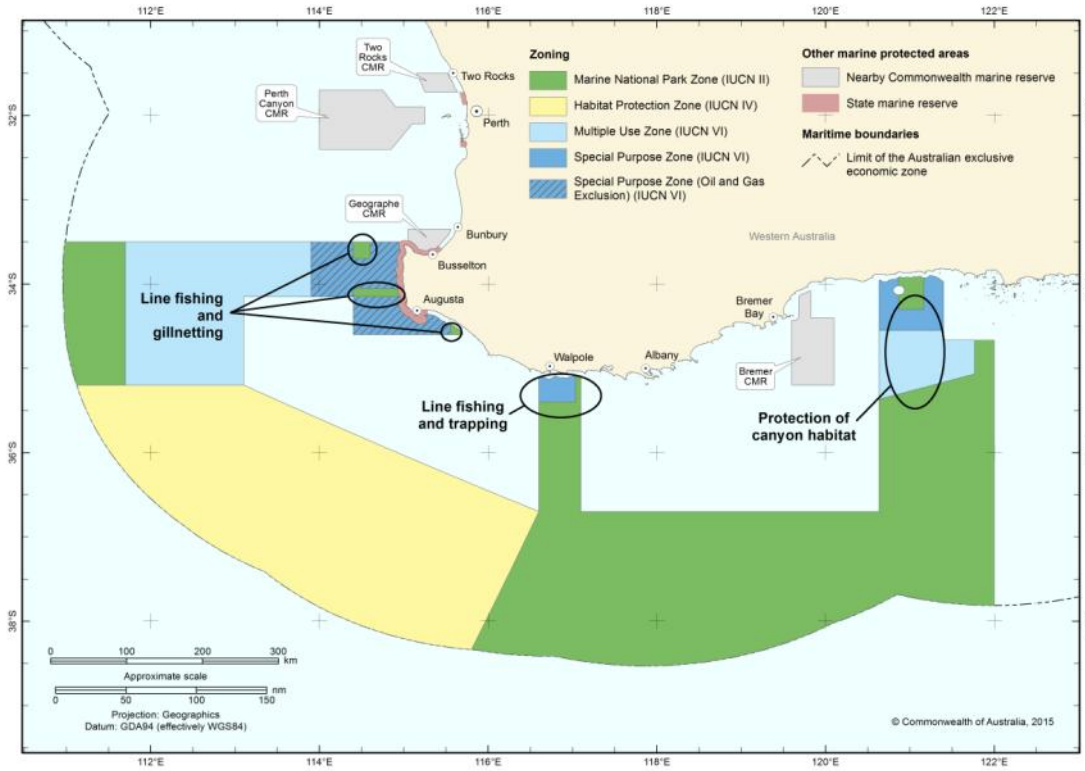

Figure 4.3.4.1 South-west Corner CMR as proclaimed, showing key issues and drivers for change identified during the CMR Review

Areas of contention

The Regional Panel determined that loss of access by established commercial fisheries was an area of contention.

Scalefish

The West Coast Demersal Scalefish Fishery is a small handline/dropline fishery that currently has seven licence holders in the south-west zone. It is managed under input controls that monitor hours at sea using a VMS. The fishery is deemed to be sustainable and is considered low impact, with gear being restricted to five handlines or droplines per vessel suspended vertically in the water column; these cannot be left unattended. The maximum workable depth for this fishery is the 800 m contour.

The Regional Panel noted the impact of the two existing MNPZs in the Capes coast area and considered a suggestion to move the northern MNPZ further east to avoid fishable ground to the west. This suggestion, however, created an unforeseen consequence for the gillnet fishery that operates in the inshore area.

At the invitation of the Regional Panel, the Western Australian Fishing Industry Council attempted to broker an alternative that could address the problem but was unable to find a better solution than the proclaimed arrangement. Hence the *status quo* was retained.

The Regional Panel also considered improving the conservation outcome in the Capes coast by extending the eastern end of each of the MNPZs as HPZs to the edge of the MUZ boundary. This suggestion, however, created an unintended consequence for deepwater trap fisheries operating offshore and was not pursued.

Demersal scalefish at Peaceful Bay
The Regional Panel noted that late changes in 2012 to the South-west Corner CMR that positioned an MNPZ over a section of the shelf at Peaceful Bay had a major and unintended impact on a local fishery operating out of this area, with significant consequences for a vertically integrated fishing operation.

Various alternative zoning configurations were canvassed, all of which had similar outcomes because of the location and size of the CMR in this area. As a consequence the workable solution was to zone this area as Multiple Use.

Donnelly Banks
The Regional Panel noted concerns that the MNPZ over the Donnelly Banks excluded the gillnet and scalefish sectors from this area. The area is considered to be an important nursery for reef-associated species such as dhufish, and is one of the few MNPZs that protect shelf environments. It is also a relatively small area that will act as an important reference and monitoring site in the future.

As a consequence the BAP declined to recommend changes to the zoning of this area.

Fishing prospectivity
The Regional Panel heard that there was considerable fishing prospectivity for the West Coast Tuna and Billfish Fishery in the offshore MNPZ in the South-west Corner CMR. It recognised that this area was currently not utilised by the industry for economic reasons, but acknowledged that the area could hold considerable potential in the future.

Recommendations
The recommendations for the South-west Corner CMR are to:
- Maintain the MNPZs off the Capes coast and the Donnelly Banks
- Extend the deepwater MNPZ on the western border of the CMR southwards
- Rezone the MNPZ off Peaceful Bay as SPZ down to 35°30.5'S
- Extend the MNPZ on the eastern arm of the South-west Corner CMR over Stokes Canyon to the 1 000 m contour
- Maintain the oil and gas exclusion off the Capes coast.

These changes are shown in Figure 4.3.4.2 and summarised in Table 4.3.4.1.

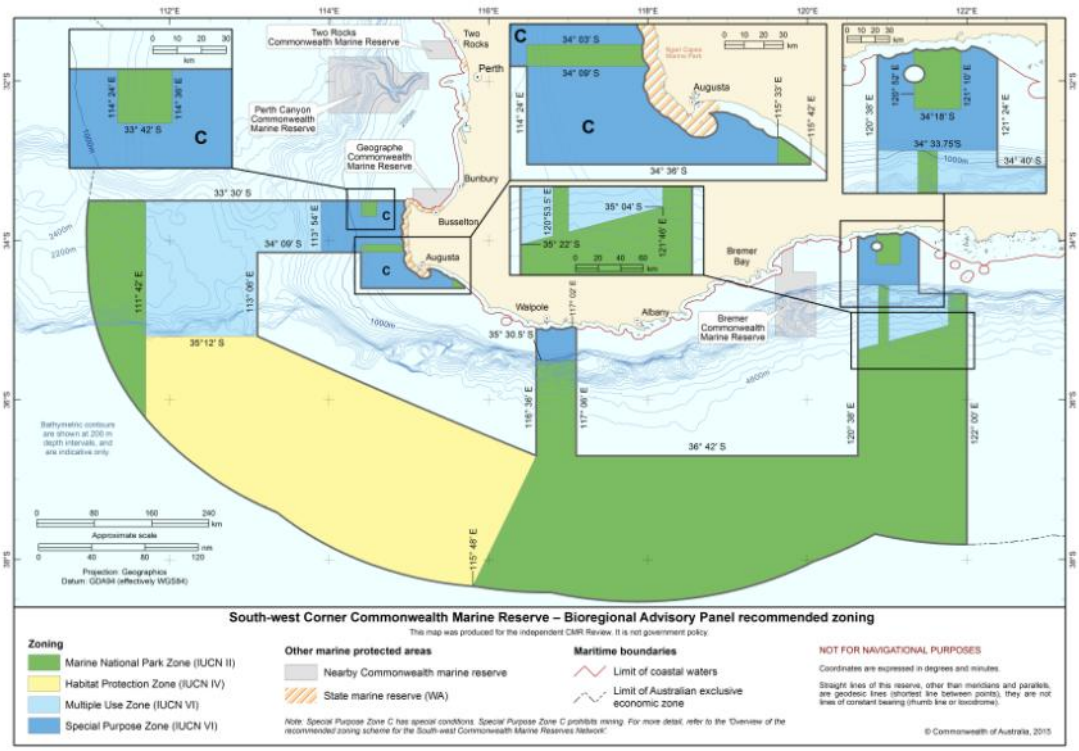

Figure 4.3.4.2 Recommended zoning for South-west Corner CMR

Table 4.3.4.1 indicates how the areas under different zone types (within the outer boundaries of the reserve) will change with the recommended zoning. The area under MNPZ is increased by 1%, the result of a decrease in the areas under MUZ and HPZ. Together these zones afford a high level of protection to over 80% of the reserve. There is also a slight increase in the area under SPZ.

Table 4.3.4.1 Comparison of areas of zone types between proclaimed and recommended zoning for South-west Corner CMR

Zone	Proclaimed		Recommended		Difference	
	Area (km^2)	% of CMR	Area (km^2)	% of CMR	Area (km^2)	% of CMR
MNPZ (IUCN II)	128 677	47.33%	132 290	48.65%	+3 613	+1.33%
HPZ (IUCN IV)	91 904	33.80%	88 448	32.53%	–3 456	–1.27%
MUZ (IUCN VI)	36 868	13.56%	35 857	13.19%	–1 011	–0.37%
SPZ (IUCN VI)	4 900	1.80%	5 753	5.63%	+853	+0.31%
SPZ (Oil and Gas Exclusion) /SPZ C*	9 550	3.51%	9 550	3.51%	Nil	Nil
Total	271 898	100%	271 898	100%		

*The proclaimed SPZ (Oil and Gas Exclusion) and recommended SPZ (C) have the same allowable activities, and are therefore reported as the same zone type.
Note: All figures are rounded to the nearest km^2 (and therefore in some instances can appear to not add up to the totals supplied). No changes have been made to the outer boundaries and total area of the reserves. Percentages are calculated based on the rounded figures.

Outcomes

The recommended zoning for the South-west Corner CMR will increase the total area of MNPZ to nearly 49% of the reserve area, providing a more extensive depth transect across the Naturaliste Plateau and greater protection to a significant canyon system on the south-west coast. The recommended zoning will reduce representation of one Biologically Informed Seascape in MNPZ in the South-west CMR Network (see Appendix H). Although the zoning changes will also reduce the representation in MNPZ of one Depth Range (by Provincial Bioregion) and one other Biologically Informed Seascape, the increase in representation of these features in the Bremer CMR will ensure they retain a high level of protection in the network. The recommended zoning will also maintain the number of conservation features represented in HPZs in the South-west CMR Network. These conservation features are listed in Appendix H.

The changes recommended are not considered to have an impact on recreational fisheries, which tend to operate closer inshore and mostly in state waters. On the other hand, some changes will result in improved access for recreational and charter fishers in waters off the Walpole area.

The number of fisheries impacted by the reserve is expected to decrease under the recommended zoning, compared to the proclaimed zoning. The increased area of SPZ in the reserve will result in greater access for the WA managed South Coast Crustacean Fishery and Trap and Net Fishery, and the Southern and West Coast Demersal Gillnet and Longline Fishery. A reduction in impacts on the Commonwealth managed fisheries operating in the reserve is not expected; however, due to the confidential nature of the fisheries catch data for this area the likely change of impact is unknown.

The recommended zoning changes in the South-west Corner CMR are expected to improve ease of compliance with the internal boundaries of the reserve for users such as commercial fishers. The westernmost MNPZ has been extended further southwards but maintains the same longitude along its eastern boundary as in the proclaimed zoning for simplicity. The removal of the narrow strip of MNPZ near Walpole and extension of the SPZ further southwards to below the 1000 m depth contour will be easier for commercial fishers to comply with. Conversely, the extension of the eastern MNPZ over the Stokes Canyon increases complexity in this area; however, the vast majority of the MNPZ occurs deeper than 1000 m and has been designed to minimise compliance difficulties for commercial fishers. The use of only one type of SPZ across the network, with specific rules implemented in the areas marked 'C' in the South-west Corner CMR, reduces the overall complexity of zoning at the network level. There is no change to the prohibition of oil and gas and mining in the SPZ off the Capes coast.

The South-west Corner CMR does not overlap with any native title determinations, applications or IPAs. The reserve is adjacent to the Esperance Nyungars native title determination and the Esperance Nyungars Government ILUA; the Harris Family, South West Boojarah #2, Southern Noongar, and Wagyl Kaip registered native title claims; and the Single Noongar Claim (Area 1) native title registered application area.

The recommended extensions to the MNPZs in this reserve will restrict mining activities above the level of restriction set out in the proclaimed zoning. The removal of the MNPZ near Peaceful Bay will allow mining activities above the level of restriction set out in the proclaimed zoning. The area covered by the recommended zoning change is rated as having medium-high and low petroleum prospectivity.

4.3.5 BREMER COMMONWEALTH MARINE RESERVE

Background

The Bremer CMR covers 4472 km^2 off the south coast of WA, adjacent to the state water boundary and close to the terrestrial Fitzgerald River National Park. The reserve, established in 2012, contained three zone types: Marine National Park (6%), Special Purpose (30%) and Multiple Use (63%) (Figure 4.3.5.1).

Conservation values represented in the reserve include examples of ecosystems of the Southern Province and South-west Shelf Province bioregions, including the Bremer Canyon, which supports known aggregations of sperm and killer whales. The reserve includes foraging areas for threatened white sharks, Australian sea lions, Indian yellow-nosed albatross, soft-plumaged petrel and flesh-footed shearwater, as well as calving habitat for threatened southern right whales and migration areas for protected humpback whales. Two KEFs found in the reserve are the Albany Canyons group and the ancient coastline at a depth range of 90 m to 120 m.

Several commercial fisheries overlap with the reserve, including the WA managed Southern and West Coast Demersal Gillnet and Longline Fishery, South Coast Purse Seine Fishery, and South Coast Trawl Fishery. Recreational and charter fishing occurs in the area, mostly within state waters, with some activities extending into Commonwealth waters. The area is moderately to highly prospective for petroleum and until recently there were petroleum exploration permits over part of the reserve.

Issues raised

In addition to the South-west CMR Network issues raised above in Section 4.3, the Bremer CMR was raised in several submissions and in meetings with stakeholders. Issues raised included:

- Importance of the area for aggregations of calving southern right whales and other marine life
- Increase protection, specifically, MNPZs, to enhance ecotourism (whale watching) opportunities in the area
- Loss of access to MNPZs (IUCN II) by recreational anglers
- Exclude oil and gas and mineral exploration
- Loss of access for commercial fisheries, specifically scallop trawl.

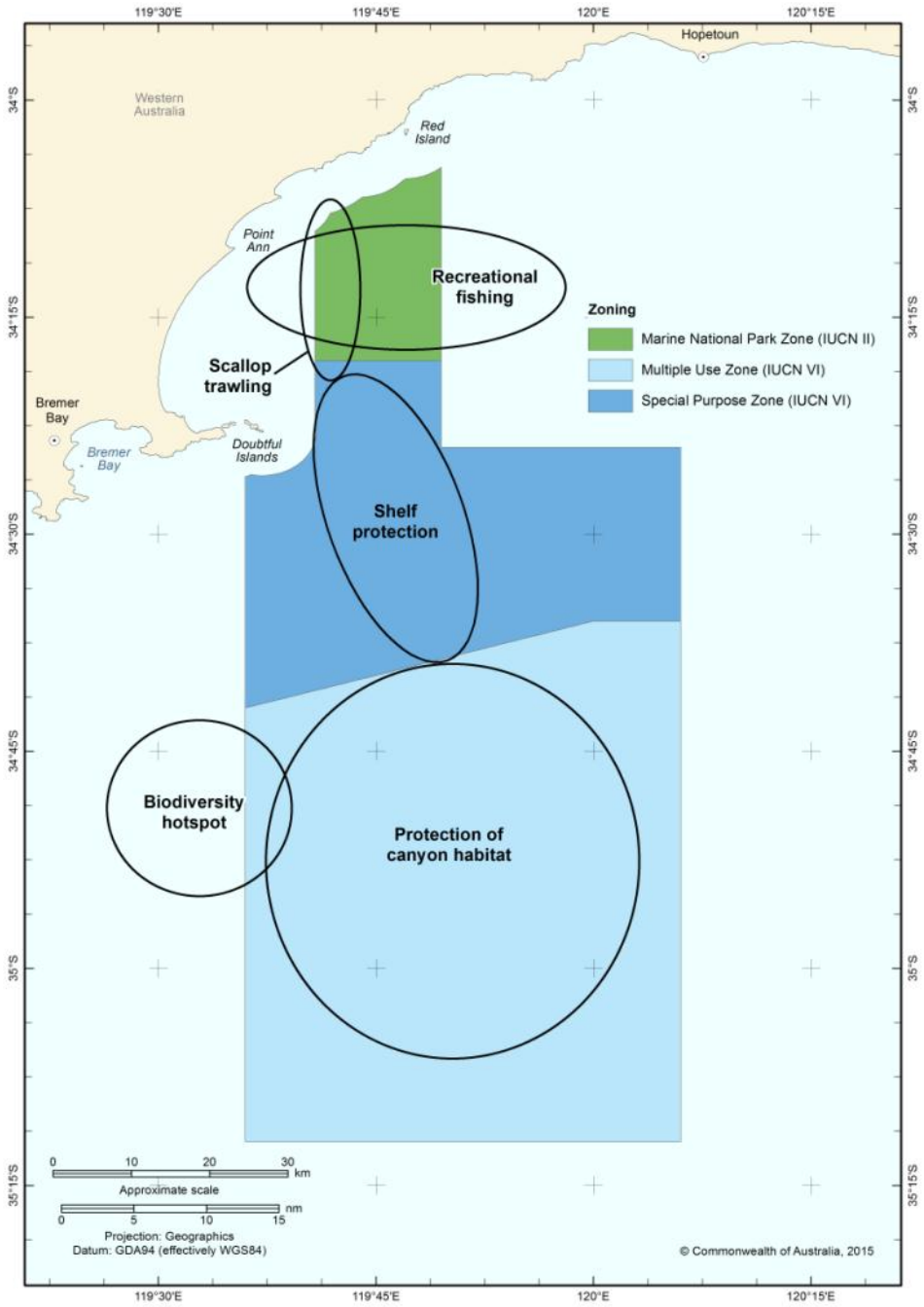

Figure 4.3.5.1 Bremer CMR as proclaimed, showing key issues and drivers for change identified during the CMR Review

Areas of contention

The Regional Panel determined that loss of access by established commercial fisheries and higher protection for the Bremer Canyon and the continental shelf were areas of contention.

Scallop trawl

The South Coast Trawl Fishery targets saucer scallops (*Amusium balloti*) in shallow, protected environments, often in the lee of islands and protected embayments. Typically recruitment of scallops is both temporally and spatially variable, making it an unpredictable resource. For this reason trawling in a particular area is not persistent and habitat is able to recover between periods of exploitation. In this fishery scallops are taken using an otter trawl fitted with 100 mm mesh and bycatch reduction devices, to reduce bycatch and the incidental catch of large animals respectively.

The ESP review of the FGRA for scallop trawling suggested that the benthic habitat impacts of this fishery were both localised and minor. Current ESD reporting indicated that impacts on bycatch and threatened, endangered or protected species were also low. This assessment suggested that scallop trawl fisheries operating on soft sediment in the Bremer CMR could be considered 'compatible' with respect to the conservation values of the area.

The Regional Panel noted that there was an extensive area of nearshore shelf environment protected in the Bremer CMR. While the ESP findings indicated that scallop trawling did not pose a significant overall risk to offshore environments, localised impacts were possible. For this reason the ESP recommended that a monitoring program be implemented to evaluate the effects of scallop trawl in the reserve area.

Conservation

The area has been recognised as one of significance to aggregations of marine megafauna including large sharks, cetaceans (including killer and sperm whales), dolphins and seals, as well as seabirds, although these concentrations are apparently predominantly to the west of the existing CMR boundary off the continental shelf. The ESP found that the Bremer Canyon is described as one of nine shelf-incising canyons in the South-West Bioregion and one of the largest of the 81 canyons described by Geoscience Australia in a comprehensive mapping exercise of the Albany region. Simulation modelling suggests that this canyon has a 'high source capacity' (typically topographically complex) and has a high potential to contribute to the resilience of the protected area network by exporting larvae to other connected locations.

Recommendations

The recommendations for the Bremer CMR are to:

- Establish a new SPZ replacing the western side of the existing MNPZ to include provision for scallop trawling on the inshore waters of the shelf
- Extend the MNPZ south as a transect across the shelf leaving an area of SPZ east and west of this down to a boundary mostly below the 1000 m contour
- Rezone the existing MUZ south of the SPZ as MNPZ
- Exclude oil and gas and mining from the SPZs
- While changing the outer boundaries of the CMR network was outside the scope of this review, there is considerable merit in investigating a westwards extension of the MNPZ south of the continental shelf to include the area that has been identified as being significant for the aggregation of megafauna (see further discussion in Chapter 8 and BAP Recommendation 8.8).

These changes are shown in Figure 4.3.5.2 and summarised in Table 4.3.5.1.

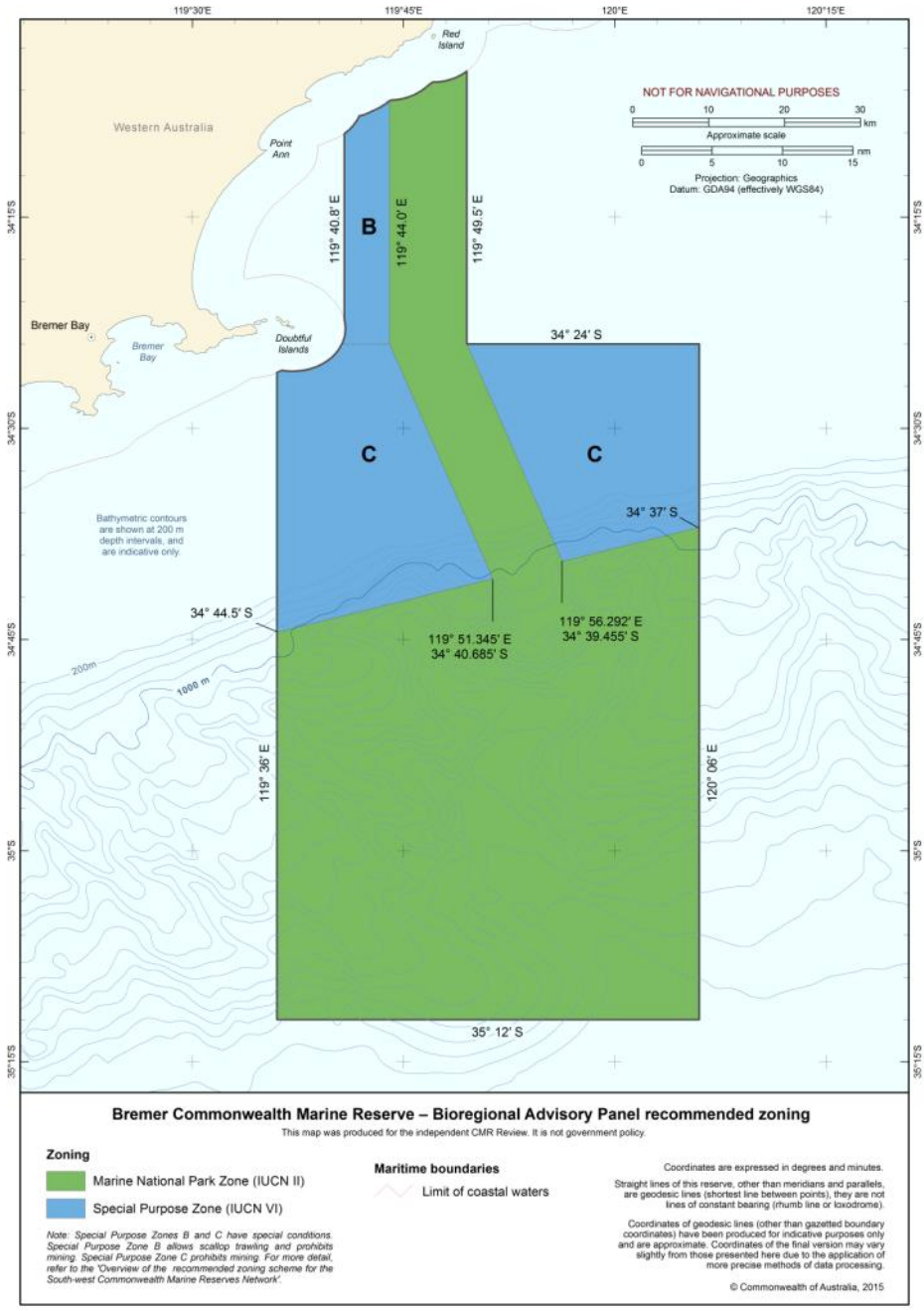

Figure 4.3.5.2 Recommended zoning for Bremer CMR

Table 4.3.5.1 indicates how the areas under different zone types (within the outer boundaries of the reserve) will change with the recommended zoning. There is a very significant increase in the area of MNPZ to cover 71% of the reserve and a corresponding decrease in the area under MUZ. Although a new SPZ to provide for scallop trawl is introduced, the overall area under SPZ decreases slightly. The SPZ areas will exclude oil and gas and mining.

Table 4.3.5.1 Comparison of areas of zone types between proclaimed and recommended zoning for Bremer CMR

Zone	Proclaimed		Recommended		Difference	
	Area (km^2)	% of CMR	Area (km^2)	% of CMR	Area (km^2)	% of CMR
MNPZ (IUCN II)	284	6.35%	3 172	70.93%	+2 888	+64.58%
MUZ (IUCN VI)	2 838	63.46%	Nil	Nil	–2 838	–63.46%
SPZ (IUCN VI)	1 351	30.21%	Nil	Nil	–1 351	–30.21%
SPZ B (IUCN VI)	Nil	Nil	147	+3.29%	+147	+3.29%
SPZ C (IUCN VI)	Nil	Nil	1 153	25.78%	+1 153	+25.78
Total	4 472	100%	4 472	100%		

Note: All figures are rounded to the nearest km^2 (and therefore in some instances can appear to not add up to the totals supplied). No changes have been made to the outer boundaries and total area of the reserves. Percentages are calculated based on the rounded figures.

Outcomes

The recommended zoning for Bremer CMR will significantly increase the area of the MNPZ. While this does not extend over the aggregating site to the west of the CMR, most of the Bremer Canyon, including the shelf break of the canyon head, will be highly protected under MNPZ.

The recommended zoning for Bremer CMR will not change the number or type of primary conservation features represented in MNPZ in the South-west CMR Network, but will increase the total area of most of these conservation features under protection in MNPZs.

The location of the MNPZ was determined in consultation with the local fishing community and avoids areas that are regularly used by the sector. In addition, recreational and charter fishers will have greater access to the area under the inshore SPZ.

The expansion of MNPZ in Bremer CMR will increase the impact on some commercial fishing catches. Fisheries affected include the Western Australian managed Line Fishery, Southern and West Coast Demersal Gillnet and Longline Fishery and Crab Trap Fishery and the South Coast Crustacean Fishery. This displacement is balanced by improved access in other parts of the network including the Twilight, Eastern Recherche and South-west Corner CMRs.

The reconfiguration of the MNPZ and SPZ in the north-western part of the reserve will decrease impacts on the South Coast Trawl Fishery by improving access for scallop trawling, and also reduce displacement of the Western Australian South Coast Purse Seine Fishery.

The zoning changes to the Bremer CMR reduce the total number of zone types in the reserve from three to two, decreasing the complexity for users. The introduction of the transect of MNPZ across the continental shelf may increase the difficulty of compliance for some users of the reserve; however, this has also been minimised by positioning the greater part of the MNPZ below 1 000 m. The use of only one type of SPZ across the

network, with specific rules implemented in areas marked ‘B’ and ‘C’ in the Bremer CMR, reduces the overall complexity of zoning at the network level.

The Bremer CMR does not overlap with any native title determinations, applications or IPAs. The reserve is adjacent to the Southern Noongar and Wagyl Kaip registered native title claims, which do not extend into Commonwealth waters.

The recommended reconfiguration and expansion of MNPZ and exclusion of oil and gas from the whole reserve will restrict mining activities substantially above the level of restriction set out in the proclaimed zoning. The area covered by these recommended zones is rated as having medium-high petroleum prospectivity.

4.3.6 EASTERN RECHERCHE COMMONWEALTH MARINE RESERVE

Background

The Eastern Recherche CMR covers an area of approximately 20 574 km^2, from Cape Pasley in the eastern part of the Recherche Archipelago into deep water off the continental shelf to the limit of Australia's EEZ. The reserve, established in 2012, includes two zone types: Marine National Park (78%), and Special Purpose (approximately 22%) (Figure 4.3.6.1).

Conservation values represented in the reserve include examples of the Southwest Shelf Province, Southern Province, and Great Australian Bight Shelf Transition bioregions, which include seagrass meadows and rocky reef habitats. The reserve includes foraging areas for the threatened white sharks and Australian sea lions and several migratory seabirds including flesh-footed shearwater. The reserve also includes calving habitat for the threatened southern right whales and seasonally predictable meso-scale eddies, which are associated with increased productivity and feeding aggregations. There is one KEF in the reserve: the Commonwealth waters surrounding the Recherche Archipelago, an area of extensive rocky reef environments that is recognised globally for its biodiversity. The reserve includes one of the few areas where this reef environment extends into Commonwealth waters. The islands of the archipelago support breeding colonies of seabirds, Australian sea lions and New Zealand fur seals.

The WA managed South Coast Crustacean and South Coast Trawl fisheries operate in the area along with the Southern and West Coast Demersal Gillnet and Longline Fishery. The Western Australian Abalone Fishery operates in the coastal waters adjacent to the reserve. Recreational fishing and tourism also occur in the area but are mainly confined to state waters.

The reserve is in an area that is not prospective for oil and gas.

Issues raised

In addition to the South-west CMR Network issues raised above in Section 4.3, the Eastern Recherche CMR was canvassed in a number of submissions and in meetings with stakeholders. Issues raised included:

- Protection for cetaceans
- Loss of access for commercial fisheries, including commercial trolling and gillnetting
- Economic development including fishing prospectivity.

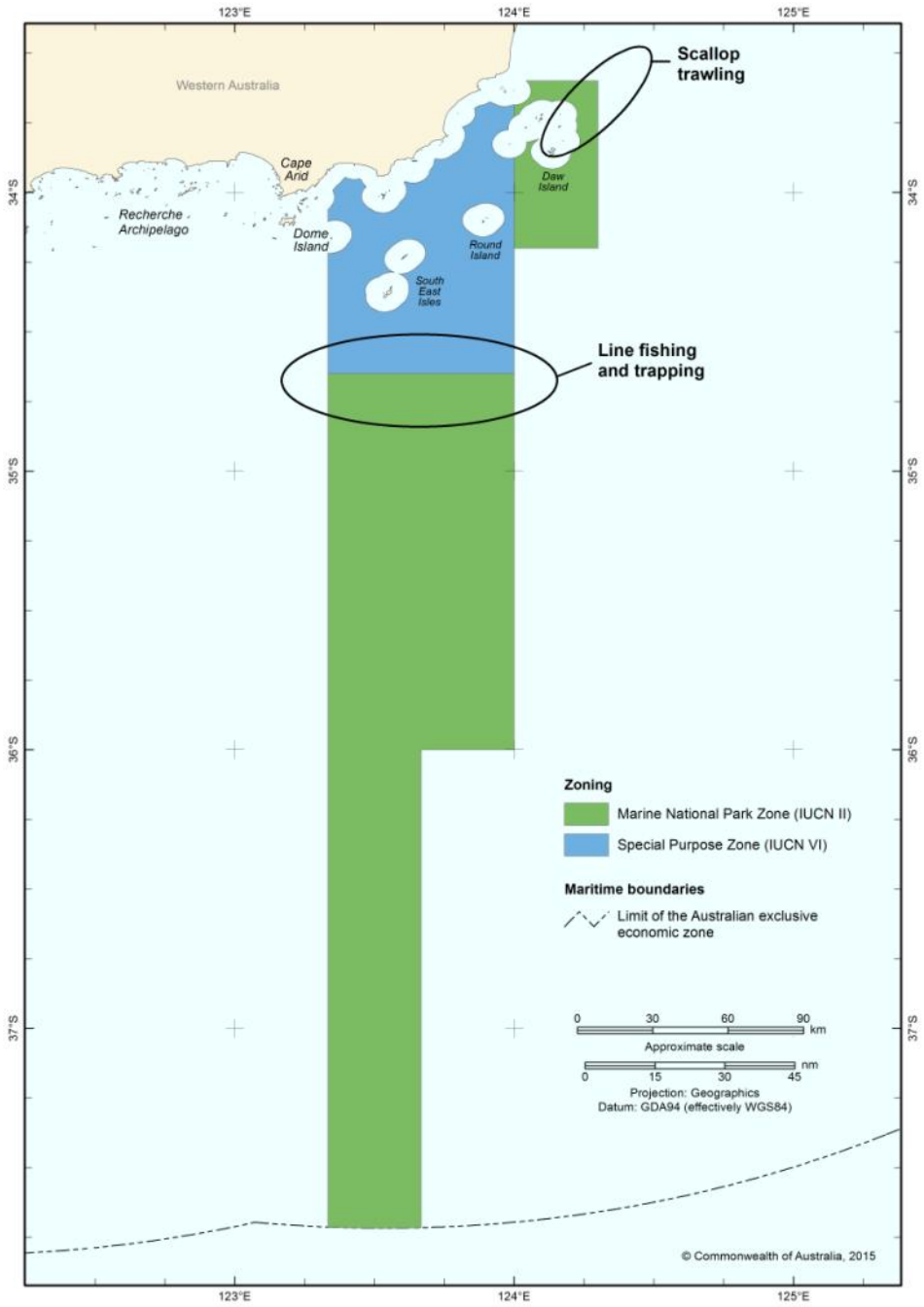

Figure 4.3.6.1 Eastern Recherche CMR as proclaimed, showing key issues and drivers for change identified during the CMR Review

Areas of contention

The Regional Panel determined the loss of access by established commercial fisheries to be an area of contention.

Commercial fishing

The area to the north-east of the existing inshore MNPZ encompasses the periphery of an area trawled for scallops. While it was suggested that an SPZ (Trawl) be created to accommodate this fishery, the Regional Panel was of the view that this area was not critical to the fishery and the conservation value of the MNPZ outweighed a minor loss of access to this area.

The Regional Panel noted the importance of the shelf break for the deepwater trap fishery in the area.

Conservation
The Recherche Archipelago is an area of biological significance that is lightly fished and therefore provides an area where increased shelf protection could be achieved without impacting on recreational or commercial fisheries.

The BAP noted this but considered that the area was already well served in terms of MNPZ protection and there was no merit in further restricting fisheries in the area.

Recommendation
The recommendation for the Eastern Recherche CMR is to extend the SPZ further south to the 1 000 m contour line.

The change is shown in Figure 4.3.6.2 and summarised in Table 4.3.6.1.

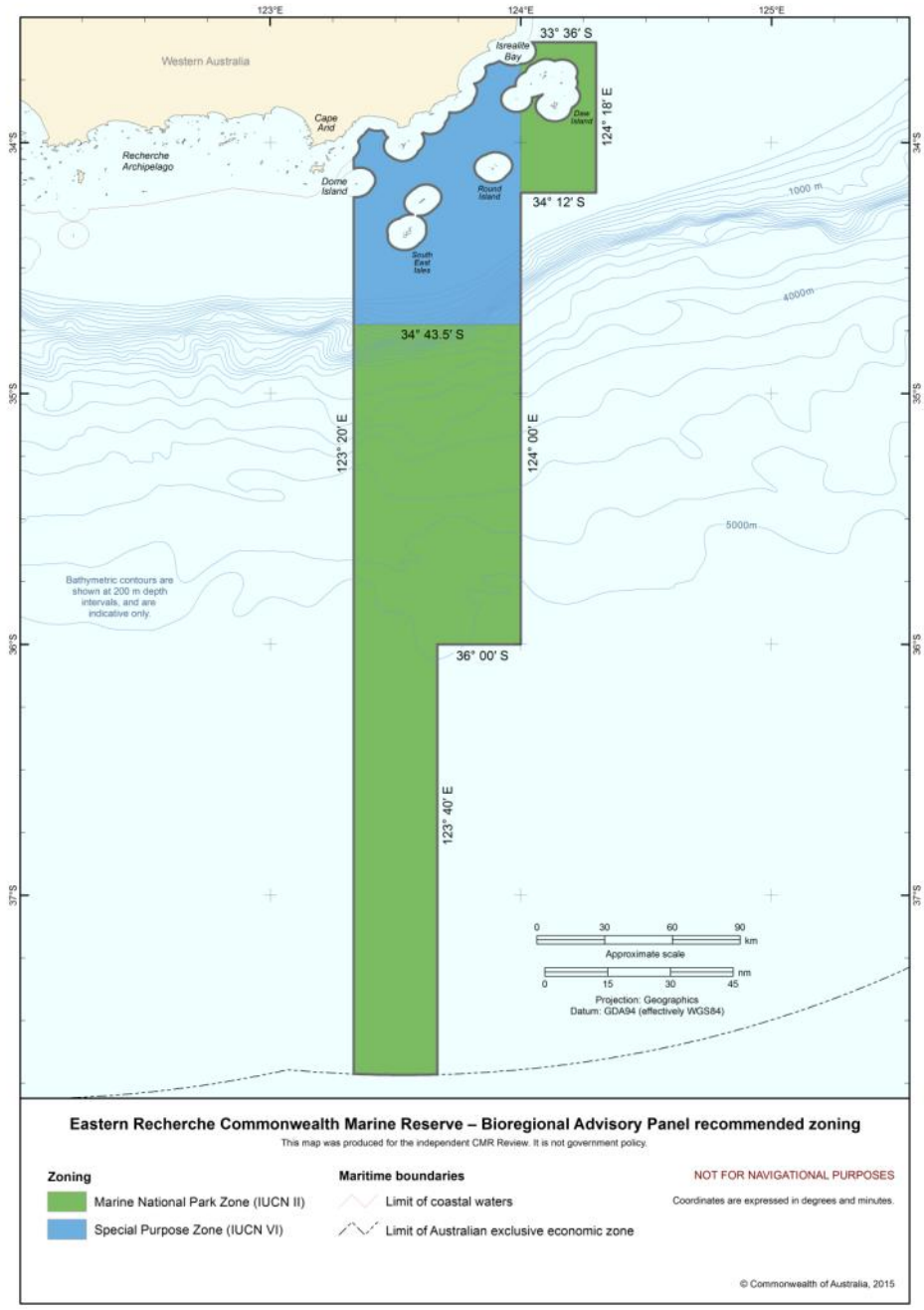

Figure 4.3.6.2 Recommended zoning for Eastern Recherche CMR

Table 4.3.6.1 indicates how the areas under different zone types (within the outer boundaries of the reserve) will change with the recommended zoning. The area under SPZ is increased and there is a corresponding decrease in MNPZ, which makes up 76% of the reserve.

Table 4.3.6.1 Comparison of areas of zone types between proclaimed and recommended zoning for Eastern Recherche CMR

Zone	Proclaimed		Recommended		Difference	
	Area (km^2)	% of CMR	Area (km^2)	% of CMR	Area (km^2)	% of CMR
MNPZ (IUCN II)	16 072	78.12%	15 564	75.65%	–508	–2.47%
SPZ (IUCN VI)	4 502	21.88%	5 010	24.35%	+508	+2.47%
Total	20 574	100%	20 574	100%		

Note: All figures are rounded to the nearest km^2 (and therefore in some instances can appear to not add up to the totals supplied). No changes have been made to the outer boundaries and total area of the reserves. Percentages are calculated based on the rounded figures.

Outcomes

The recommended small expansion of SPZ and corresponding reduction of MNPZ in the Eastern Recherche CMR will not change the number or type of conservation features represented in MNPZ in the South-west CMR Network.

Six WA managed fisheries operating in the reserve are estimated to be displaced by the recommended zoning to some extent. However, the changes reduce the impact on the Western Australian South Coast Trawl Fishery and Southern and West Coast Demersal Gillnet and Longline Fishery. The recommended change to the Eastern Recherche CMR to extend the SPZ southwards to below the 1 000 m depth contour is expected to improve the practicality of the zoning for commercial fishers who conduct their operations along depth gradients.

The changes may provide additional access for recreational and charter fishing, the majority of which occurs in shallow waters.

The Eastern Recherche CMR does not overlap with any native title determinations or applications or IPAs. The reserve is adjacent to the Esperance Nyungars and Ngagju native title determinations and the Esperance Nyungars Government ILUA.

The extension of the SPZ in this reserve may allow a small increase in mining activities above the level of restriction set out in the proclaimed zoning. The area covered by the recommended zoning change is rated as having low petroleum prospectivity.

4.3.7 TWILIGHT COMMONWEALTH MARINE RESERVE

Background

The Twilight CMR covers approximately 4641 km^2 adjacent to the state water boundary offshore of Twilight Cove on the south coast of WA. The entire reserve, established in 2012, is zoned as Marine National Park (Figure 4.3.7.1).

Conservation values represented in the reserve include examples of south coast continental shelf environments, ecosystems of the Great Australian Bight Shelf Transition bioregion, foraging areas for threatened white sharks and migratory flesh-footed shearwater, seasonal calving habitat for threatened southern right whales, and habitats surrounding haul-out sites for threatened Australian sea lions.

The area is important to traditional owners and a native title claim overlaps with parts of the marine reserve.

The WA managed South Coast Crustacean and South Coast Trawl fisheries operate in the area along with the Southern and West Coast Demersal Gillnet and Longline Fishery. The Western Australian Abalone Fishery operates in the coastal waters adjacent to the reserve. Recreational fishing and tourism also occur in the area but are mainly confined to state waters.

The area is not considered prospective for oil and gas, although prospectivity is moderate to high just to the south of the reserve, where an exploration permit has recently been granted.

Issues raised

In addition to the South-west CMR Network issues raised above in Section 4.3, the Twilight CMR was raised in meetings with stakeholders. Issues raised included:

- Important foraging area for Australian sea lions and Australian fur seals
- Loss of access for commercial fisheries, including commercial gillnetting and rock lobster trapping.

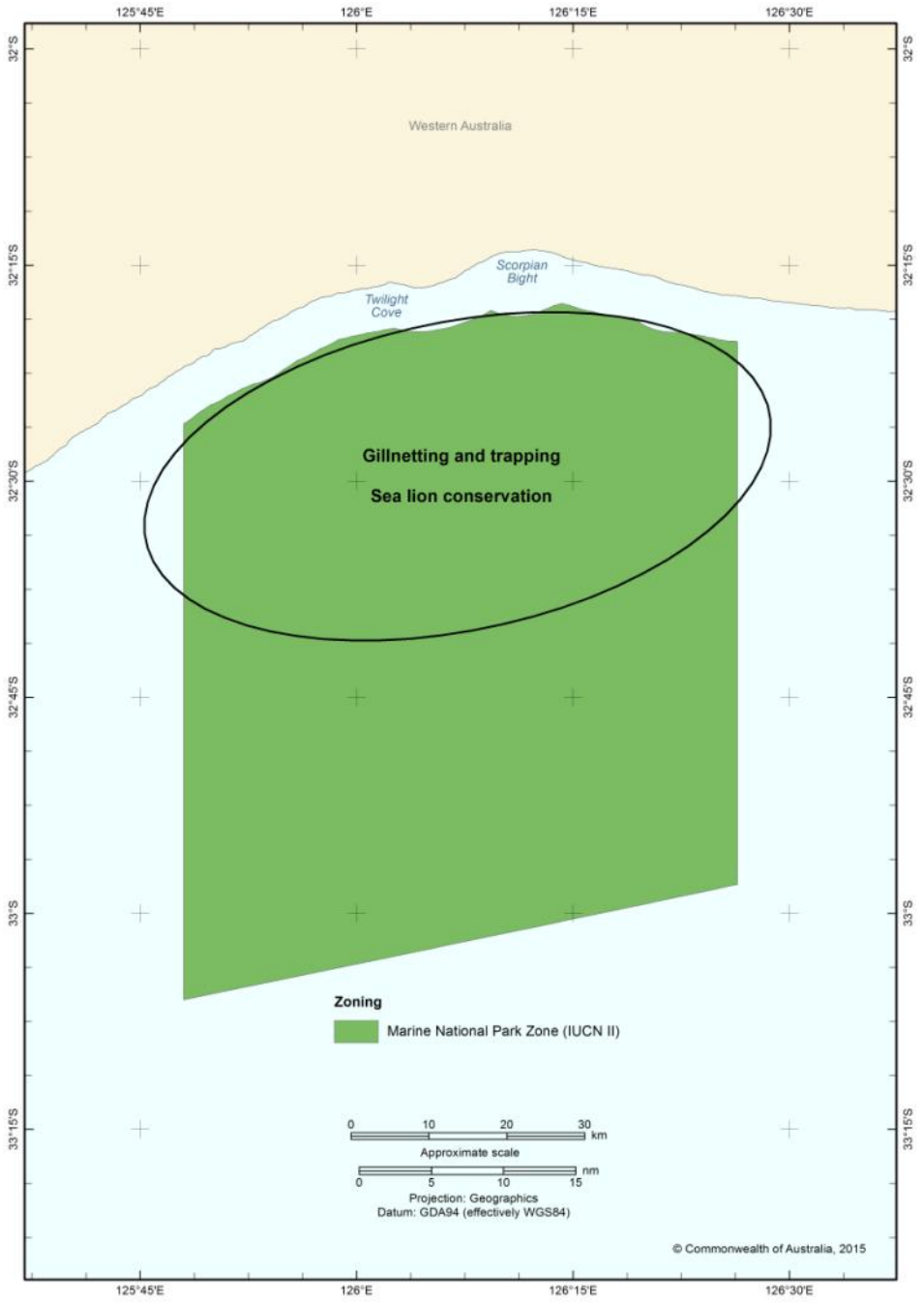

Figure 4.3.7.1 Twilight CMR as proclaimed, showing key issues and drivers for change identified during the CMR Review

Areas of contention

Commercial fishing

The Regional Panel noted that the Twilight CMR had been a late inclusion in the process leading to the 2012 proclamation and had not involved the same level of consultation with affected stakeholders, particularly the commercial fishing sector.

The area is important to the gillnet fishery, particularly between state waters and the 50 m depth contour.

As proclaimed the area presented an operational barrier to fishers working along depth contours as they needed to traverse a significant distance between the western and eastern boundaries. This had the effect of limiting the operations of fishers working from

either the east or the west, as it was uneconomical to traverse this distance before resuming fishing.

Conservation
The coastal areas are important haul-outs and feeding grounds for Australian sea lions.

Recommendations
The recommendations for the Twilight CMR are to:

- Create two new SPZs to allow gillnetting and lobster fishing and exclude oil and gas and mining between the limit of state waters and an east–west boundary that falls within the 50 m contour
- Retain a significant MNPZ transect south from the inner shelf between Scorpion Bight and Twilight Cove.

These changes are shown in Figure 4.3.7.2 and summarised in Table 4.3.7.1.

Note: At the time of writing the BAP was made aware of changes to state regulations which prohibit gillnetting within a 20 km radius of sea lion colonies. This restriction will provide added protection within the reserve, increasing the area within the Twilight CMR where gillnetting is disallowed. However, the BAP did not think it necessary to amend the MNPZ in the reserve as this would have an impact on the lobster fishery which is allowed in the SPZ.

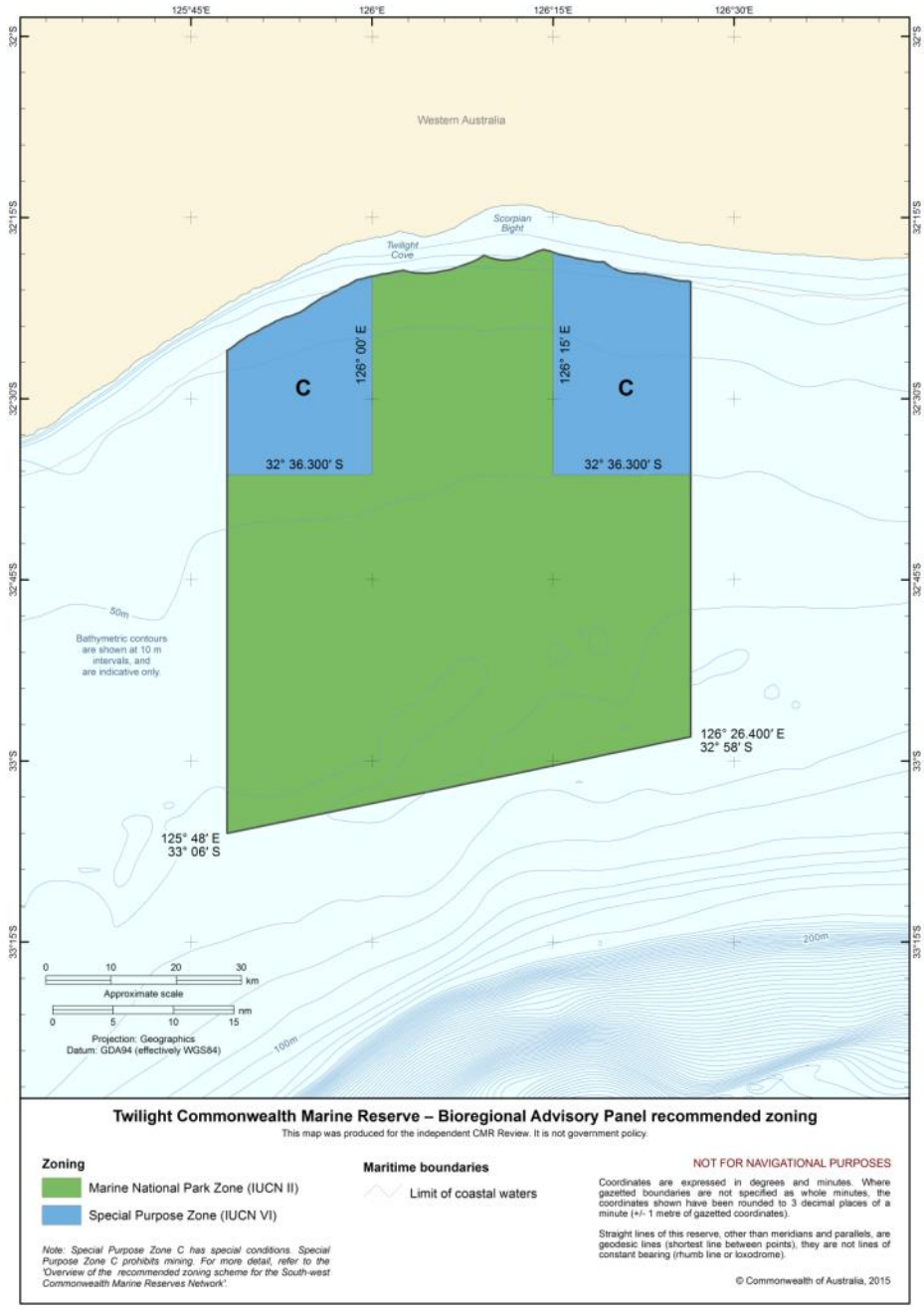

Figure 4.3.7.2 Recommended zoning for Twilight CMR

Table 4.3.7.1 indicates how the areas under different zone types (within the outer boundaries of the reserve) will change with the recommended zoning. An area under SPZ is created and there is a corresponding decrease in MNPZ, which makes up 78% of the reserve.

Table 4.3.7.1 Comparison of areas of zone types between proclaimed and recommended zoning for Twilight CMR

Zone	Proclaimed		Recommended		Difference	
	Area (km^2)	% of CMR	Area (km^2)	% of CMR	Area (km^2)	% of CMR
MNPZ (IUCN II)	4 641	100%	3 605	77.68%	–1 036	–22.32%
SPZ C (IUCN VI)	Nil	Nil	1 036	22.32%	+1 036	+22.32%
Total	4 641	100%	4 641	100%		

Note: All figures are rounded to the nearest km^2 (and therefore in some instances can appear to not add up to the totals supplied). No changes have been made to the outer boundaries and total area of the reserves. Percentages are calculated based on the rounded figures.

Outcomes

The recommended significant reduction of MNPZ and corresponding increase in SPZ in the Twilight CMR will not change the number or type of conservation features represented in MNPZ or HPZ in the South-west CMR Network.

The recommended reduction in MNPZ will increase access for recreational and charter fishers and reduce the impact on commercial fishing.

Four WA managed fisheries operating in the marine reserve are estimated to be displaced by the recommended zoning to a certain extent. However, the introduction of the two new SPZs will decrease the amount of displacement to three fisheries, with substantial reductions estimated for the Western Australian South Coast Crustacean Fishery and Southern and West Coast Demersal Gillnet and Longline Fishery.

The recommended zoning configuration of the Twilight CMR introduces an extra zone type and is more complex than that of the proclaimed zoning, which may increase complexity for users. The use of only one type of SPZ across the network, with specific rules implemented in areas marked 'C' in the Twilight CMR, reduces the overall complexity of zoning at the network level.

The Twilight CMR overlaps with the Western Australian Mirning People registered native title claim.

The introduction of the SPZs in Twilight CMR that will not allow mining activities maintains the level of restriction set out in the proclaimed zoning.

4.3.8 GREAT AUSTRALIAN BIGHT COMMONWEALTH MARINE RESERVE

Background

The Great Australian Bight CMR covers a total area of 45 926 km^2 and encompasses the continental shelf offshore from Eucla east to Nuyts Reef, extending into deep water off the shelf to the limit of Australia's EEZ. The reserve is adjacent to SA's Far West Coast and Nuyts Archipelago marine parks. The reserve, established in 2012, incorporates the former Great Australian Bight Marine Park (Commonwealth waters). The reserve includes three zone types: Marine National (17%), Special Purpose (34%), and Multiple Use (49%) (Figure 4.3.8.1).

Conservation values represented in the reserve include examples of ecosystems of the Great Australian Bight Shelf Transition and Southern Province bioregions, which include some of the world's most diverse soft sediment benthic invertebrate communities, as well as pelagic habitats supporting small pelagic fish species. The reserve also includes foraging areas for white sharks and Australian sea lions, as well as sperm whales and migratory short-tailed shearwater, and seasonal calving habitat for southern right whales. There is one KEF in the reserve: the ancient coastline at a depth range of 90 m to 120 m.

The Commonwealth Southern Bluefin Tuna Fishery is the most significant fishery operating within or near the reserve. Other key fisheries include the Commonwealth Gillnet, Hook and Trap Sector and the Great Australian Bight Trawl Sector of the Southern and Eastern Scalefish and Shark Fishery (SESSF); the Commonwealth Skipjack Tuna and Western Tuna and Billfish fisheries; and the South Australian Marine Scalefish and Rock Lobster fisheries. The high-value South Australian Abalone Fishery also operates in this area, although it is mostly confined to state waters. Recreational and charter fishing also occur in this area but are mostly confined to state waters.

Petroleum prospectivity is high in the Ceduna sub-basin, which extends out from the shelf break down the continental slope within the boundaries of the reserve. The reserve overlaps with six existing petroleum exploration titles that were awarded in January 2011 and overlap sections of the MUZ.

Issues raised

In addition to the South-west CMR Network issues raised above in Section 4.3, the Great Australian Bight CMR was canvassed in detail in several submissions and in meetings with stakeholders. Issues raised included:

- Potential oil and gas industry developments—specifically, excluding oil and gas from reserve
- Importance of the area to whale populations, including sperm and blue whales.

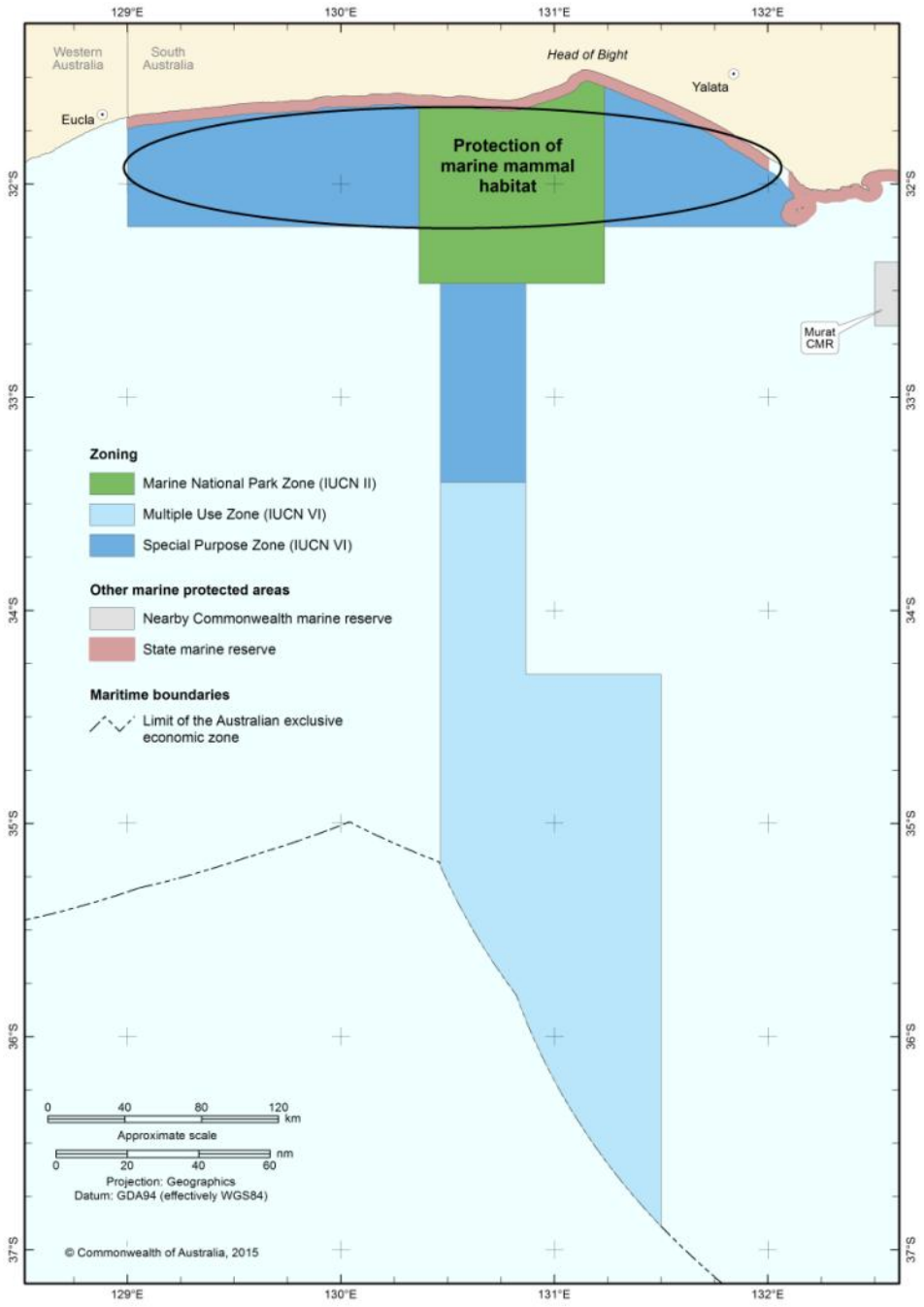

Figure 4.3.8.1 Great Australian Bight CMR as proclaimed, showing key issues and drivers for change identified during the CMR Review

Areas of contention

The Regional Panel determined that a higher level of protection for important marine mammal habitat was an area of contention. The Regional Panel noted the significant number of submissions that had expressed a concern that oil and gas posed a risk to the conservation values at the head of the Bight and more generally.

Recommendation

The recommendation for the Great Australian Bight CMR is to exclude oil and gas and mining from the SPZs to the east and west of the MNPZ.

The change is shown in Figure 4.3.8.2 and summarised in Table 4.3.8.1.

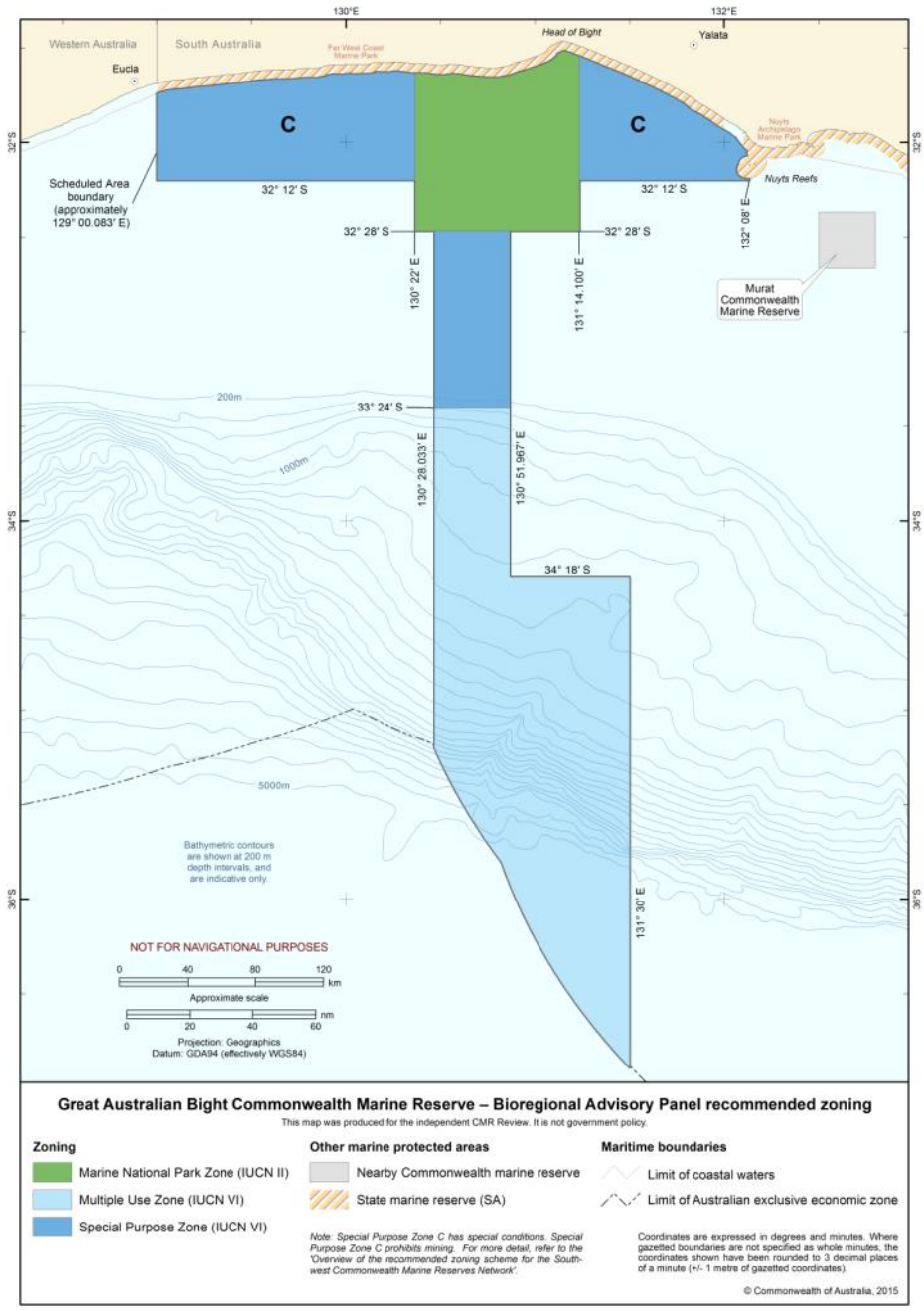

Figure 4.3.8.2 Recommended zoning for Great Australian Bight CMR

Table 4.3.8.1 indicates how the areas under different zone types (within the outer boundaries of the reserve) will change with the recommended zoning. There is no change to the MNPZ or MUZ but the SPZ now contains two areas where there is a exclusion of the oil and gas sector.

Table 4.3.8.1 Comparison of areas of zone types between proclaimed and recommended zoning for Great Australian Bight CMR

Zone	Proclaimed		Recommended		Difference	
	Area (km^2)	% of CMR	Area (km^2)	% of CMR	Area (km^2)	% of CMR
MNPZ (IUCN II)	7 728	16.83%	7 728	16.83%	Nil	Nil
MUZ (IUCN VI)	22 682	49.39%	22 682	49.39%	Nil	Nil
SPZ (IUCN VI)	15 516	33.78%	3 861	8.41%	–11 655	–25.38%
SPZ C (IUCN VI)	Nil	Nil	11 654	25.38%	+11 654	+25.38%
Total	45 926	100%	45 926	100%		

Note: All figures are rounded to the nearest km^2 (and therefore in some instances can appear to not add up to the totals supplied). No changes have been made to the outer boundaries and total area of the reserves. Percentages are calculated based on the rounded figures.

Outcomes

The recommended zoning change for the Great Australian Bight CMR will not change the number or type of conservation features represented in MNPZ or HPZ in the South-west CMR Network. The recommended restriction on mining activities in the SPZ areas marked 'C' will preclude exploration and development from the nearshore coastal-shelf provinces.

The zoning will not change the level of access for recreational or charter fishers and will result in the same level of impact on commercial fishing as that arising from the proclaimed zoning boundaries. Two SA managed fisheries and three Commonwealth fisheries will remain displaced by the recommended zoning of the reserve to some degree and there are no recommended changes to the zoning of the Great Australian Bight CMR that will reduce the impacts on these fisheries.

The recommended zoning for the Great Australian Bight CMR introduces restrictions to mining in the two SPZ 'C' areas. The use of only one type of SPZ across the network, with specific rules implemented in areas marked 'C' in the Great Australian Bight CMR, reduces the overall complexity of zoning at the network level.

The Great Australian Bight CMR does not overlap with any native title determinations, applications or IPAs. The CMR is adjacent to the Western Australian Mirning People registered native title claim, the Far West Coast registered native title claim, the Far West Coast Native Title Settlement and Far West Coast Parks ILUAs, and the Yalata IPA.

The change to two SPZs in this reserve that do not permit mining will restrict mining activities above the level of restriction set out in the proclaimed zoning (from 17% to 42% of the CMR). The area covered by these recommended zones does not have a petroleum prospectivity rating.

4.3.9 WESTERN EYRE COMMONWEALTH MARINE RESERVE

Background

The Western Eyre CMR covers approximately 57 946 km^2 and encompasses the continental shelf from offshore of the Nuyts Archipelago south-east to the Investigator group of islands, extending into the deep abyssal zone of the eastern Great Australian Bight to the limit of Australia's EEZ. The reserve is adjacent to SA's Investigator, West Coast Bays and Nuyts Archipelago marine parks. The reserve, established in 2012, includes three zone types: Marine National Park (30%), Special Purpose (42%), and Multiple Use (28%) (Figure 4.3.9.1).

Conservation values represented in the reserve include examples of ecosystems of the Spencer Gulf Shelf Province, the Great Australian Bight Shelf Transition, and the Southern Province bioregions, including the highly diverse benthic invertebrate communities of the Great Australian Bight, meso-scale eddies associated with enhanced productivity and feeding aggregations, and pelagic habitats supporting small pelagic fish species. The reserve includes foraging areas for major breeding colonies of threatened Australian sea lions as well as white sharks, blue whales, sperm whales and migratory short-tailed shearwater and Caspian tern. It also includes seasonal calving habitat for threatened southern right whales. There are two KEFs in the reserve: the ancient coastline at a depth range of 90 m to 120 m; and the Kangaroo Island Pool, canyons and adjacent shelf break, and Eyre Peninsula upwellings. The Kangaroo Island canyons are known for their seasonal upwellings of deep ocean waters that support aggregations of krill, small pelagic fish and squid, which in turn attract marine mammals, sharks, large predatory fish, and seabirds.

The South Australian Rock Lobster and Sardine fisheries and the Commonwealth Gillnet, Hook and Trap Sector of the SESSF are the most significant fisheries operating within or near the reserve. Other key fisheries in the area include the South Australian Marine Scalefish Fishery, the Commonwealth Great Australian Bight Trawl Sector of the SESSF, and the Commonwealth Small Pelagic and Skipjack Tuna fisheries. The high-value South Australian Abalone Fishery also operates in this area, but is mostly confined to state waters. Key abalone fishing grounds that extend into Commonwealth waters, including reefs to the north of the Investigator group of islands, are outside the reserve boundaries.

Petroleum prospectivity within the boundaries of the reserve is moderate to high from the shelf break to the lower parts of the continental slope. The reserve overlaps partially with two offshore petroleum acreage releases.

Issues raised

In addition to the South-west CMR Network issues raised above in Section 4.3, the Western Eyre CMR was canvassed in detail in several submissions, as well as in meetings with stakeholders. Issues raised included:

- Potential for oil and gas industry developments—specifically, excluding oil and gas from reserves
- Complementarity of state and Commonwealth protection—specifically, the Pearson Island group
- Loss of access for commercial fisheries, including commercial purse seining (sardines and tuna) and trapping (rock lobster).

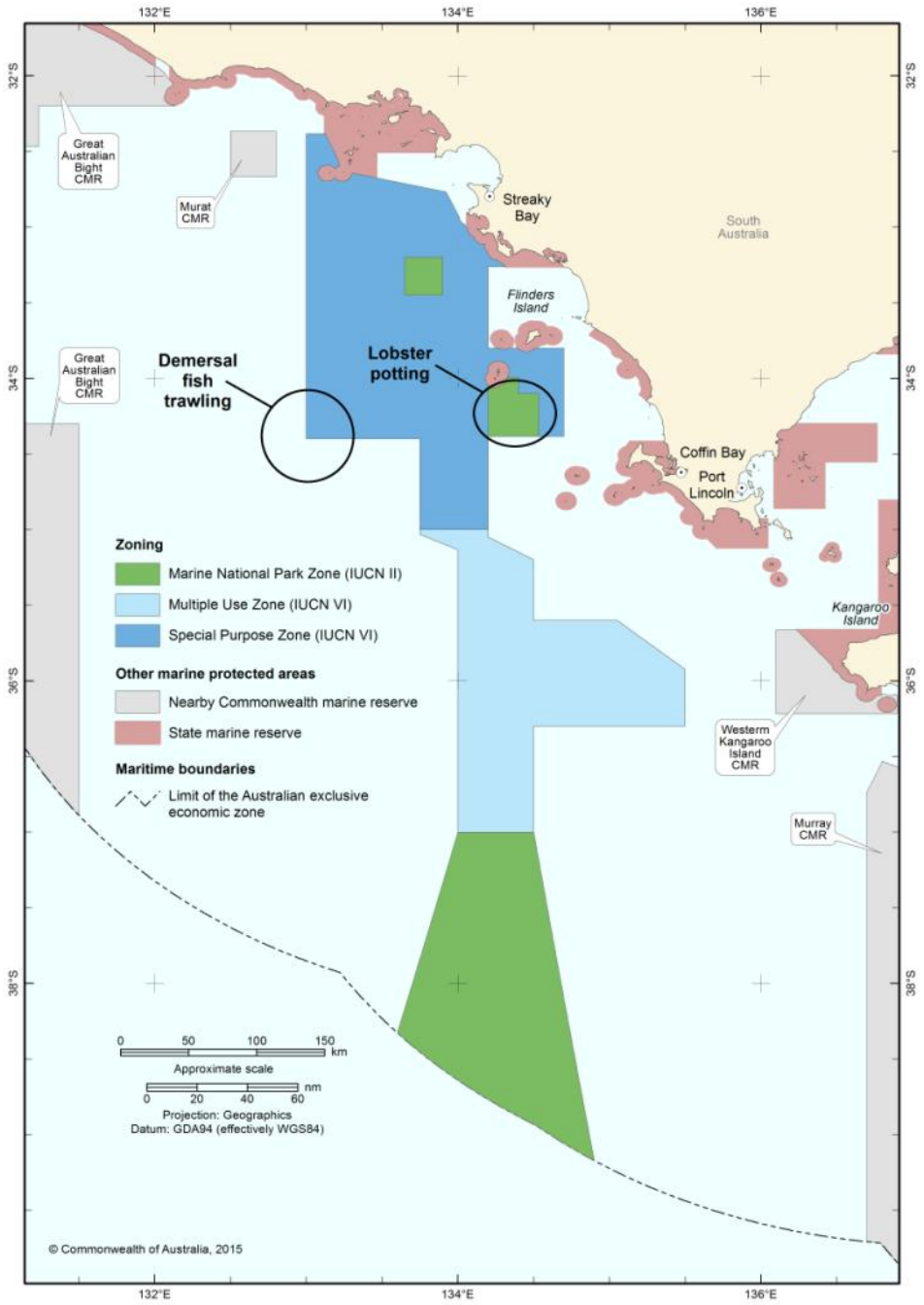

Figure 4.3.9.1 Western Eyre CMR as proclaimed, showing key issues and drivers for change identified during the CMR Review

Areas of contention

The Regional Panel determined that loss of access by established commercial fisheries was an area of contention.

Sardine fishery

The Regional Panel noted the concerns relating to the accidental drift of a sardine vessel into an MNPZ during the pumping of a catch. It was of the opinion that this was a management issue and not one of zoning.

Southern Bluefin Tuna Fishery

The Regional Panel noted that there was considerable variability in the distribution of southern bluefin tuna and that there would be occasions when these fish may be found in reserves. Concerns were also noted about the possible impact of oil and gas exploration

and drilling on tuna behaviour but the BAP did not believe that this could be addressed through zoning.

Great Australian Bight Trawl Fishery
The Regional Panel noted that a small corner of the CMR that was currently subject to trawling along a depth contour would create operational difficulties for the sector if trawling was excluded.

South Australian Rock Lobster Fishery
The Regional Panel noted concerns that the MNPZ south of Pearson Island had an impact on the southern rock lobster fishery in the area, but acknowledged the long history of negotiation that had led to the configuration of zones in the proclaimed reserve. Several alternatives to the existing MNPZ were tested but none proved to be an improvement on the existing arrangements.

Recommendation
The recommendation for the Western Eyre CMR is to create a small new SPZ 'A' where demersal trawling is permitted in the south-west corner of the existing SPZ.

This change is shown in Figure 4.3.9.2 and summarised in Table 4.3.9.1.

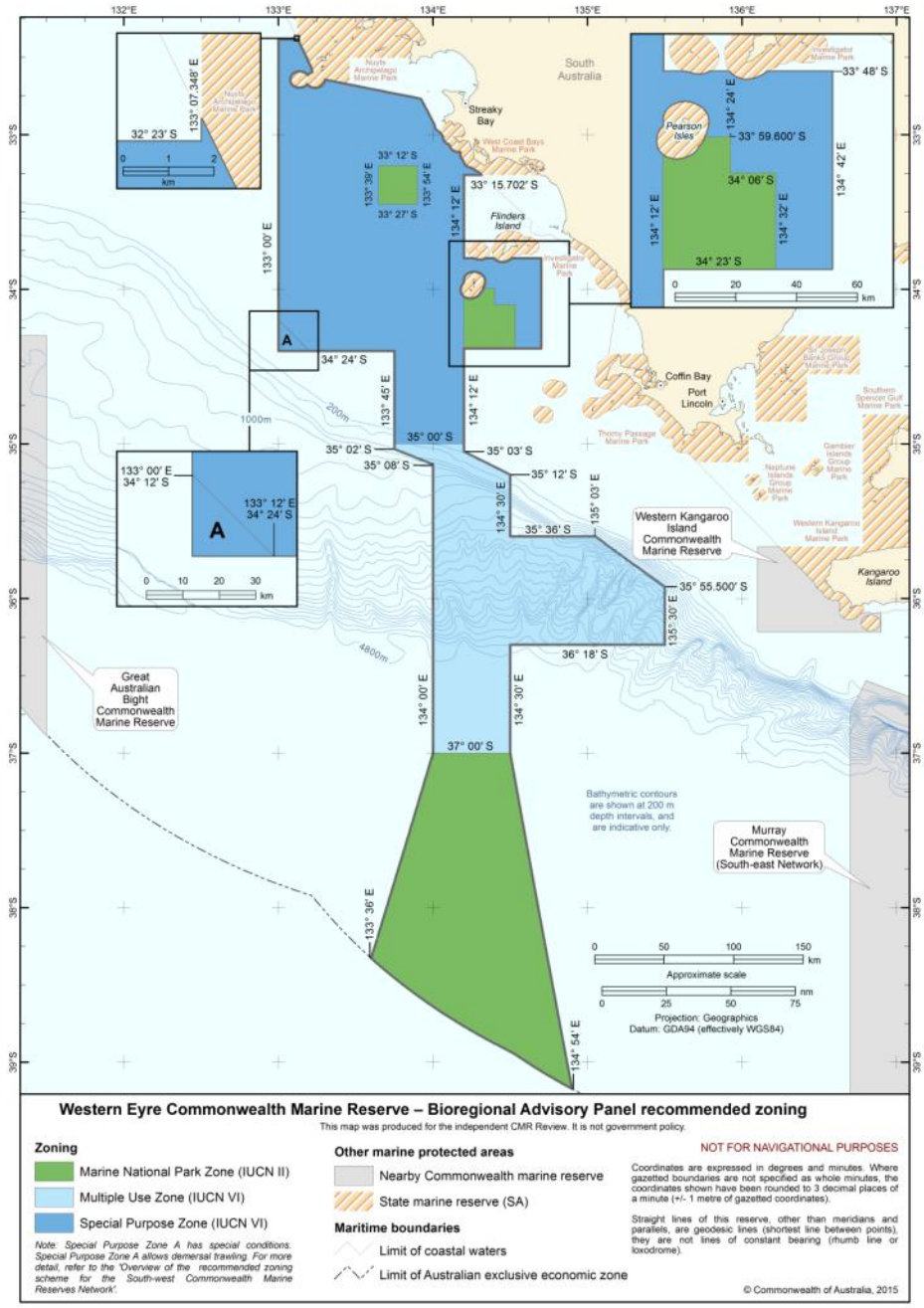

Figure 4.3.9.2 Recommended zoning for Western Eyre CMR

Table 4.3.9.1 indicates how the areas under different zone types (within the outer boundaries of the reserve) will change with the recommended zoning. The amendment to the zoning was so slight as to have no material impact on the zones.

Table 4.3.9.1 Comparison of areas of zone types between proclaimed and recommended zoning for Western Eyre CMR

Zone	Proclaimed		Recommended		Difference	
	Area (km^2)	% of CMR	Area (km^2)	% of CMR	Area (km^2)	% of CMR
MNP (IUCN II)	17 439	30.10%	17 439	30.10%	Nil	Nil
MUZ (IUCN VI)	16 107	27.80%	16 107	27.80%	Nil	Nil
SPZ (IUCN VI)	24 400	42.11%	24 196	41.76%	–204	–0.35%
SPZ A (IUCN VI)	Nil	Nil	204	0.35%	+204	+0.35%
Total	57 946	100%	57 946	100%		

Note: All figures are rounded to the nearest km^2 (and therefore in some instances can appear to not add up to the totals supplied). No changes have been made to the outer boundaries and total area of the reserves. Percentages are calculated based on the rounded figures.

Outcomes

The recommended zoning change for Western Eyre CMR will not change the number or type of conservation features represented in MNPZ or HPZ in the South-west CMR Network.

This will not change the level of access for recreational or charter fishers and will result in the same amount of impact on commercial catch from the reserve as would have been the case with the proclaimed zoning boundaries. Two SA managed fisheries and three Commonwealth fisheries will remain displaced by the recommended zoning of the reserve to some degree. However, allowing access for trawling in a small portion of the SPZ slightly reduces the potential displacement of the Commonwealth Great Australian Bight Trawl Sector of the SESSF. The reduction of impacts on this sector will be mainly due to improved operational efficiency.

The recommended zoning for Western Eyre CMR introduces a small area of SPZ 'A' specifically designed to increase the practicality of the zoning of the reserve, allowing commercial trawl operators to fish along the depth gradient. The use of only one type of SPZ across the network, with specific rules implemented in the area marked 'A' in Western Eyre CMR reduces the overall complexity of zoning at the network level. There are no other recommended changes to the zoning in this reserve.

The Western Eyre CMR does not overlap with any native title determinations, applications or IPAs. The reserve is adjacent to the Far West Coast registered native title claim, the Far West Coast Native Title Settlement and Far West Coast Parks ILUAs, and the Wirangu No. 2 and Nauo registered native title claims.