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Appendix A: Policy context for identifying Commonwealth marine reserves

In 1991 the Australian Government initiated a long-term marine conservation program to ensure the conservation and sustainable use of Australia's marine and estuarine environments. A key component of this initiative was a commitment to expand Australia's existing marine reserve system through the establishment of a national system of MPAs.

Convention on Biological Diversity (1992–1993)

The Australian Government provided signature and ratification of the CBD at the United Nations Conference on Environment and Development (Rio Earth Summit). This convention was developed by working groups of the United Nations Environment Programme in recognition of the need for global action on conserving biological diversity. This was an important first step in working towards the creation of Commonwealth MPAs.

Signature and ratification of the CBD was the first major step in a long journey to developing a network of marine reserves in Australian waters. The subsequent key policy commitments that show the history of marine reserve policy development are:

- Australia's Intergovernmental Agreement on the Environment (1992)
- Jakarta Mandate on the Conservation and Sustainable Use of Marine and Coastal Biological Diversity (1995) (the Jakarta Mandate)
- National Strategy for the Conservation of Australia's Biological Diversity (1996)
- Australian and New Zealand Environment and Conservation Council Guidelines for Establishing the National Representative System of Marine Protected Areas (1998) (the ANZECC Guidelines)
- Australia's Oceans Policy (1998)
- Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)
- World Summit on Sustainable Development (2002)
- Goals and Principles for the Establishment of the National Representative System of Marine Protected Areas in Commonwealth Waters (2007) (see Appendix B)
- Australia's Biodiversity Conservation Strategy 2010–2030
- 40 new marine reserves declared in Commonwealth waters (2012)
- Commonwealth Marine Reserves Review (2013).

Australia's Intergovernmental Agreement on the Environment (1992)

The Intergovernmental Agreement on the Environment was made between the Commonwealth, state, territory and local governments to facilitate a cooperative national approach to management of the environment. The parties agreed that a representative system of protected areas encompassing terrestrial, estuarine and marine environments is a significant component in maintaining ecological processes and systems (Schedule 9, item 13).

Jakarta Mandate (1995)

Marine and coastal biological diversity was identified as a priority at the first Conference of Parties to the CBD in 1994. The Jakarta Mandate was presented as the global consensus on marine and coastal biological diversity at the second Conference of Parties in Indonesia in 1995. Key objectives for conservation of marine and coastal biological diversity presented in the Jakarta Mandate were:

- Integrated marine and coastal area management
- Sustainable management of marine and coastal living resources
- Effective marine and coastal protected areas

- Development and management of mariculture
- Prevention of incursions of invasive species.

National Strategy for the Conservation of Australia's Biological Diversity (1996)
The 1996 National Strategy for the Conservation of Australia's Biological Diversity was developed and agreed by Commonwealth, state and territory governments to meet commitments made under the CBD and the Intergovernmental Agreement on the Environment. The strategy recognised that the marine and estuarine MPA system in particular was inadequate to maintain biological diversity. The strategy recommended expansion of marine parks and reserves to encompass representative examples of Australia's marine environments. Action 1.4.1 of the strategy commits to undertake a program that ensures that the Commonwealth, state and territory terrestrial and MPA systems are comprehensive, adequate and representative.

Australian and New Zealand Environment and Conservation Council Guidelines for Establishing the National Representative System of Marine Protected Areas (1998)
The ANZECC Task Force on Marine Protected Areas prepared the Guidelines for Establishing the National Representative System of Marine Protected Areas (NRSMPA) to assist government agencies in the development of the NRSMPA and to assist stakeholders in understanding the process. They set out high-level criteria to identify and select MPAs. The primary goal of the NRSMPA was 'to establish and manage a CAR 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'.

The ANZECC Guidelines include the CAR principles:
- Comprehensiveness: the NRSMPA will include the full range of ecosystems recognised at an appropriate scale within and across each bioregion
- Adequacy: the NRSMPA will have the required level of reservation to ensure the ecological viability and integrity of populations, species and communities
- Representativeness: areas that are selected for inclusion in MPAs should reasonably reflect the biotic diversity of the marine ecosystems from which they derive.

They outline additional principles for the development of the NRSMPA, including a regional framework, the inclusion of highly protected areas (IUCN I and II in each bioregion), use of the precautionary principle, appropriate consultation (to address social, economic and cultural issues), Indigenous involvement (to recognise and incorporate interests of Indigenous peoples), and principles relating to decision-making (to integrate long- and short-term environmental, economic, social and equity considerations).

Australia's Oceans Policy (1998)
A comprehensive policy for ecosystem-based marine and coastal management was released in 1998 (Australia's Oceans Policy), which integrated regional marine planning with the development of the NRSMPA.

Australia's Oceans Policy sets out the framework for the implementation of integrated marine planning and management. The policy included a three-year, $50 million programme for the commencement of regional marine planning, including identifying current and emerging threats to ecosystem health and developing management strategies and frameworks to address them. A key component of the policy was to accelerate

development of the NRSMPA, including development of new MPAs and improved management of existing ones.

Environment Protection and Biodiversity Conservation Act 1999
The EPBC Act is the Australian Government's key piece of environmental legislation. It enables the Australian Government to join with the states and territories in providing a national scheme of environment and heritage protection and of biodiversity conservation.

The EPBC Act is the principal regulatory tool for managing marine environmental issues and provides a framework for the management of matters of national environmental significance in the entire Australian marine environment.

The primary provisions of the EPBC Act in marine matters relate to marine bioregional planning, protected and listed species and ecological communities, key threatening processes, World Heritage and, in the Commonwealth marine area, mitigation of marine impacts. The EPBC Act provides for Commonwealth reserves to be established and managed and includes statutory consultation requirements for all stages of reserve and management plan development. It gives effect to a range of domestic and international policy commitments relating to marine reserves.

World Summit on Sustainable Development (2002)
The 2002 United Nations World Summit on Sustainable Development focused on developing action plans for meeting commitments made at the 1992 Rio Earth Summit. Australia promoted its Oceans Policy (1998) as an effective framework for meeting the Jakarta Mandate. Australia also committed to establish a national marine reserve network by 2012.

Appendix B: Goals and Principles for the Establishment of the National Representative System of Marine Protected Areas in Commonwealth Waters

The Goals

Four goals to maximise conservation outcomes are guiding the identification of areas suitable for inclusion in the NRSMPA. These goals apply nationally, and they guide identification of representative marine reserves in all the marine regions (except the South-east Marine Region, where the process has been completed). Additionally, a number of supporting principles are assisting in determining the location, selection (when more than one option to meet the goals is available), design and zoning of suitable areas.

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

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

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

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

Guiding Principles

Location

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

1. Marine reserves will be located taking into account the occurrence and location of existing spatial management arrangements (for example, existing protected areas and sectoral measures) that contribute to the goals.

2. The goals should be met with the least number of separate marine reserves (that is, a smaller number of larger marine reserves rather than many small marine reserves) to maximise conservation outcomes.

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 Marine Protected Areas.

3. The capacity of a marine reserve to mitigate identified threats to conservation values.

4. The occurrence of spatially defined habitats for and/or aggregations of threatened and/or migratory species.

5. The occurrence of ecologically important pelagic features which have a consistent and definable spatial distribution.

6. The occurrence of known small-scale (tens of kilometres) ecosystems associated with the benthic/demersal environment.

7. Relevant available information about small-scale distribution of sediment types and sizes and other geo-oceanographic variables.

8. Occurrence of listed heritage sites (where inclusion in the marine reserve network would improve administration of protection regimes).

9. Socio-economic costs should be minimised.

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

10. Individual areas should, as far as practicable, include continuous depth transects (for example, from the shelf to the abyss).

11. Whole seafloor features (such as geomorphic features) should be included.

12. Features should be replicated wherever possible within the system of marine reserves (that is, included more than once).

13. Size and shape should be orientated to account for inclusion of connectivity corridors and biological dispersal patterns within and across marine reserves.

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

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

16. The size and shape of each area should be set to minimise socio-economic costs.

For each area identified as a candidate marine reserve, 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). To accommodate climate change as far as practicable, design principles and zoning that promote resilience and adaptation will be incorporated. In particular, accommodating latitudinal or longitudinal movement in ecosystem or species distributions and changes in oceanographic features and currents, anticipated in response to climate change.

Zoning
Because zoning of marine reserves (that is, the allocation of appropriate management regimes to different areas) has the potential to affect the socio-economic costs associated with the establishment of any marine reserve, 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 marine reserves:

17. Zoning will be based on the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)/the World Conservation Union (IUCN) categories of protection.
18. The regional marine reserve network will aim to include some highly protected areas (IUCN Categories I and II) in each provincial bioregion.
19. Zoning will be based on the consideration of the threat that specific activities pose to the conservation objectives of each marine reserve.
20. Zoning of marine reserves will seek to ensure that the conservation objectives of the area are protected, taking into account a precautionary approach to threats as well as the relative costs and benefits (economic, social and environmental) of different zoning arrangements.

Appendix C: Terms of reference for the review

Context
The Coalition Government committed to establish a national representative system of marine protected areas in 1998, and confirmed that commitment at the 2002 World Summit for Sustainable Development.

A key milestone towards the national representative system was the 2007 proclamation of the South-east network of Commonwealth Marine Reserves. In November 2012, forty new Commonwealth marine reserves were proclaimed in the South-west, North-west, North, Temperate East and Coral Sea marine regions, completing the Australian Government's contribution to Australia's national system of marine protected areas.

Commonwealth marine reserves are proclaimed and managed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), which requires that statutory management plans be developed and implemented by the Director of National Parks.

To fulfil its commitment, in December 2013 the Government set aside the management plans for the reserves in the South-west, North-west, North, Temperate East and Coral Sea marine regions. New management plans will be developed following a review to ensure that management arrangements reflect appropriate consultation with stakeholders and are informed by the best available science.

As stated in the Government's policy for a *More Competitive and Sustainable Fisheries Sector* an expert marine panel will be appointed to review the science supporting the boundary area for each zone. This process will reconsider proposed zoning boundaries in consultation with stakeholders. The review will restore confidence in the process by bringing genuine consultation.

Scope and process of the Review
The review will comprise two interrelated streams:

- An Expert Scientific Panel of five members including a Chair will review the science supporting the current marine reserves.
- Bioregional Advisory Panels of three members for each marine region covered by the review, with two co-chairs working across all panels, will facilitate enhanced consultation with stakeholders on marine reserves.

Terms of reference for these panels are described below.

The panels will operate and report separately, but will share information to ensure that review outcomes collectively reflect robust consideration of scientific, economic and social evidence. To facilitate this, the co-chairs of the Bioregional Advisory Panels will also participate as members of the Expert Science Panel.

Both components of the review will be conducted with regard for the *Goals and Principles for the Establishment of the National Representative System of Marine Protected Areas in Commonwealth Waters* (the Goals and Principles) and the legislation and regulations for the development of management plans and managing activities within Commonwealth reserves.

The review will only consider the reserves proclaimed in November 2012: that is, those reserves in the South-west; North-west, North, Temperate East and Coral Sea marine regions.

Secretariat support will be provided to the panels by the Department of the Environment. The Department will also facilitate the involvement of other relevant Australian Government departments in the review process, including the Department of Agriculture.

The panels will report to the Government within six months of the first meeting of the panels, unless extended by the Minister for the Environment. The reports will be transmitted to the Government via the Minister for the Environment. The panel chairs are responsible for transmitting the reports of the panels.

The reports of the Expert Scientific Panel and the Bioregional Advisory Panels will be made publicly available.

The Government's response to the reports will inform the development of new management plans for the marine reserves. Further public consultation on the development of new marine reserve management plans will be undertaken in accordance with the EPBC Act.

Terms of reference for the Expert Scientific Panel

The Expert Scientific Panel will advise the government on the science underpinning the Commonwealth marine reserves including proposed zoning boundaries and allowed uses. The Expert Scientific Panel will review the risk assessments that supported zoning, and zoning boundary, considerations and other scientific information related to zoning decisions for individual networks or reserves. Based on this review, the Expert Scientific Panel will advise on:

- options for zoning, and zoning boundaries, and allowed uses consistent with the Goals and Principles
- future priorities for scientific research and monitoring relating to marine biodiversity within the marine reserves, especially any relating to the understanding of threats to marine biodiversity within the marine reserves.
- options for addressing, the most significant information gaps hindering robust, evidence-based decision-making for the management of the marine reserves.

The Expert Scientific Panel will produce a single report addressing these issues. The report will be separate to the report of the co-chairs of the Bioregional Advisory Panels.

<u>Membership</u>

The Expert Scientific Panel will consist of five members selected through agreement between the Minister for the Environment and the Parliamentary Secretary to the Minister for Agriculture. Two of these members are also the co-chairs of the Bioregional Advisory Panels, in order to facilitate sharing of information across the review panels.

Terms of reference for the Bioregional Advisory Panels

Bioregional Advisory Panels will be appointed for the South-west; North-west, North, Temperate East and Coral Sea marine regions. These panels will share two co-chairs, who will oversee the work of all of the panels and will consult with peak bodies for all relevant sectors. These co-chairs are also members of the Expert Scientific Panel. All Bioregional Advisory Panels will consult across sectors including: industry, recreational users,

community groups, tourism, Indigenous communities, environmental interest groups and other parties as appropriate.

The Bioregional Advisory Panels will then provide the government with:

- Advice on areas of contention with the marine reserves
- Advice on options for zoning boundaries to address those areas of contention
- recommendations for improving the inclusion of social and economic considerations into decision-making for marine reserves, with particular regard for their management
- Suggestions for ongoing engagement of regional stakeholders.

The Bioregional Advisory Panels will also report, or provide advice on, any information received through the consultation process they feel may influence, contribute to or improve the drafting of future management plans.

The co-chairs of the Bioregional Advisory Panels will produce a single report addressing these issues and reflecting the inputs of all of the panels. The report will be separate to the report of the Expert Scientific Panel.

Manner of consultation

The Panels will consider views of interested parties provided through a range of mechanisms that may include:

- Regional meetings with key stakeholders or stakeholder organisations
- Meetings with peak organisations representing relevant business and not-for-profit sectors and with relevant government agencies
- Online survey
- Other written representations.

Membership

The co-chairs of the Bioregional Advisory Panels have been selected based on their capacity to facilitate input into marine reserves planning from the full range of stakeholders, and based on agreement between the Minister for the Environment and the Parliamentary Secretary to the Minister for Agriculture.

The Bioregional Advisory Panels will consist of three members for each region. Members have been selected for their capacity to facilitate input from a broad range of stakeholders.

Appendix D: Bioregional Advisory Panel membership, conduct of meetings and handling of conflicts of interest

Co-Chairs

Professor Colin Buxton

- Adjunct Professor and retired Director (2010-2013), the Institute for Marine and Antarctic Studies, University of Tasmania
- Director and Professor, Tasmanian Aquaculture and Fisheries Institute, University of Tasmania (1998–2010)
- Independent Scientific Audit of Marine Parks in New South Wales (2011)
- Member of the IUCN Species Survival Committee

Mr Peter Cochrane

- Australian Government Ambassador for the IUCN World Parks Congress 2014
- Adjunct Fellow, the Australian National University Fenner School of Environment and Society
- Director of National Parks, Australian Government (1999–2013)
- Member of the Executive Committee IUCN World Commission on Protected Areas

North Bioregional Advisory Panel

Mrs Katherine Winchester

- Chief Executive Officer, Northern Territory Seafood Council Incorporated
- Member and past treasurer, National Seafood Industry Alliance
- Selection Panel, Fisheries Research and Development Corporation Board (2012)

Mr Peter Cox

- Project Officer and Past President, Nhulunbuy Regional Sports Fishing Club Inc.
- Vice President, Northern Territory Game Fishing Association Inc.
- Past NT Executive Officer, Game Fishing Association of Australia

Mr Joe Morrison (until May 2015)

- Chief Executive Officer, Northern Land Council
- Chief Executive Officer, North Australian Indigenous Land and Sea Management Alliance (2001–2013)
- Former member, Australian Government's Indigenous Advisory Committee on the EPBC Act

North-west Bioregional Advisory Panel

Mr Brett McCallum

- Deputy Chair, Fisheries Research and Development Corporation
- Executive Officer, Pearl Producers Association (2001–2014)
- Board Member, National Aquaculture Council (2006–2011)

Dr Andrew Rowland

- Chief Executive Officer, Recfishwest
- Member, Advisory Panel on the Western Australian Government's Marine Stewardship Council
- Member, Fisheries Research and Development Corporation's Western Australian Fisheries Research Advisory Body

Associate Professor Stephan Schnierer

- Associate Professor, School of Environment, Science and Engineering, Southern Cross University
- Member, New South Wales Ministerial Fisheries Advisory Council
- Member, Fisheries Indigenous Reference Group (Fisheries Research and Development Corporation)

South-west Bioregional Advisory Panel

Mr Clayton Nelson

- Director and Vice Chair, Western Australian Fishing Industry Council
- General Manager Fishing, MG Kailis
- Adviser to federal Minister for Fisheries, Northern Prawn Fishery Management Advisory Committee (2006–2007)

Dr Andrew Rowland

- Chief Executive Officer, Recfishwest
- Member, Advisory Panel for Western Australian Government's Marine Stewardship Council
- Member, Fisheries Research and Development Corporation's Western Australian Fisheries Research Advisory Body

Ms Sue Middleton

- Chair, Western Australian Regional Development Trust
- Commissioner, Agricultural Produce Commission
- Rural and Regional Representative, Council of Australian Governments Reform Council

Temperate East Bioregional Advisory Panel

Mr Simon Boag

- Director (Vice Chairman), Commonwealth Fisheries Association
- Member, Victorian Fisheries Advisory Council
- Executive Officer, South East Trawl Fishing Industry Association (2009–2014)

Mr Stelios (Stan) Konstantaras

- President, Australian National Sportfishing Association (ANSA) NSW Branch
- Foundation member, Recreational Fishing Alliance of NSW Inc.
- President, South Sydney Amateur Fishing Association

Professor William Gladstone

- Head of School, School of the Environment, University of Technology, Sydney
- Director, Centre for Sustainable Use of Coasts and Catchments, University of Newcastle (2002–2009)
- Board member, Sydney Institute of Marine Science

Coral Sea Bioregional Advisory Panel

Mr Neville Rockliff

- Board member, Petuna Aquaculture
- Owner and Managing Director, Ceas Pty Ltd
- Managing Director, Rockliff Seafoods

Mrs Judy Lynne

- Executive Officer, Sunfish Queensland Inc.
- Director, Australian Recreational Fishing Foundation (2012–2014)
- Member, Great Barrier Reef Marine Park Authority Tourism and Recreation Reef Advisory Committee (2008–2014)

Mrs Larissa Hale

- Executive Director, Yuku Baja Muliku Landowners and Reserves Limited
- Working on Country Coordinator, Balkanu Cape York Business Development
- Coordinator, Yuku Baja Muliku Indigenous Land and Sea Ranger Program

Conduct of meetings

BAP members participated in the panel meetings as outlined in Table D1.

Table D1 BAP meeting dates and locations

BAP	Meeting	Date	Location
All (combined)	BAP meeting 1	5-6 November 2014	Sydney
Coral Sea	BAP meeting 1	9 December 2014	Brisbane
South-west/ North-west	BAP meeting 2	12 December 2014	Teleconference
Temperate East	BAP meeting 2	12 December 2014	Teleconference
Temperate East	Regional consultation approach	23 January 2015	Teleconference
Coral Sea	Regional consultation approach	23 January 2015	Teleconference
North	BAP meetings 1 and 2	7 February 2015	Darwin
North-west	BAP meeting 3	28–29 April 2015	Fremantle
South-west	BAP meeting 3	30 April – 1 May 2015	Fremantle
Temperate East	BAP meeting 3	3–4 May 2015	Melbourne
North	BAP meeting 3	11–12 May 2015	Cairns
Coral Sea	BAP meeting 3	13–14 May 2015	Cairns
All (combined)	BAP meeting 4	19 July 2015	Sydney

Handling of conflicts of interest

Committees and panels appointed by the Australian Government are required to establish and maintain an interest register and appropriately manage conflicts of interest. Members of the panels were selected for their capacity to facilitate input from a broad range of stakeholders and were not selected to represent any particular sector(s).

At the commencement of the CMR Review, procedures were established to capture and manage any actual, perceived or potential conflict of interest. As part of the formal appointment process, each panel member was required to complete a declaration of interest and was required to review and, if necessary, update their declared interests, considering any changes to their circumstances and the scope of the panels' work at each meeting. An interest register was established and maintained throughout the review.

The co-Chairs were responsible for managing any conflicts of interest throughout the review. In accordance with the conflict of interest guidance, the co-Chairs requested panel members to declare any interests at the start of each meeting. Panel members also had a responsibility to speak with each other if they perceived a conflict of interest that someone had not recognised and/or disclosed, and to advise the panel member of this perception. The co-Chairs have considered all declarations and decided on the appropriate course of action. Management of conflicts of interest included restriction or exclusion from the meeting at the discretion of the Chairs when considered to be necessary and appropriate.

Appendix E: Consultation streams—online survey, written submissions and stakeholder meetings

To facilitate feedback from a broad range of stakeholders, the CMR Review provided three consultation streams to support stakeholders 'joining the conservation'. Stakeholders were encouraged to use any or all three methods:

1—An online survey primarily designed to quickly capture participants' views on the areas of contention about the marine reserves network.

2—Written submissions to allow stakeholders the opportunity to provide a detailed written submission for the BAP's consideration.

3—Face-to-face stakeholder meetings designed to foster detailed discussions on reserve design and identify areas of contention.

An overview of each of the three approaches is provided below.

1) Online survey

Overview

The co-Chairs of the BAP invited interested parties to complete the online survey to provide ideas and suggestions on how marine reserves should be managed into the future. The online survey was open for approximately four months from 19 December 2014 to 31 March 2015. During this time 1 859 responses were received.

The online survey was a key consultation tool to enable all stakeholders to provide targeted feedback to the panels in a quick and efficient manner.

Online survey questions

Question 1a	'Which Commonwealth marine reserve(s) are you interested in? You can choose multiple reserves, all of the reserves or entire networks.'
Question 1b	'For each reserve or network that you are interested in, do you support the existing zoning? What are the main issues you would like to see addressed?'
Question 1c	'What do you think is important about marine reserves? Please indicate how important each of the following are to you: …'
Question 2a	'What do you think are the major issues impacting biodiversity in Commonwealth marine reserves? You can select as many issues as you like.'
Question 2b	'Of the above, which three do you see as the most critical issues? Please rank (from 1 to 3) the 3 most critical issues [1 being the most critical].'
Question 3	'Which management activities do you think should be the highest priority for the Government within Commonwealth marine reserves? Please rank three in order from highest to lowest priority [1 being the highest priority].'
Question 4	'How do you think the Commonwealth marine reserves will affect you (positively or negatively)? Please provide a brief explanation.'
Question 5	'What is your preferred communication method about the ongoing management of Commonwealth marine reserves?'

Question 6	'Which topics would you like to get updates on?'
Question 7	'How often would you like to get information about the ongoing management of the marine reserves?'
Question 8a	'How frequently do you visit a Commonwealth marine reserve(s)?'
Question 8b	'What was the purpose for visiting the reserve(s)? You can select more than one purpose.'
Question 8c	'What is your gender?'
Question 8d	'Do you wish to identify yourself as an Aboriginal or Torres Strait Islander?'
Question 8e	'What is your country of residence?'
Question 8f	'What is your postcode?'
Question 8g	'What is your age?'
Question 8h	'Are you responding on behalf of a group, business or organisation? If yes, who are you responding on behalf of?'

Who provided feedback through the survey?

The demographic questions in the survey allowed survey participants to provide information such as their location, age and gender. The majority of survey responses (95%) were submitted by participants living in Australia, aged 50 years or older (60%). Responses were equally submitted by males and females.

A small number (5%) of the responses received were on behalf of groups, businesses or organisations. These included recreational fishing organisations, commercial fishing companies, scientific or research organisations, and environmental organisations.

A summary of the feedback obtained through the online survey is provided in Appendix F.

2) Written submissions

Overview

Written submissions opened for approximately five months from 28 November 2014 to 31 March 2015.

The CMR Review received 13 124 written submissions, of which 13 096 were submitted via email and 28 through the post.

Who provided feedback?

Submissions were received from a wide variety of stakeholders. The vast majority (12 906 or 98%) were from individuals. The remainder (218 or 2%) were from organisations, including businesses, clubs, representative associations, local or state government agencies and industry bodies, across a range of sectors.

A full list of the names of submitters and their submissions are available on the CMR Review website.

Nature of submissions received

The CMR Review received a number of very detailed submissions that provided valuable information to assist the Regional Panels in their deliberation on the areas of contention. These submissions were received from individuals, organisations, businesses and groups or alliances of organisations. The submissions not only identified areas of contention but also provided reasonable, justifiable solutions to identified problems, alternative options for allowable activities, zoning etc. including the provision of maps and/or geospatial coordinates.

A significant number of submissions (approximately 12 000) utilised talking points and feedback mechanisms provided on various websites.

One email campaign submission—containing identical information from 120 respondents—was received from the Billfish Foundation. The 120 responses were considered as one submission, in line with the instructions provided at the opening of the submissions period.

Of the 13 124 submissions received, approximately 69% did not provide feedback on issues within the terms of reference for the review. An additional 6% did not contain any content other than a salutation ('Dear Review panels' etc.) and closing statement ('Yours sincerely' etc.).

3) Stakeholder meetings

The Regional Panels met with individuals, members and representatives of conservation councils, Indigenous groups and traditional owners, tourism authorities, fishing clubs, local governments, shipping associations and port authorities, oil and gas companies and associations, commercial fishers and their representative organisations, national parks associations, conservation groups, game fishing associations, charter operators, researchers, natural resource management groups and state and territory governments.

There were 265 meetings, forums and teleconferences held around the country between February and August 2015.

The first round of consultation was held between February and May 2015 across 15 locations. Stakeholders were asked to identify areas of contention and suggest changes to zoning boundaries and management arrangements. Table E1 summarises the meetings held during the first round of consultation.

Table E1 Number of first-round meetings and participants

Region(s)	Individual meetings	Individual meeting attendees	Multi-sector/ national forums	Multi-sector/ national forum attendees
Coral Sea	40	62	2	42
Coral Sea/North *	3	12		
North	25	43		
North/North-west *	1	1	1	18
North-west	23	34	1	11
South-west	32	65	1	13
South-west/North-west *	9	26	1	25

Temperate East	33	44	2	23
Temperate East/Coral Sea *	2	3		
National	5	14	2	21
Total	**173**	**304**	**10**	**153**

* Some meetings were conducted with panel members from two Regional Panels where the stakeholder or issue was relevant to both regions.

Following evaluation of all input received, options were developed and a second round of consultation was held between July and August 2015 across 11 locations. Table E2 summarises the meetings held for the option-testing consultations.

Table E2 Numbers of option-testing meetings and participants

Region(s)	Option-testing meetings	Option-testing meeting attendees
Coral Sea	15	49
North	13	27
North-west	15	25
South-west	15	46
South-west/North-west *	4	14
Temperate East	9	26
Temperate East/Coral Sea *	2	14
National	9	25
Total	**82**	**226**

* Some meetings were conducted with panel members from two Regional Panels where the stakeholder or issue was relevant to both regions.

Meeting dates and locations and participant numbers for the consultations undertaken in the Temperate East, South-west, North-west, North and Coral Sea regions and those meeting at a national level are summarised in Tables E3 to E8.

Invitations were also extended to national representatives from the commercial fishing, recreational and game fishing, oil and gas, ports, shipping and tourism sectors; the science community; ENGOs; and Indigenous communities. Table E8 summarises the sectoral representation and participants.

Table E3 Temperate East regional consultation

Total meetings	Total meeting attendees
48	110
Location	**Dates**
Ulladulla	13 February
Sydney	16–17 February, 23 July
Port Stephens	18–19 February, 24 July
Multi-sector forums	
Sydney	16 February
Port Stephens	19 February

Participants	Organisation/business	Sector
Rocky Legana	Bermagui Fishermen's Co-operative	Commercial fishing
Tony Lavelle		Commercial fishing
Rocky Pirello		Commercial fishing
Angelo Maiorana		Commercial fishing
Tricia Beatty	Professional Fishermens Association	Commercial fishing
Mark Boulter	Sydney Fish Market	Commercial fishing
Gus Dannoun	Sydney Fish Market	Commercial fishing
Tony Muollo	Trans Tasman Fisheries	Commercial fishing
Mike Rowley	Fortuna Seafoods	Commercial fishing
Joe Rowley	Fortuna Seafoods	Commercial fishing
John Skoljarev		Commercial fishing
John Skoljarev Snr		Commercial fishing
Les Scott	Australian Longline Pty Ltd	Commercial fishing
Darren Ward		Commercial fishing
Leo Lukin		Commercial fishing
Ross Fidden	Commercial Fishermen's Co-operative (Newcastle)	Commercial fishing
Robert Guata	Commercial Fishermen's Co-operative (Newcastle)	Commercial fishing
Greg Parker		Commercial fishing
Noel Gogerly	Wallis Lake Fishermen's Co-operative	Commercial fishing
David Shannon	Fremantle Tuna	Commercial fishing
Gary Heilmann	De Bretts Seafood Pty Ltd	Commercial fishing
Brett Taylor	4 Seas Pty Ltd	Commercial fishing
Adam Whan	Whan & Boxall Pty Ltd	Commercial fishing
Pavo Walker	Walker Seafoods Australia	Commercial fishing
Miro Mislov		Commercial fishing
Elio Mislov		Commercial fishing
Denis Brown	NSW Seafood Industry Council	Commercial fishing
Phil Ward		Commercial fishing
Paul Williams	P&M Williams Enterprises	Commercial fishing
Michael Williams	P&M Williams Enterprises	Commercial fishing
Jeff Moore	Commonwealth Fisheries Association	Commercial fishing
Danny Stewart		Commercial fishing
Cathal Farrell	Upscale Seafoods	Commercial fishing
Frank Pirello		Commercial fishing
Grahame Turk	National Seafood Industry Alliance	Commercial fishing
Bill Barker	Nature Coast Marine Group	Conservation
Pia Winberg	Venus Shell Systems	Conservation
Alexia Wellbelove	Humane Society International	Conservation
Suzanne Milthorpe	Nature Conservation Council of NSW	Conservation
Daisy Baram	Nature Conservation Council of NSW	Conservation
Gary Shoer	National Parks Association of NSW	Conservation
Megan Kessler	NSW Environmental Defenders Office	Conservation
Rachel Walmsley	NSW Environmental Defenders Office	Conservation
Charlotte Richardson	The Wilderness Society	Conservation
Alice Forest	The Wilderness Society	Conservation
Jack Albert	Surfrider Foundation	Conservation
Bruce Pease	EcoNetwork Port Stephens	Conservation
Darrell Dawson	EcoNetwork Port Stephens	Conservation

Elizabeth Edmonds	Australian Ocean Institute	Conservation
Chris Smyth	Australian Ocean Institute	Conservation
Ron Ward	Norfolk Island Government	Government
Robin McKenzie	Norfolk Island Government	Government
Lisle Snell MLA	Norfolk Island Government	Government
Rodney James	NSW Department of Primary Industries	Government
Cameron Lay	NSW Department of Primary Industries	Government
Trish Harrup	NSW Department of Primary Industries	Government
Peter Gallagher	NSW Department of Primary Industries	Government
Natalie Gollan	NSW Department of Primary Industries	Government
Alan Jordan	NSW Department of Primary Industries	Government
Ryan Bennett	Port Authority of NSW	Ports
Jacki Spiteri	Port of Newcastle	Ports
John Burgess	Australian National Sports Fishing Association	Recreational fishing
Adrian Wayne	Australian Underwater Federation, Spearfishing Commission	Recreational fishing
Malcolm Poole	Recreational Fishing Alliance of NSW	Recreational fishing
Tim Dean	Calypso Fishing Adventures	Recreational fishing
Scott Thorrington	Haven Sport Fishing Charters	Recreational fishing
Brent Hancock	Newcastle and Port Stephens Game Fishing Club	Recreational fishing
Denis Sterling	Norfolk Island Fishing Association	Recreational fishing
Pat Hutchings	Australian Museum Research Institute	Research
Will Figueria	Australian Marine Sciences Association (NSW)	Research
Robert Kearney	University of Canberra	Research
Bil Colthurst	Fishing International Supplies & Hardware	Shore-based industry
Sue Newson	Crest Diving Jervis Bay	Tourism

Table E4 South-west regional consultation

Total meetings	**Total meeting attendees**	
62	189	
Location	**Dates**	
Adelaide	23–24 February, 27 July	
Busselton	25–26 February	
Peaceful Bay	27 February	
Fremantle	11–13 March, 28–30 July	
Multi-sector forums		
Adelaide	23 February	
Fremantle	12 March	
Participants	**Organisation/business**	**Sector**
Aaron Irving	Pearl Producers Australia	Commercial fishing
Alan Miles		Commercial fishing
Bev Cooke	Southern Coast Gillnet Association, WA Demersal Gillnet and Longline Association	Commercial fishing

David Carter	Southern Coast Gillnet Association, WA Demersal Gillnet and Longline Association	Commercial fishing
George Kailis	Kailis Bros/Southern Coast Gillnet Association, WA Demersal Gillnet and Longline Association	Commercial fishing
Brendan Johnson		Commercial fishing
Brian Jeffriess	Australian Southern Bluefin Tuna Association	Commercial fishing
Kirsten Rough	Australian Southern Bluefin Tuna Association	Commercial fishing
Paul Watson	Australian Southern Bluefin Tuna Association	Commercial fishing
David Drew	Bremer Fish Processors	Commercial fishing
David Hand		Commercial fishing
Doug Gibson		Commercial fishing
Felicity Horne	Western Australian Fishing Industry Council	Commercial fishing
Angus Callander	Western Australian Fishing Industry Council	Commercial fishing
Guy Leyland	Western Australian Fishing Industry Council	Commercial fishing
John Harrison	Western Australian Fishing Industry Council	Commercial fishing
Jeff Moore	Great Australian Bight Fishing Industry Association/Western Australian Fishing Industry Council	Commercial fishing
Hamish Ch'ng	Far West Scallops	Commercial fishing
Ian Ricciardi	Ricciardi Seafoods and Coldstores	Commercial fishing
Jaime Phillips	Southern Star	Commercial fishing
Ryan Phillips	Southern Star	Commercial fishing
Kevin Tenardi		Commercial fishing
Kyri Toumazos	South Australian Northern Zone Rock Lobster Fishermen's Association	Commercial fishing
Roger Rowe	South Australian Northern Zone Rock Lobster Fishermen's Association	Commercial fishing
Nathan Bicknell	Wildcatch Fisheries South Australia	Commercial fishing
Neil MacDonald	Wildcatch Fisheries South Australia	Commercial fishing
Franca Romeo	Wildcatch Fisheries South Australia	Commercial fishing
Jonas Woolford	Wildcatch Fisheries South Australia	Commercial fishing
Neville Manstead	WA Shark Association, Esperance Rock Lobster	Commercial fishing
Nicholas Soulos		Commercial fishing
Ray Davies	Ocean Wild Tuna	Commercial fishing
Terry Romaro		Commercial fishing
Talor Bradley	CC Fisheries	Commercial fishing
Terry Mouchemore	Western Rock Lobster Council	Commercial fishing
Vern Wilde		Commercial fishing
William Robb		Commercial fishing
Adrian Meder	Australian Marine Conservation Society	Conservation
Alexis Grayson	Rockingham Regional Environment Centre	Conservation

Brad Norman	ECOOCEAN	Conservation
Chris Burton	Busselton Dunsborough Environment Centre, Margaret River Regional Environment Centre	Conservation
Drew McKenzie	Surfrider Margaret River	Conservation
Laura Bailey	Surfrider Margaret River	Conservation
Tracey Muir	Surfrider Margaret River	Conservation
Dylan Gleave	South Coast NRM	Conservation
Carl Beck	South Coast NRM	Conservation
Emily Hughes dit Ciles	South West Catchments Council, South West NRM	Conservation
Garry Burke	Busselton Dunsborough Environment Centre, Margaret River Regional Environment Centre	Conservation
Jim Matten	Busselton Dunsborough Environment Centre, Margaret River Regional Environment Centre	Conservation
Allison Cassanet	Busselton Dunsborough Environment Centre, Margaret River Regional Environment Centre	Conservation
Joan Jenkins	Friends of the Earth	Conservation
Kady Grosser	Save Our Marine Life Alliance	Conservation
Mary-anne Rath		Conservation
Michelle Grady	The PEW Charitable Trusts/Save Our Marine Life Alliance	Conservation
Sharna True	The PEW Charitable Trusts	Conservation
Nick Dunlop	Conservation Council WA	Conservation
Peter Owen	The Wilderness Society South Australia	Conservation
Angus Mitchell	SA Department of Environment and Natural Resources	Government
Brenton Greer	SA Department of Environment and Natural Resources	Government
Chris Thomas	SA Department of Environment, Water and Natural Resources	Government
Dirk Holman	SA Department of Environment, Water and Natural Resources	Government
Vera Hughes	SA Department of Environment, Water and Natural Resources	Government
Jenny Cassidy	SA Department of Transport, Planning and Infrastructure	Government
Joel Peters	WA Department of the Premier and Cabinet	Government
Lee Butcher	WA Department of the Premier and Cabinet	Government
Simone Soliman	WA Department of the Premier and Cabinet	Government
Rae Burrow	WA Department of Fisheries	Government
Shaun Meredith	WA Department of Fisheries	Government
Martin Holtz	WA Department of Fisheries	Government
Scott Whiting	WA Department of Parks and Wildlife	Government
Denam Bennetts	WA Department of Parks and Wildlife	Government
Liesl Ludgerus	WA Department of Parks and Wildlife	Government

Tania Ashworth	WA Department of State Development	Government
Vitus D'Cunha	WA Department of Transport	Government
John Morris	WA Department of Transport	Government
Mark Sparrow	WA Department of Transport	Government
Saul Bosch	WA Department of Transport	Government
Ian Briggs	WA Department of Mines and Petroleum	Government
Josh Wilson	Mayor of Fremantle	Government
Melissa Parkes MP	Member for Fremantle	Government
Rick Wilson	Liberal Member for O'Connor	Government
Tom Hatton	WA Marine Parks and Reserves Authority	Government
Martin Holtz	WA Department of Fisheries	Government
Nola Marino MP	Member for Forrest	Government
Steve Thomas	Media Advisor to Nola Marino MP	Government
Darren Forster	Goldfields Land and Sea Council	Indigenous
David Garner	Yamatji Marlpa Aboriginal Corporation	Indigenous
Jose Kalpers	Yamatji Marlpa Aboriginal Corporation	Indigenous
Margaret Rose	Yamatji Marlpa Aboriginal Corporation	Indigenous
Odette Lennane	Yamatji Marlpa Aboriginal Corporation	Indigenous
Peter Metcalfe	BP Developments Australia	Oil or gas
Rochelle Smith	BP Developments Australia	Oil or gas
Denis Doak	Fremantle Ports	Ports
Shaun Davis	Fremantle Ports	Ports
Ben Patrick	Halco Tackle	Recreational fishing
Leyland Campbell	Recfishwest	Recreational fishing
John Webber	Perth Game Fishing Club, Western Australia Game Fishing Association	Recreational fishing
Peter Coote	Game Fishing Association of Australia (GFAA), Western Australian Game Fishing Association	Recreational fishing
Tim Carter	Australian Fishing Trade Association (AFTA) Western Australia, Halco Tackle	Recreational fishing
Len Vertigan	King Bay Game Fishing Club	Recreational fishing
Ben Fitzpatrick	Oceanwise Expeditions	Research
Chris Daniels	University of South Australia	Research
Clare Charlton	S2V Consulting, Curtin University	Research
Corey Bradshaw	University of Adelaide	Research
Lynnath Beckley	Murdoch University	Research
Rob Lewis	University of Adelaide and Flinders University	Research
Alicia McDonald	Busselton Jetty and Diving Operators	Tourism
Sophie Teedle	Busselton Jetty and Diving Operators	Tourism
Chris Dodd	Diving Frontiers, NARC Dive Club	Tourism
David Riggs	Riggs Australia	Tourism
Lee Johnson	Perth Scuba	Tourism
Phil Tickle	Siesta Park Holiday Resort	Tourism

Table E5 North-west regional consultation

Total meetings	Total meeting attendees	
55	154	
Location	**Dates**	
Fremantle	12–16 March, 28–30 July	
Broome	17 March, 31 July	
Darwin	18 March	
Multi-sector forums		
Fremantle	12 March	
Fremantle	16 March	
Darwin	18 March	
Participants	**Organisation/business**	**Sector**
Aaron Irving	Pearl Producers Australia	Commercial fishing
Annie Jarret	Northern Prawn Fishery Association	Commercial fishing
Rob Fish	Northern Territory Seafood Council	Commercial fishing
David Shannon	Fremantle Tuna	Commercial fishing
Doug Gibson		Commercial fishing
Guy Leyland	Western Australian Fishing Industry Council	Commercial fishing
Jeff Moore	Western Australia Fishing Industry Council	Commercial fishing
John Harrison	Western Australia Fishing Industry Council	Commercial fishing
Hamish Ch'ng	Far West Scallops	Commercial fishing
Ian Flemming	Tasmanian Seafoods	Commercial fishing
James Brown	Cygnet Bay Pearls	Commercial fishing
Jeff Westerberg		Commercial fishing
Kym Coffey	Paspaley Pearling Company	Commercial fishing
Sam Buchanan	Paspaley Pearling Company	Commercial fishing
Tony Thiel	Paspaley Pearling Company	Commercial fishing
Patrick Moase	Clipper Pearls	Commercial fishing
Simon Little	Westmore Seafoods	Commercial fishing
Steve Hinge		Commercial fishing
Terry Romaro		Commercial fishing
Adrian Meder	Australian Marine Conservation Society	Conservation
Jacqueline Taylor	Australian Marine Conservation Society	Conservation
Alexander Watson	World Wide Fund for Nature Australia	Conservation
Alexis Grayson	Rockingham Regional Environment Centre	Conservation
Andy Duke	No Shark Cull Inc	Conservation
Anna Boustead	Environment Centre NT	Conservation
Micha Neumann	Environment Centre NT	Conservation
Brad Norman	ECOOCEAN	Conservation
David Morris	Environmental Defenders Office	Conservation
Jacqueline Hine	Cape Conservation Group	Conservation
Jason Fowler	Environs Kimberley	Conservation
Martin Pritchard	Environs Kimberley	Conservation
Jenita Enevoldsen	The Wilderness Society	Conservation

Kady Grosser	Save Our Marine Life Alliance	Conservation
Kandy Curran	Roebuck Bay Working Group	Conservation
Mary-anne Rath		Conservation
Michelle Grady	The PEW Charitable Trusts/Save Our Marine Life Alliance	Conservation
Sharna True	The PEW Charitable Trusts	Conservation
Nick Dunlop	Conservation Council WA	Conservation
Richard Costin	Kimberley Whale Watching	Conservation
Simon Woodley	Ningaloo Coast World Heritage Advisory Committee	Conservation
Chris Mitchell	Regional Development Australia—Kimberley	Government
Tom Hatton	WA Marine Parks and Reserves Authority	Government
Joel Peters	WA Department of the Premier and Cabinet	Government
Lee Butcher	WA Department of the Premier and Cabinet	Government
Simone Soliman	WA Department of the Premier and Cabinet	Government
Rae Burrow	WA Department of Fisheries	Government
Shaun Meredith	WA Department of Fisheries	Government
Martin Holtz	WA Department of Fisheries	Government
Scott Whiting	WA Department of Parks and Wildlife	Government
Denam Bennetts	WA Department of Parks and Wildlife	Government
Liesl Ludgerus	WA Department of Parks and Wildlife	Government
Tania Ashworth	WA Department of State Development	Government
Vitus D'Cunha	WA Department of Transport	Government
John Morris	WA Department of Transport	Government
Mark Sparrow	WA Department of Transport	Government
Saul Bosch	WA Department of Transport	Government
Ian Briggs	WA Department of Mines and Petroleum	Government
Colin Sutton	Kooljaman at Cape Leveque	Indigenous
Erica X	Kooljaman at Cape Leveque	Indigenous
David Garner	Yamatji Marlpa Aboriginal Corporation	Indigenous
Jose Kalpers	Yamatji Marlpa Aboriginal Corporation	Indigenous
Margaret Rose	Yamatji Marlpa Aboriginal Corporation	Indigenous
Odette Lennane	Yamatji Marlpa Aboriginal Corporation	Indigenous
Desmond Williams	Wunambal Gaambera Aboriginal Corporation	Indigenous
Lillian X	Wunambal Gaambera Aboriginal Corporation	Indigenous
Tom Vigilante	Wunambal Gaambera Aboriginal Corporation	Indigenous
Richard Campbell	Northern Land Council	Indigenous
Lorrae McCarthur	Northern Land Council	Indigenous
Tom Holyoake	Kimberley Land Council	Indigenous
Bindi Gove	BHP Billiton Petroleum	Oil or gas
Emmet Fay	BHP Billiton Petroleum	Oil or gas
Mark Garrahy	BHP Billiton Petroleum	Oil or gas
Tim Cooper	BHP Billiton Petroleum	Oil or gas
Greg Oliver	INPEX	Oil or gas
Patrick Hastwell	ConocoPhillips Australia Pty Ltd	Oil or gas

Peter Metcalfe	BP Developments Australia	Oil or gas
Samantha Jarvis	Santos Offshore Pty Ltd	Oil or gas
Tom Baddeley	Santos Offshore Pty Ltd	Oil or gas
David McMaster	Darwin Port Corporation	Ports
Brad Kitchen	Pilbara Ports Authority	Ports
Denis Doak	Fremantle Ports	Ports
Shaun Davis	Fremantle Ports	Ports
Kevin Shellack	Kimberley Ports Authority	Ports
Tim Hungerford-Morgan	Kimberley Ports Authority	Ports
Veronica Mair	Kimberley Ports Authority	Ports
Vikas Bangia	Kimberley Ports Authority	Ports
Diane Dowdell	Aurizon Ltd	Ports
Ben Little	Broome Fishing Club	Recreational fishing
Ben Patrick	Halco Tackle	Recreational fishing
Craig Ingram	Amateur Fishermen's Association of the NT	Recreational fishing
Tristan Sloane	Amateur Fishermen's Association of the NT	Recreational fishing
Dennis Bryan-Smith	Exmouth Gulf Fishing Club	Recreational fishing
Kirt Dekker	Exmouth Gulf Fishing Club	Recreational fishing
Derek Albert	Broome Fishing Club	Recreational fishing
Jeff Cooper	Broome Fishing Club	Recreational fishing
John Webber	Perth Game Fishing Club, Western Australia Game Fishing Association	Recreational fishing
Peter Coote	Game Fishing Association of Australia, Western Australia Game Fishing Association	Recreational fishing
Len Vertigan	King Bay Game Fishing Club, Western Australian Game Fishing Association	Recreational fishing
Leyland Campbell	Recfishwest	Recreational fishing
Tim Carter	Australian Fishing Trade Association Western Australia, Halco Tackle	Recreational fishing
Tracey Rushford	Reelteasers Charters	Recreational fishing
Ben Fitzpatrick	Oceanwise Expeditions	Research
Clare Charlton	S2V Consulting, Curtin University	Research
Jackie Gould	Charles Darwin University	Research
Lynnath Beckley	Murdoch University	Research
Neil Lonergan	Murdoch University	Research
Chris Dodd	Diving Frontiers, NARC Dive Club	Tourism

Table E6 North regional consultation

Total meetings	**Total meeting attendees**
43	101
Location	**Dates**
Darwin	18–19, 26 March, 4–5 August
Nhulunbuy	27 March, 6 August
Cairns	30 March, 11 August

Multi-sector forum		
Darwin	18 March	
Participants	**Organisation/business**	**Sector**
Annie Jarrett	Northern Prawn Fishing Industry Association	Commercial fishing
Rob Fish	Northern Territory Seafood Council	Commercial fishing
Ian Flemming	Tasmanian Seafoods	Commercial fishing
Jeff Westerberg		Commercial fishing
Steve Hinge		Commercial fishing
Andy Prendergast	Austral Fisheries	Commercial fishing
Michael O'Brien	Tropical Ocean Prawns	Commercial fishing
Robert Pender	Fishermen's Portal	Commercial fishing
Bruce Davey	FV Wildcard	Commercial fishing
Tiger Davey	FV Wildcard	Commercial fishing
David Wren	Wren Fishing	Commercial fishing
Claudine Ward	Gulf of Carpentaria Commercial Fishermen Association	Commercial fishing
Greg Neumann	Gulf of Carpentaria Commercial Fishermen Association	Commercial fishing
Brian Koennecke		Commercial fishing
Eric Perez	Queensland Seafood Industry Association	Commercial fishing
Marshall Betzel	Queensland Seafood Marketers Association and North Queensland Trawlers	Commercial fishing
Rob Lowden	Seafresh Seafoods, RB Lowden Pty Ltd	Commercial fishing
Jacqueline Taylor	Australian Marine Conservation Society	Conservation
Anna Boustead	Environment Centre NT	Conservation
Micha Neumann	Environment Centre NT	Conservation
Jackie Gould	Environment Centre NT	Conservation
Daniel Beaver	Centre for Conservation Geography	Conservation
David Morris	Environmental Defenders Office	Conservation
Michelle Grady	The PEW Charitable Trusts/Save Our Marine Life Alliance	Conservation
Bob Manning	Cairns Regional Council	Government
Neil Quinn	Cairns Regional Council	Government
Lara Wilde	Gulf Savannah Development	Government
Valerie Smith	Tourism NT	Government
Tony Griffiths	NT Department of Land and Resource Management	Government
Ian Curnow	NT Department of Primary Industry and Fisheries	Government
Glenn Shipp	NT Department of Primary Industry and Fisheries	Government
Rachel Bacon	NT Department of the Chief Minister	Government
Jim Rogers	NT Department of the Chief Minister	Government
Jordy Bowman	NT Department of the Chief Minister	Government
Ernie Wonka	NT Department of the Chief Minister	Government
Thomas Noael	NT Department of the Chief Minister	Government
Alister Trier	NT Department of Primary Industry and Fisheries	Government
Ron Kelly	NT Department of Mines and Energy	Government

Russell Ball	NT Department of Mines and Energy	Government
Jann Crase	Regional Development Australia Far North Queensland and Torres Strait Inc	Government
David Rolland	GHD	Consultant
Lorrae McCarthur	Northern Land Council	Indigenous
Richard Campbell	Northern Land Council	Indigenous
Kelly Gardner	Carpentaria Land Council Aboriginal Corporation	Indigenous
Warwick Angus	Crocodile Island Rangers	Indigenous
Leonard Bowaynu	Crocodile Island Rangers	Indigenous
George Milaypuma	Crocodile Island Rangers	Indigenous
Steve Roeger	Dhimurru Aboriginal Corporation	Indigenous
Vanessa Drysdale	Dhimurru Aboriginal Corporation	Indigenous
Thomas Amagula	Dhimurru Aboriginal Corporation	Indigenous
Djalinda Ulamari	Dhimurru Aboriginal Corporation	Indigenous
Mandaka Marika	Dhimurru Aboriginal Corporation	Indigenous
John Wilson	Gumurr Marthakal Rangers	Indigenous
David Preece	Yirralka Rangers, Laynhapuy Homelands Association Inc	Indigenous
Patrick Hastwell	ConocoPhillips Australia Pty Ltd	Oil or gas
Greg Oliver	INPEX	Oil or gas
David McMaster	Darwin Port Corporation	Ports
Tristan Sloan	Amateur Fishermen's Association of the NT	Recreational fishing
Craig Ingram	Amateur Fishermen's Association of the NT	Recreational fishing
Ralph Pellenat	Nhulunbuy Regional Sport Fishing Club	Recreational fishing
Sean Canobie	Nhulunbuy Regional Sport Fishing Club	Recreational fishing
Jackie Gould	Charles Darwin University	Research
Karen Edyvane	Charles Darwin University	Research
Kiki Dethmers	North Australian Marine Research Alliance	Research
Michael Guinea	North Australian Marine Research Alliance	Research
Rik Buckworth	North Australian Marine Research Alliance	Research

Table E7 Coral Sea regional consultation

Total meetings	**Total meeting attendees**
64	182
Location	**Dates**
Cairns	30 March – 1 April, 11–12 August
Mooloolaba	7 April, 10 August
Brisbane	8–9 April
Sydney	13 August
Townsville	9 November
Multi-sector forums	
Cairns	31 March
Brisbane	8 April

Participants	Organisation/business	Sector
Andy Prendergast	Austral Fisheries	Commercial fishing
Angelo Maiorana		Commercial fishing
Annie Lamason	Great Barrier Reef Tuna	Commercial fishing
Bob Lamason	Great Barrier Reef Tuna	Commercial fishing
Kyle Lamason	Great Barrier Reef Tuna	Commercial fishing
Rowan Lamason	Great Barrier Reef Tuna	Commercial fishing
Sarah Lamason	Great Barrier Reef Tuna	Commercial fishing
Ben Leahy		Commercial fishing
Brett Taylor	4 Seas Pty Ltd	Commercial fishing
Brett Adamson		Commercial fishing
Cathal Farrell	Upscale Seafoods	Commercial fishing
Chauncey Hammond	Tasmanian Seafoods	Commercial fishing
Eric Perez	Queensland Seafood Industry Association	Commercial fishing
Frank Pirello		Commercial fishing
Gary Heilmann	De Bretts Seafood Pty Ltd	Commercial fishing
Glenn Adamson		Commercial fishing
Grahame Turk	National Seafood Industry Alliance	Commercial fishing
Greg Keatley	GIMK Pty Ltd	Commercial fishing
Jeff Moore	Commonwealth Fisheries Association	Commercial fishing
Renee Vajtauer	Commonwealth Fisheries Association	Commercial fishing
Keith (Nick) Schulz	Urangan Fisheries Pty Ltd	Commercial fishing
Robert McLachlan	Urangan Fisheries Pty Ltd	Commercial fishing
Les Scott	Petuna Sealord Deepwater Fishing, Australian Longline Pty Ltd	Commercial fishing
Malcolm Mackay		Commercial fishing
Marshall Betzel	Queensland Seafood Marketers Association and North Queensland Trawlers	Commercial fishing
Megan McKay	Barameda Fisheries	Commercial fishing
Michael O'Brien	Tropical Ocean Prawns	Commercial fishing
Paul Williams	P&M Williams Enterprises	Commercial fishing
Michael Williams	P&M Williams Enterprises	Commercial fishing
Pavo Walker	Walker Seafoods Australia	Commercial fishing
Peter Jackson	East Coast Crabfishers Industry Network	Commercial fishing
Rob Lowden	Seafresh Seafoods, RB Lowden Pty Ltd	Commercial fishing
Steven Murphy	Australian Ocean King Prawn Company	Commercial fishing
Wayne Delongville	Seavine Pty Ltd	Commercial fishing
Adam Whan	Whan & Boxall Pty Ltd	Commercial fishing
Denis Brown	NSW Seafood Industry Council	Commercial fishing
Elizabeth Edmonds	Australian Oceans Institute	Conservation
Chris Smyth	Australian Oceans Institute	Conservation
Fiona Maxwell	Australian Marine Conservation Society	Conservation
Josh Coates	Cairns and Far North Environment Centre	Conservation
Michelle Grady	The PEW Charitable Trusts/Save Our Marine Life Alliance	Conservation
Narelle McCarthy	Sunshine Coast Environment Centre	Conservation
Nicola Hungerford	Queensland Conservation Council	Conservation
Paul Donatiu	National Parks Association of Queensland Inc	Conservation
Paul McDonald	South East Catchments Ltd	Conservation
Sue Sargent	Burnett Mary Regional Group NRM	Conservation

Tony Isaacson	Dive Care Dare	Conservation
Bob Manning	Cairns Regional Council	Government
Neil Quinn	Cairns Regional Council	Government
James Murphy	Qld Department of National Parks, Sports and Racing	Government
Maria Mohr	Department of Agriculture and Fisheries	Government
Peter Hutchinson	Qld Department of Premier and Cabinet	Government
Jann Crase	Regional Development Australia Far North Queensland and Torres Strait Inc	Government
Jessica Bourner	Gold Coast City Council	Government
Kristopher Boody	Gold Coast City Council	Government
Warren Entsch MP	Federal Member for Leichardt	Government
Richard Quincey	Great Barrier Reef Marine Park Authority	Government
David Wachenfeld	Great Barrier Reef Marine Park Authority	Government
Bruce Elliot	Great Barrier Reef Marine Park Authority	Government
Kirsten Dobbs	Great Barrier Reef Marine Park Authority	Government
Alex Wells	Balkanu Cape York Development	Indigenous
Frankie Deemal	Balkanu Cape York Development	Indigenous
Danny O'Shane	Northern Queensland Land Council	Indigenous
Greg Smith	Dalrymple Bay Coal Terminal	Ports
Rick Morton	Rick Morton Consulting	Ports
Adam Smith	Reef Ecologic, Australian Underwater Federation	Recreational fishing
Adrian Wayne	Australian Underwater Federation, Spearfishing Commission	Recreational fishing
Luke Randall	Australian Underwater Federation, Spearfishing Commission	Recreational fishing
Alex Johnston	Cairns Game Fishing Club, Broadbill Charters	Recreational fishing
Bruce Alvey	Sunfish Queensland	Recreational fishing
David Bateman	Sunfish Queensland	Recreational fishing
Bruce Stobo	Kanimbla Charters	Recreational fishing
Bruce Davey	FV Wildcard	Recreational fishing
Damon Olsen	Nomad Sportfishing	Recreational fishing
Daniel McCarthy	Cairns Professional Game Fishing Association, Big Fish Down Under	Recreational fishing
Darren Haydon	Down Under Marlin Charters	Recreational fishing
Dianne Hance	Queensland Game Fishing Association	Recreational fishing
Doug Sanderson	Queensland Game Fishing Association	Recreational fishing
Evan Jones	Queensland Game Fishing Association	Recreational fishing
Graeme Devin	Queensland Game Fishing Association	Recreational fishing
Graham Johnston	Cairns Game Fishing Club, Broadbill Charters	Recreational fishing
Ian Bladin	Queensland Game Fishing Association	Recreational fishing
Mick Meiers	Queensland Game Fishing Association	Recreational fishing
Paul Aubin	Cairns Recreational Fishing Industry Stakeholders (CAREFISH)	Recreational fishing
Peter Sayre	Bianca Charters	Recreational fishing
Brad Congdon	James Cook University	Research
Robin Beaman	James Cook University	Research
Hannah Robertson	Biopixel	Research
Richard Fitzpatrick	Biopixel	Research

Vanessa Adams	University of Queensland	Research
Bil Colthurst	Fishing International Supplies and Hardware	Shore-based industry
Ryan Donnelly	Cairns Marine	Shore-based industry
Lyle Squire	Cairns Marine	Shore-based industry
Wayne Bayne	Mitchells Marine	Shore-based industry
Catherine Johnson	Ecrolight, Deep Sea Divers Den	Tourism
Tobi Schnell	Ecrolight, Deep Sea Divers Den	Tourism
Chris Eade	Cod Hole and Ribbon Reef Operators Association	Tourism
Craig Stephen	Cod Hole and Ribbon Reef Operators Association	Tourism
Col McKenzie	Association of Marine Park Tourism Operators	Tourism
Mike Ball	Mike Ball Dive Expeditions	Tourism
Ronda Green	Wildlife Tourism Australia	Tourism

Table E8 National-level stakeholder consultation

Meetings	**Total meeting attendees**	
16	60	
National forums/meetings		
Sydney	7 November 2014	
Melbourne	22 April 2015	
Canberra	22 July 2015	
Sydney	13 August 2015	
Brisbane	10 November 2015	
Participants	**Organisation**	**Sector**
Renee Vajtauer	Commonwealth Fisheries Association	Commercial fishing
Jeff Moore	Commonwealth Fisheries Association	Commercial fishing
Les Scott	Commonwealth Fisheries Association	Commercial fishing
Grahame Turk	National Seafood Industry Alliance	Commercial fishing
Annie Jarret	Northern Prawn Fishery Association	Commercial fishing
John Harrison	Western Australian Fishing Industry Council	Commercial fishing
Darren Kindleysides	Australian Marine Conservation Society	Conservation
Fiona Maxwell	Australian Marine Conservation Society	Conservation
Adrian Meder	Australian Marine Conservation Society	Conservation
Michelle Grady	The PEW Charitable Trusts/Save Our Marine Life Alliance	Conservation
Teagan Goolmeer	Rottnest Island Authority/Indigenous Advisory Committee	Conservation
Keld Knudsen	Australian Petroleum Production and Exploration Association	Oil and gas
Clare Valence	Australian Petroleum Production and Exploration Association	Oil and gas
Miranda Taylor	Australian Petroleum Production and	Oil and gas

	Exploration Association	
Christine Lamont	National Offshore Petroleum Safety and Environmental Management Authority	Oil and gas
Cameron Grebe	National Offshore Petroleum Safety and Environmental Management Authority	Oil and gas
Susan Fryda-Blackwell	Ports Australia	Ports
Allan Hansard	Australian Recreational Fishing Foundation	Recreational fishing
Brett Cleary	Australian Recreational Fishing Foundation	Recreational fishing
John Burgess	Australian National Sportfishing Association	Recreational fishing
Evan Jones	Queensland Game Fishing Association, Game Fishing Association of Australia	Recreational fishing
Adrian Wayne	Australian Underwater Federation, Spearfishing Commission	Recreational fishing
Hugh Kirkman	Australian Marine Sciences Association	Research
Lynnath Beckley	Australian Marine Sciences Association	Research
Hugh Possingham	Ocean Science Council of Australia	Research
Craig Johnson	Ocean Science Council of Australia	Research
Kikki Dethmers	Ocean Science Council of Australia	Research
David Booth	Ocean Science Council of Australia	Research
Ove Hoegh-Guldberg	University of Queensland	Research
Tyrone Ridgeway	University of Queensland	Research
Rod Nairn	Shipping Australia	Shipping
Angela Gillham	Maritime Industry Australia	Shipping
Sam Bradley	Maritime Industry Australia	Shipping

Appendix F: Overview of online survey responses

The majority of survey participants (95%) indicated that they lived within Australia. Of the participants living outside of Australia, 33% lived in the United States of America, 13% in New Zealand, 11% in Canada and 9% in the United Kingdom.

Survey participants tended towards the older age brackets, with just under 60% of participants aged over 50. The gender balance was almost equal.

Approximately 50% of participants indicated that they visited a CMR yearly or less than once a year.

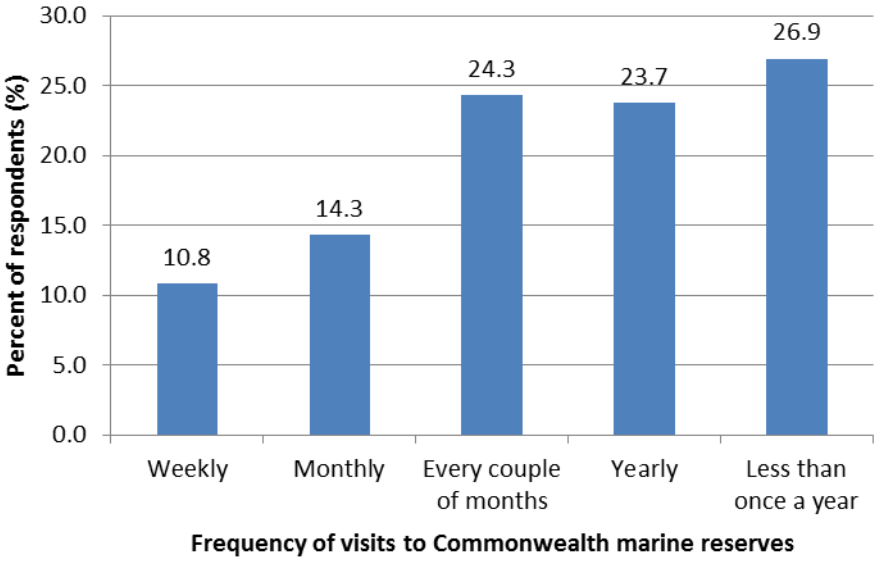

Figure F1 Frequency of visits to CMRs

The top three purposes for visiting CMRs were identified as recreational other (sailing, diving etc.), recreational fishing and conservation activities.

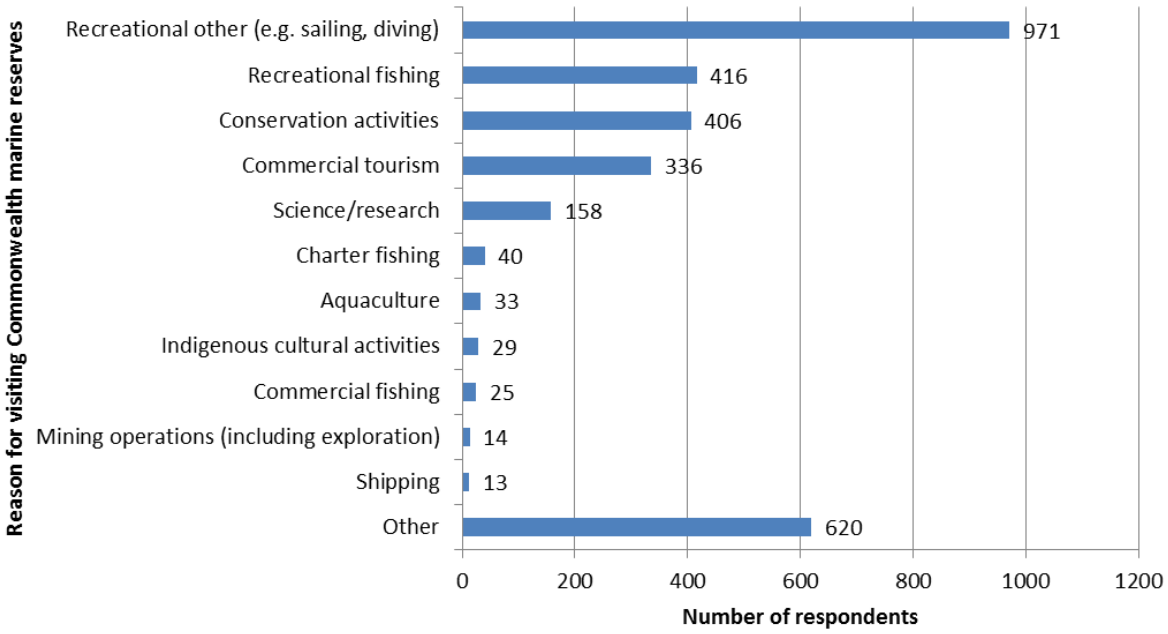

Figure F2 Reasons for visiting CMRs

A total of 620 participants described other reasons for visiting CMRs. Table F1 summarises the types of responses provided within this category.

Table F1 Other reasons nominated as a main purpose survey participants visit CMRs

Other reasons for visiting CMRs	Frequency
Statements such as, 'These areas belong to all Australians, not just commercial fisheries and oil companies that operate there'	217
Environmental appreciation/nature watching/enjoying nature/concern for the environment	166
Don't visit/haven't visited, but interested	21
Educational reasons	7
I live here	7
Painting/photography	5
Existing category: recreational other (e.g. sailing, diving etc.)	83
Existing category: commercial fishing	1
Existing category: conservation activities	1
Additional (various)	112

Only 5% of survey participants indicated that they were responding on behalf of a group, business or organisation. Within this 5% of participants there were a total of 58 different groups, businesses or organisations, including recreational fishing organisations; commercial fishing companies, individuals and organisations; scientific or research organisations; and environmental organisations.

The majority of participants indicated that they were interested in all of the networks and reserves within the CMR estate; therefore the survey responses did not allow the review to identify any areas of particular interest at either the network or reserve level.

This held true more broadly for the other survey responses, with no reserve, network or geographic region being of greater interest than any other.

There were 1328 responses in total, which provided enough detail to determine whether participants supported the existing zoning. Of these, 95% indicated support for the existing zoning. Of the 5% that did not support the existing zoning, no particular geographic region received a greater number of comments.

Survey participants who visited the marine reserves for aquaculture, mining operations and shipping were more likely to support the existing zoning, while those who visited for commercial fishing or charter fishing purposes were less likely to support the existing zoning. Table F2 summarises participants' support for the proclaimed zoning.

Table F2 Support for existing zoning compared to purpose of visiting CMRs

		Support for existing zoning?	
Purpose for visiting	**No.**	**Yes (%)**	**No (%)**
Aquaculture	21	100	0
Charter fishing	23	70	30
Commercial fishing	16	44	56
Commercial tourism	250	96	4
Conservation activities	289	98	2
Indigenous cultural activities	19	89	11
Mining operations (including exploration)	5	100	0
Recreational fishing	287	87	13
Recreational other (e.g. sailing, diving etc.)	712	97	3
Science/research	91	91	9
Shipping	8	100	0
Other	487	98	2

The top two responses for what participants considered important about the CMRs were: 'Maintaining the health of oceans and marine ecosystems' (95.3% important and above) and 'Protection/preservation of marine biodiversity' (95.1% important and above).

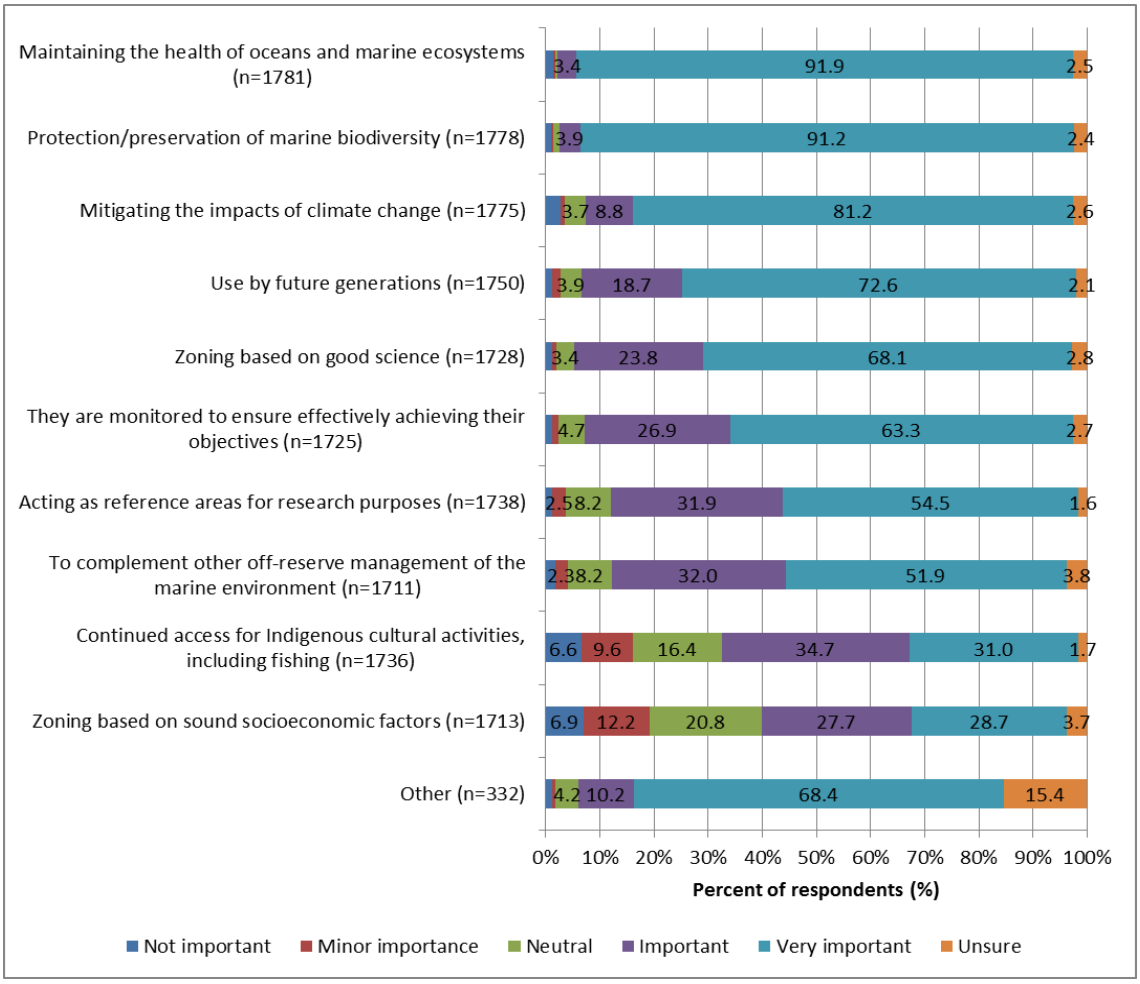

Figure F3 Participants' ratings of the importance of CMRs

A total of 283 participants provided details of other important roles of CMRs. Table F3 illustrates the types of responses received about other roles of CMRs.

Table F3 Other important roles of CMRs

Other important roles of CMRs	Frequency
Sanctuaries work/are good/effective	20
Expansion or creation of new reserves/exclusion zones	19
Access (for all people/recreational fishers/recreational users)	11
Stakeholder engagement/education	9
Importance of tourism	9
Against Indigenous cultural activities	8
Need for adequate funding	4
100% no-take zones/larger no-take zones	3
All of the above/all are related	3
Existing categories: protection/preservation of marine biodiversity/maintaining the health of oceans and marine ecosystems	84
Existing category: zoning based on good science	15
Existing category: mitigating the impacts of climate change	5
Existing category: continued access for Indigenous cultural activities, including fishing	3
Other (various)	90

The top three issues impacting biodiversity in CMRs were identified as being pollution, mining operations (including exploration) and habitat degradation and loss.

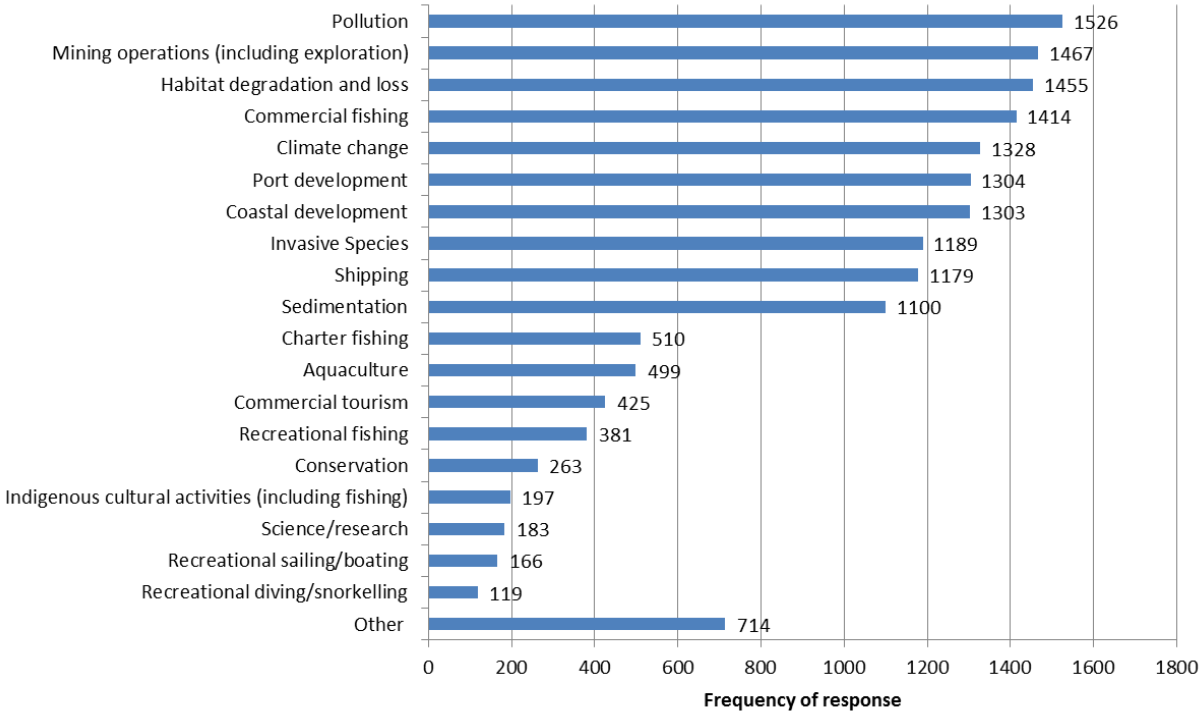

Figure F4 Issues impacting biodiversity in CMRs

A total of 714 survey participants indicated there were other important issues impacting on biodiversity in CMRs. All of these participants provided a description. Table F4 summarises the other issues identified by participants.

Table F4 Other issues impacting biodiversity in CMRs

Other issues impacting biodiversity in CMRs	Frequency
Positive impact statements such as, 'It depends on the reserve, but sanctuaries are proven to work'	525
All of the above	12
Illegal activities	7
Exploitation/greed	6
Dredging	5
Lack of knowledge/information/education	5
Existing category: commercial fishing	12
Existing category: pollution	20
Existing category: shipping	8
Existing category: recreational fishing	8
Existing category: science/research	5
Existing category: mining operations (including exploration)	5
Existing category: recreational sailing/boating	4
Existing category: Indigenous cultural activities (including fishing)	3
Existing category: habitat degradation and loss	2
Existing category: port development	2
Other (various)	85

Survey participants ranked the most critical issues impacting biodiversity as mining operations (including exploration), climate change and habitat degradation and loss.

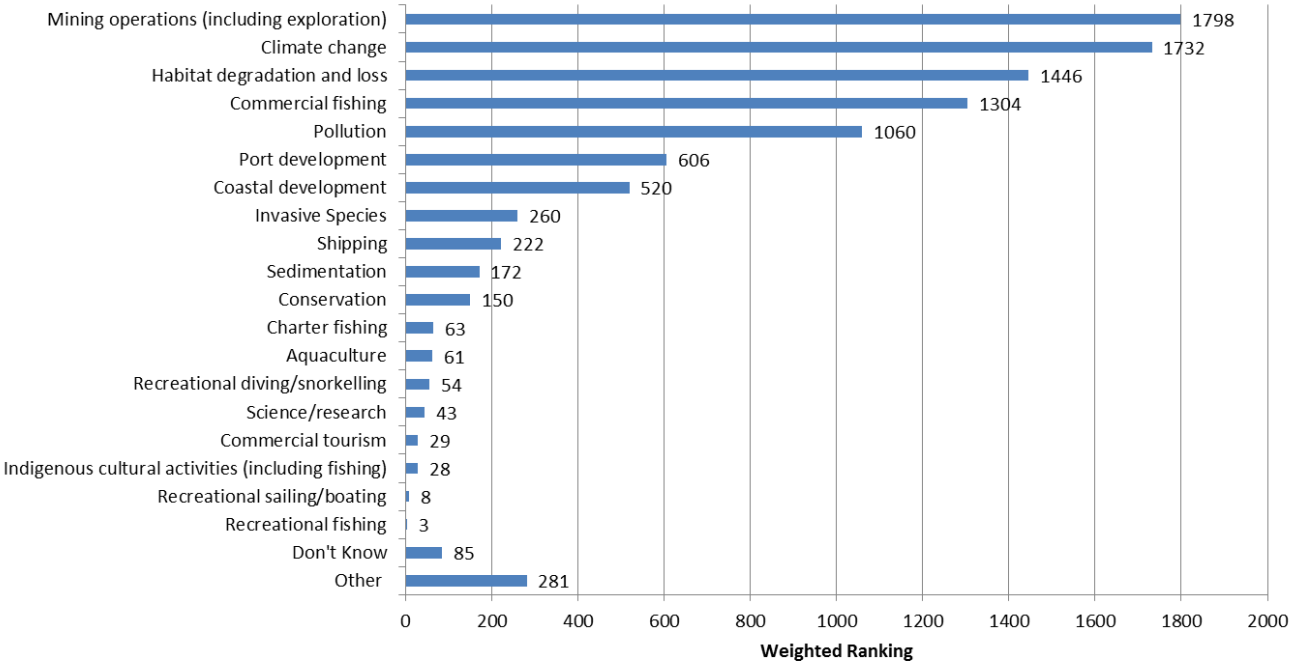

Figure F5 Participants' rankings of critical issues impacting biodiversity

The three highest priorities for management activities were identified as 'well developed and resourced scientific monitoring to support ongoing management', 'ensuring that users comply with rules and regulations', and 'involving the community in management of the reserves'. The fourth, 'raising community awareness', had only 20 fewer responses.

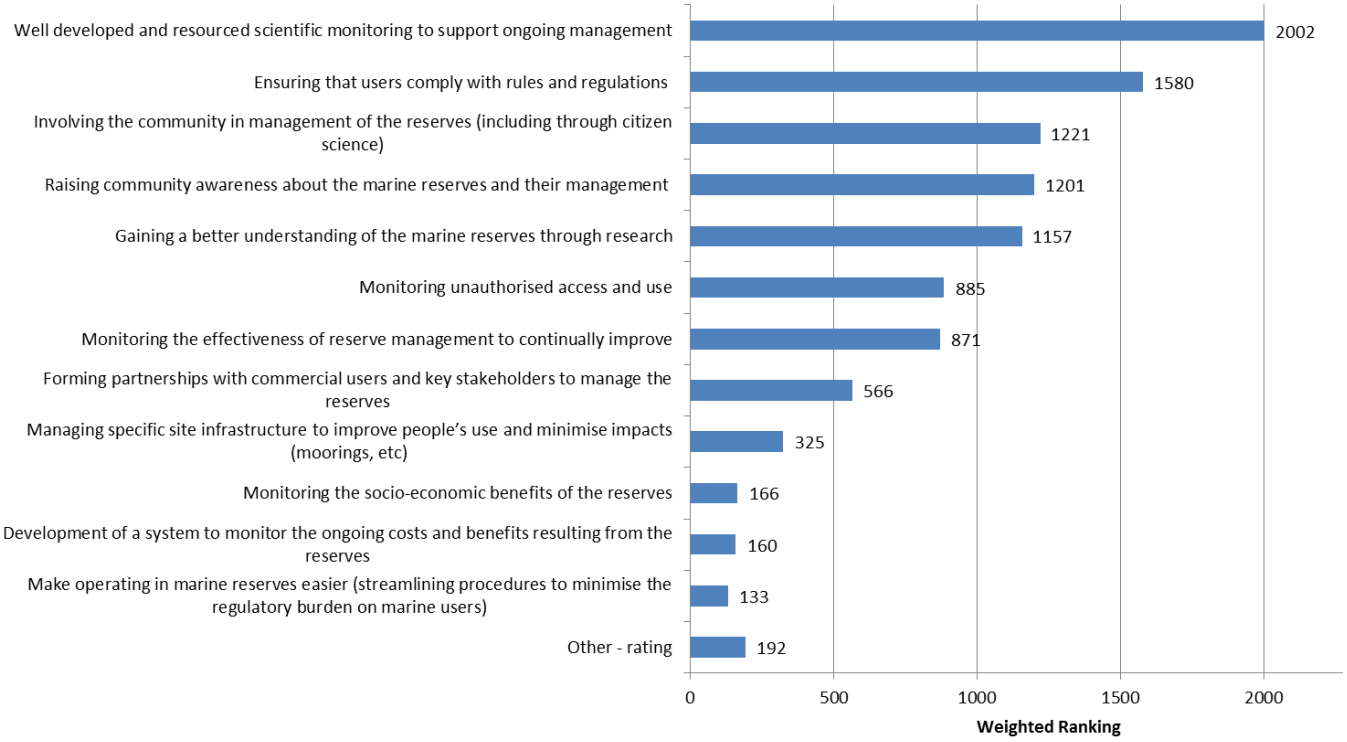

Figure F6 Participants' weighted rankings of priority for management activities

A total of 136 participants provided details about other management activities in CMRs. Table F5 summarises these responses.

Table F5 Other management activities in CMRs

Other management activities in CMRs	Frequency
Against commercial fishing/big industry/commercialising the ocean	24
All of the above are important/linked	11
Expansion or creation of new reserves/exclusion zones/no-take zones	8
Existing category: ensuring that users comply with rules and regulations	11
Existing category: raising community awareness about the marine reserves and their management	6
Existing category: well developed and resourced scientific monitoring to support ongoing management	4
Existing category: monitoring the effectiveness of reserve management to continually improve	2
Existing category: involving the community in management of the reserves (including through citizen science)	2
Existing category: gaining a better understanding of the marine reserves through research	1
Other (various)	67

Of the participants who explained how the CMRs will affect them personally, 92% indicated that there would be a positive personal impact and 98% indicated a positive impact in broader ways (other than personally).

The expected personal impacts of CMRs were compared against participants' purposes for visiting CMRs. Participants visiting CMRs for aquaculture, commercial tourism, conservation activities, Indigenous cultural activities, recreational activities (other than fishing) and shipping were more likely to report positive impacts, while those visiting for commercial fishing, recreational fishing and charter fishing were more likely to report negative personal impacts. Table F6 summarises the perceived personal impacts of the CMRs compared to the reasons for visiting the CMRs.

Table F6 Personal impacts compared to purpose for visiting CMRs

Purpose of visiting CMRs	Personal impact			Impact other than personal		
	No.	Positive (%)	Negative (%)	No.	Positive (%)	Negative (%)
Aquaculture	12	92	8	15	100	0
Charter fishing	25	44	56	5	80	20
Commercial fishing	14	29	71	5	80	20
Commercial tourism	169	95	5	91	100	0
Conservation activities	192	99	1	115	98	2
Indigenous cultural activities	11	100	0	11	100	0
Mining operations (including exploration)	6	100	0	3	100	0
Recreational fishing	204	76	24	103	92	8
Recreational other (e.g. sailing, diving etc.)	461	93	7	303	99	1
Science/research	68	93	7	114	100	0
Shipping	3	100	0	2	100	0
Other	327	98	2	179	100	0

Participants' preferred method for receiving information was clearly email updates (75%), followed by website updates (23%).

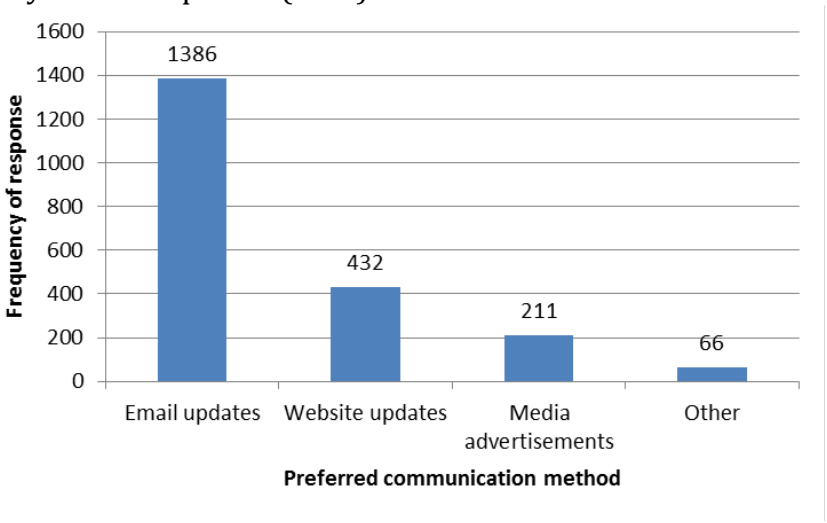

Figure F7 Preferred communication methods

The topics of most interest for participants were 'Science and research activities' and 'New information about the Commonwealth marine reserves'.

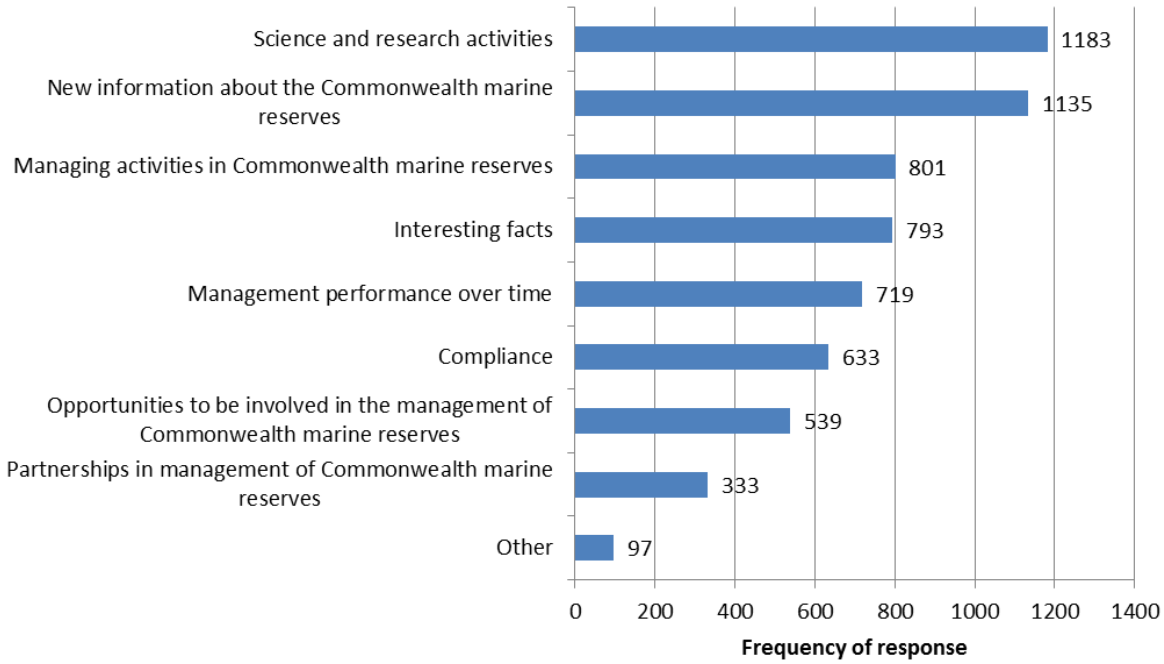

Figure F8 Topics of interest for information updates to participants

Appendix G: Consolidated summary of feedback received by the review

This appendix contains a high-level summary of the feedback received during the CMR Review. To avoid unnecessary duplication, feedback summarised at the estate-wide or network level is not repeated at the reserve level unless it specifically addresses that reserve.

This appendix is a summary of the feedback and opinions provided by stakeholders. As such it has not been edited to ensure the comments received are accurate or factually correct.

ESTATE WIDE

- Questioning of the scientific integrity of the decision to exclude commercial fishing in IUCN VI zones while permitting all forms of mining and oil and gas activity.
- Questioning of the scientific integrity of Multiple Use zoning that allows all forms of mining and oil and gas activity but not trawl or other forms of demersal fishing which, in the case of the NPF, have proven to be low impact.
- It is inconsistent, unfair and not sustainable that commercial fishing is excluded from IUCN IV and II zones despite other industries, including oil and gas mining, being permitted that pose equal levels of risk to the environment.
- The 2012 guidelines for IUCN protected area management Category VI, currently SPZs and MUZs, define these areas as 'under low-level non-industrial sustainable natural resource management and where such use of natural resources compatible with nature conservation is seen as one of the main aims of the area'. Mining is an extractive industrial process and that is not compatible with the aim of this zoning or within the spirit of the marine reserves process itself. There is an inconsistency when removing commercial bottom trawl fishing methods while allowing mining including exploration and development in these current zones.
- Commercial fisheries are already regulated by the AFMA and therefore there is a need to differentiate the level of protection within a reserve opposed to the surrounding area outside the reserve. IUCN VI zones do not clearly articulate the protection provided and should be upgraded.
- Sound fisheries management tools such as spatial closures for demersal species and recreational catch-and-release zoning for pelagic species are given more consideration in management plans for fishing stakeholders, rather than ambit percentages of seafloor topography permanently closed to all forms of fishing through SZ designation.
- The commercial fishing industry has serious concerns about development of the FGRAs used in the planning of the reserves in terms of their policy, methodology and process of development.
- The plans should allow for explicit review and assessment of 'prohibited' activities, (including new gears types and/or new information) based on a clear, transparent process and sound science.
- Gillnetting should not be put in the same FGRA category as trawling.
- There should be an FGRA for the various types of recreational fishing and the impact these types have on the conservation values.

- If recreational fishing is allowed in IUCN I or II zones then the CMR Review must specifically address the lack of an environmental impact statement currently available regarding recreational fishing methods.
- Ongoing engagement with the commercial fishing industry must occur before the finalisation of each management plan.
- Policing and management of CMRs presents new logistical and cultural challenges. New and emerging technologies can provide part of the answer, but there is no substitute for an engaged community and a culture of compliance.
- The CMR Review should consider the South-east CMR Network Stakeholder Forum as one model for facilitating ongoing stakeholder engagement.
- The South-east collaborative forum was a positive model that involved up to a dozen stakeholder groups. It was important to have the right people at the table for a logical and meaningful engagement and resources for maintaining engagement and dealing with stakeholder fatigue needed to be considered.
- Each management plan requires a research plan and communication strategy for that region's stakeholders.
- Management Plans should develop partnerships with relevant industries to increase understanding of the impacts of anthropogenic disturbance on the region's KEFs and protected species. Specifically, plans should make provision for translating knowledge into action with a view to reducing anthropogenic disturbance of the region's KEFs.
- An overarching governing body should be established to facilitate and provide opportunities for government agencies, non-government organisations and concerned scientists to contribute to the effectiveness of the Marine Bioregional Plan.
- The management plans are focused on mega-scale ecological features and needs to be refined further to account for local fine-scale ecosystems.
- In the case of displaced activities, such as fishing, it may be appropriate to phase out activities over a period of time, to allow alternative livelihoods to be developed, and to reduce the burden of compensation.
- Depletion (overfishing) of areas surrounding reserves because of the concentration of commercial fishers excluded from reserves would have a negative impact on species numbers. Restriction may also lead to resource conflict between commercial fishers.
- Concerns that the displaced commercial fishers will impact on the operations of other commercial fishers or on the catch available for recreational fishers.
- To assist the transition of commercial fisheries resulting from the establishment of the CMRs, the CMR Review should recommend that management plan implementation coincide with the structural adjustment for affected operators.
- Fair compensation, including marketing costs, is required for any areas where fishing is prohibited, to cover any cost associated with a transition to another business model, such as 'green tourism'.
- Commonwealth marine sanctuaries are needed to supplement the tiny area covered by state marine reserves, as very little of existing areas are actually no-take zones free from fishing and other impacts. Increase the level of protection for marine sanctuaries across the network.

- Zoning is supposed to be based on a representative approach and therefore it is anomalous to have adjacent areas in Commonwealth and state waters in reserves, as this is duplication.
- There are significant benefits, both direct and indirect, from marine reserves. Trawling, longlining and gillnetting should be excluded from these areas to protect fish stocks.
- Retain the existing zoning at a minimum and improve and expand the MNPZs throughout the CMR estate.
- In order to provide an adequate level of protection, there needs to be at least one strict nature reserve (IUCN Ia or II) within each bioregion.
- Within each reserve there should be a minimum of 30% IUCN Ia and II to ensure full and adequate protection.
- Reserves that have low-level protection due to oil and gas leases/activities are changed, once the lessee has ceased operations in the area, to IUCN Ia or II zones.
- Where existing CMRs have less than 30% of their area in IUCN Ia or II, increase coverage to at least this level, providing coverage for all geomorphic units and across depth gradients; particular attention needs to be paid to the continental shelf.
- In order to meet the NRSMPA primary goals and principles, which it does not currently meet, the zoning would need to be adjusted to include greater protection and representation of marine habitats in highly protected areas, especially on the continental shelf.
- Current protection across all the CMRs is not adequate, particularly on the continental shelf. There should be significant and individually large no-take areas in our marine reserves, as called for by marine scientists and covering all habitat types as set out in the Goals and Principles.
- Dive tourism is estimated to contribute approximately $4.2 billion to the Australian economy. Winding back of marine national parks would place at risk not only the future of marine biodiversity but also the viability of our businesses and Australia's international reputation as a world-class nature tourism destination.
- The review should use the Devilliers *et al.* four-step framework when considering the CMR in the Coral Sea and the CMR networks in the South-west, North-west, North and Temperate East marine regions.
- IUCN II zones need to be large to be fully effective. Pelagic (and, to a lesser extent, benthic) fishes are often highly mobile. Large areas are needed to reasonably ensure a sufficient biomass of fish is protected for the designations to be meaningful in the first place. Certain small zones could help protect specific, small, iconic features from bottom trawling or future seabed mining. Successful conservation of marine biodiversity requires reserve designs to meet five minimum criteria: (1) no take, (2) well enforced, (3) established over long time frames, (4) big (more than 100 km^2), and (5) contain isolated habitat. It will be essential for the network to meet these criteria to be successful in achieving the primary goal of the NRSMPA.
- The Commonwealth network of marine reserves as they stand have achieved a CAR system of marine reserves with good connectivity between individual reserves.
- The Goals and Principles do not provide appropriate guidance for the overall achievement of all CMR regions. The CMR Review must begin with the identification and prioritisation of threats to Australia's marine biodiversity. The specific activities

and their resultant impact/threat to marine biodiversity should be determined and then prioritised for management.

- Two important growth areas in marine research have led to significant advances in knowledge since the inception of the CMR and provide overwhelming support for implementing a well-designed and managed marine reserves system: (1) increased understanding of the role of connectivity in maintaining marine populations, and (2) understanding the impacts of a changing environment.
- Adequate, well-spaced reserves containing suitable habitat for targeted species provides important SZs for these species to grow, reproduce and disperse across the wider region, restocking depleted areas (whether seasonally or in less frequent episodic events). Careful planning in reserve design between existing inshore protected (state designated), offshore (CMR) and even terrestrial national parks, will also be key to providing connectivity for many species.
- It is essential that reserve design is fit for purpose. The network of reserves needs to meet the CAR criteria and have clarity as to the intent and purpose of the marine reserves while minimising the impact on fisheries.
- Management plans and managers need detailed knowledge of baseline conditions and standard monitoring protocols and methodology including the storage of and public access to environmental data.
- Marine national parks do not address root causes. There should be increased resources allocated to activities including compliance, monitoring, enforcement, education, and Indigenous ranger programs. All other zones except MNPZs, including recreational fishing zones, or those that include vertical zoning like benthic protection zones, only offer partial protection and are designed either to achieve particular social or economic outcomes or to act as buffers to the MNPZs.
- MNPZs should only be declared where Australian species are scientifically identified as possibly endangered.
- CMRs have the capacity to be baseline areas for scientific research and monitoring.
- The issue of threats is an important one but the primary purpose of marine reserves is not threat mitigation but to protect, conserve and maintain biodiversity. Research should focus on understanding functional response to changing environmental conditions and to potential risks, using highly protected marine reserves (IUCN Ia and II) as reference areas.
- The general benefits of no-take marine reserves to society as a whole—directly to conservation, education, recreation and management, and indirectly to tourism and coastal planning—are so important that a systematic approach to their creation is in the public interest.
- Marine reserve networks need to have quantifiable audit-based frameworks, to assess the efficacy of the network in achieving its objectives, encompassing ecological, social and economic objectives. Each network should have its own research plan devised with regional stakeholder engagement. There is a need for increased general research in the area.
- Promoting citizen research avenues and using citizen science is a valuable way to engage stakeholders in research activities such as evaluation of disease, marine mammal protection and SZ exemptions.

- A future research priority should be the continued mapping of Biologically Important Areas and the mapping of sperm and southern right whale distribution in Australian waters.
- Re-evaluate activities and use checklists at both state and Commonwealth levels to reflect cause-and-effect rationalism. Target the source of each specific threat and make it accountable in lieu of bans to all forms of fishing as a resilience mechanism to these increasing threats.
- Adaptive management planning is critical to the success of the reserve network.
- Marine reserve design should be based on robust science and, unless new scientific data come to light, the boundaries of the existing reserves should not be changed. The management plans should contain well-defined conservation values to assist in impact risk assessments.
- Management plans must be preceded by the necessary and appropriate risk assessments and prioritisation of these risks, and only then drafted to deal with these threats. All activities should be considered under the same broad assessment criteria, and no single activity should be treated differently to other activities.
- There is a need for establishment, maintenance and monitoring of larger improved enforcement and management strategies. The regulatory impact statement (RIS) talks about establishing a monitoring program after the reserves are created. However, these two strategies, whilst deserving of separate RISs, should be developed in conjunction with each another to ensure a seamless transition from the new management strategy into enforcement and monitoring processes.
- Scientific research and monitoring should be permitted within all zones, provided it does not compromise the values of the reserve area. Destructive sampling at small scales (such as fish, plankton, habitat sampling) should be permitted. The burden of proof should be on the proponent of any activity. Monitoring and reporting of such research should be publically available for scrutiny, just as for any other activity.
- The differing allowable uses between the existing South-east network and the proposed networks for identical zone types/colours is confusing for commercial operators, particularly those that operate across networks.
- The zoning arrangements and communication materials for the reserve should be consistent with the adjoining state reserve to assist users who may not be aware of the jurisdictional boundaries/requirements.
- Management arrangements must take into account retrieval of fishing gear, vessel transiting and landing of fish caught outside a CMR within the CMR due to drift etc. A 30–50 m buffer zone was needed to account for line drift close to MNPZs
- Oppose recreational fishing in SZs.
- Alter the operation of the MNPZs (IUCN II) to allow recreational fishing. Catch-and-release recreational fishing, including game fishing, is not an 'extractive' activity and therefore should be permitted.
- Excluding recreational and game fishers from MNPZs would jeopardise participation in valuable Australia-wide tag-and-release research for billfish and marlin species; therefore approved tag-and-release activities should be permitted in the reserve.
- Spearfishing is a selectively sustainable activity and therefore should be allowed in all zones, including MNPZs. Where additional protections are required, harm minimisation practices should be used, not blanket bans.

- There is support for a review process and subsequent drafting of management plans that recognise the importance of collaboration with the industries that make up Australia's marine economy (such as fishing, resources, tourism) and ensure future investment in exploring and developing Australia's offshore energy resources.
- The oil and gas industry is the largest investor in, and the biggest contributor to the Australian economy from, Australia's marine environment. Investors need certainty in marine reserve planning and clarity in the approvals process for activities in or near reserves. The approvals process for these activities should be streamlined.
- The existing environmental safeguards available under the processes of the EPBC Act and the Offshore Petroleum Gas Storage Act are robust and provide a well-managed offshore petroleum industry. Ban oil, gas and mining exploration with marine reserves, and demersal (bottom) and midwater trawl within marine reserves.
- There should be no concessions given to mining exploration and minerals or gas extraction in any zonal category of the network, and to do so would undermine the integrity of the reserves.
- Oil, gas and seabed mining activities can have a impact on Indigenous cultural values of the reserves and these activities should be restricted.
- Management plans must permit the continuation of shipping and other port-related activities within the zones. The plans should specify that activities such as the placement of clean dredged material in the MUZ or Special Use Zone (IUCN Category VI) is consistent with permitted uses within the zone.
- The definition of commercial vessel transit should be altered to include a reference to prevailing circumstances or conditions. Clarity is also needed as to whether anchoring or drifting are permitted activities.
- Management plans should acknowledge and clearly articulate the requirements for installation, repair and maintenance of submarine cables as these are items of nationally significant infrastructure.
- It would be helpful if the co-existence of new CMRs and existing submarine telecommunications cables were acknowledged, and any implications for new cables and maintenance activities associated with existing cables, such as permit conditions and time frames.
- Submarine cables would normally avoid areas of intense environmental significance such as MNPZs; however, the large MNPZ in this reserve makes avoiding the area when laying and undertaking maintenance of submarine cables impractical.
- A requirement to secure a permit for laying and maintenance of submarine cables as proposed in the set-aside management plans is inconsistent with the provisions of the UNCLOS, which protects the right to construct, operate and maintain submarine cables in the contiguous zone, EEZ and continental shelf. The requirement to consider whether it is practicable for a submarine cable to be located outside a zone is inconsistent with the rights in the UNCLOS to lay submarine cables on the continental shelf without the consent of the relevant coastal state.
- Create a corridor between Australia's EEZ and marine parks to provide 'eyes on the ground' for the fishing industry. Create a fishing-permitted corridor of 20 nm to ensure foreign fishing fleets/vessels do not enter or fish where parks adjoin the EEZ.

- National support in the shape of a marine reserve and sanctuary for Cape Byron Marine Park would work towards success in efforts on the different scales, which are linked and nested together.

NORTH COMMONWEALTH MARINE RESERVES NETWORK

Entire region

Feedback on the North CMR Network in its entirety, without specifying a particular CMR within the network, included:

- Sufficient detail should be articulated in the management plans, particularly relating to research, monitoring, review and evaluation systems, to enable assessments of how/if the plan is meeting its objectives.
- The North Marine Region contains nine marine bioregions with no marine sanctuaries despite governments committing to, and scientific support for, establishing marine sanctuaries in all of Australia's marine bioregions over 15 years ago.
- The North CMR Network seems to lack significant wildlife corridors between the reserves, which is concerning considering Guiding Principle 13: 'Size and shape should be orientated to account for inclusion of connectivity corridors and biological dispersal patterns within and across marine reserves.'
- There is a need for more MNPZs, particularly on the shelf and upper slope.
- Stronger conservation is needed including expanded IUCN II, reduced oil, gas and mining and a permanent ban on seabed mining.
- The North Marine Reserves Network contains areas of international, national and regional significant species which need greater protection from destructive extractive industries such as oil, gas and seabed mining.
- MUZs and SPZs within the North CMR Network should be made HPZs (or otherwise restrict all mining activities).
- Exclude all mining from all non-lease areas.
- Increase number/size of IUCN II zones and engage with Indigenous ranger groups about the management of the reserves.
- The zoning plan for the North Marine Reserves Network would be substantially improved by prohibiting mining from operating in those parts of the marine reserves that are currently outside exploration leases. This would increase the area protected from mining and exploration from 3% to 18% of the North Marine Region.
- Retain the current reserves and prohibit oil, gas and seabed mining for the benefit of tourism operators.
- Recommend that some of the Special Purpose and MUZs should be changed to HPZs in recognition of the social, health and environmental impact mining can have on coastal Indigenous communities.
- Ongoing formal consultative structures funded by government, especially to allow users to be engaged in the management of the reserves network, are critical.
- The tourism industry is an important driver in the NT. Opportunities for non-fishing related tourism activities are very limited in the North CMR Network. Tourism operators should be consulted with, particularly when considering potential management plans.
- Indigenous sacred sites and sites of significance and heritage should be identified and included in the management plan as well as the role of the Indigenous community in the management of those sites.

- There should be a commitment to including Indigenous stakeholders as decision-makers and managers of the reserves at all levels, including an amended wording of the North CMR Network Draft Management Plan.
- Where government planning processes overlap with Indigenous people's sea country this needs to be recognised by incorporating traditional owners and other relevant Indigenous bodies as decision-makers rather than a stakeholder within the process.
- Indigenous people and organisations should be partners in the management of sea country within CMRs.
- It is imperative that management plans are prepared in collaboration with local Indigenous ranger groups.
- Restrictions on mining should be placed wherever possible within the remaining reserves within the North CMR Network. The lack of restrictions on mining activities should be addressed, as these pose the greatest risk to marine-based livelihoods and therefore on the social, cultural, environmental and economic wellbeing of remote Indigenous communities.
- The North CMR Network, particularly its MNPZs, are a piece of critical regional economic infrastructure for maintaining and growing the $1.6 billion tourism industry.
- Future management plans should not impact fishing-related tourism or recreational fishing use on water areas where it currently occurs.
- Allow recreational/sport fishing/trolling in MNPZs, and provide amenities such as safe moorings and ability for recreational fishers to identify no-fishing areas.
- There is no scientific evidence to support the blanket exclusion of bottom trawling by NPF fishers in the North (and North-west) regions. To the contrary, there is a large body of scientific evidence that indicates trawling in these fisheries is not a threat to biodiversity in the North Marine Region. Bottom trawling is an acceptable activity under IUCN Category VI and occurs in various marine reserve networks around the world, including in the GBRMP and in the Commonwealth's East Marine Region marine reserve.
- Seventy per cent of the Timor Reef Fishery is contained within a reserve and therefore the impact of this reserve on the commercial fishers is high.
- 'Class approvals' for commercial fishers are generally supported by industry to facilitate much-needed administrative and operational efficiency. However, there is still a need for greater certainty about the development of class approvals and dealing with sensitive information.
- There should be continued fishing access to important long-term research survey sites which provide critical inputs into stocks assessments. Uncertainty remains around the fishing industry being able to use new gears.
- The current network of reserves is not supported by the commercial fishing industry because the FGRAs and regulatory impact statement used in the design process were fundamentally flawed and would have a significant impact on the industry.
- Question the scientific integrity of Multiple Use zoning that allows all forms of mining and oil and gas activity, but not trawl or other forms of demersal fishing which, in the case of the NPF, have proven to be low impact.

- Amend the Commonwealth displaced effort policy so that it is in line with the Fisheries Queensland guidelines prior to any adjustments being rolled out for the new MPAs in Queensland.
- The plans should allow for explicit review and assessment of 'prohibited' activities, (including new gears and/or new information) based on a clear, transparent process and sound science
- No risk assessment was carried out on any other stakeholder, based on the fact their activities are managed under other legislation. Commercial fishing is managed under other legislation, so this has led to the position that managed fishing operations in the North Marine Region are deemed of greater risk to park values than mining operations.
- Propose a fishing corridor adjacent to (inside) the 200 nm limit outer boundaries of West Cape York CMR, Arafura CMR and Oceanic Shoals, which will provide a commercial fisher monitoring presence in this area and establish a buffer zone for protection from illegal foreign fishing. Unprotected borders and foreign fishing activity are a major concern.
- This area is targeted by illegal foreign fishers and the reserves will need to be adequately policed.

Joseph Bonaparte Gulf Commonwealth Marine Reserve

- An MNPZ in the reserve, as recommended by the CSIRO, would satisfy the Government's longstanding commitment to create an MNPZ within the Anson Beagle, Cambridge-Bonaparte and Bonaparte Gulf bioregions.
- A new MNPZ (IUCN II) west of 128°30'E should be established to include the unique carbonate Medusa Bank and King Shoals.
- The southern and western branch adjacent to Western Australian and NT should be designated as a habitat/species management area (IUCN IV). This area is important nesting and inter-nesting habitat for the largest population of the flatback sea turtle.
- The North Marine Reserves Network could significantly improve the protection of marine life by the total removal of pelagic gillnetting and set mesh nets (demersal gillnets) from this reserve.

Oceanic Shoals Commonwealth Marine Reserve

- An MNPZ in the reserve, as recommended by the CSIRO, would satisfy the Government's longstanding commitment to create an MNPZ within the Oceanic Shoals bioregion and provide protection for the turtle feeding habitats of the Bonaparte Gulf.
- The reserve should be changed to an MNPZ (IUCN II). Although the area is highly prospective for oil and gas, a consequence of such activity is the compression of rock layers as the oil and gas is removed. Such subduction is likely to damage the surface shallow water ecosystems that have built up on the carbonate banks utilising the hydrocarbon seeps.
- Where sections of this reserve are not of prospective interest, they should be made HPZs to enhance the overall potential for biodiversity protection across the North CMR Network.
- The holothurian banks are an important feeding ground for turtles and birds; therefore this area should be changed to a MNPZ.

- Advocated that 10% of the reserve should be MNPZ, particularly around KEFs, as there were clear indications of important foraging areas for turtles, though little was understood about exact locations.
- Entry and speed limits for commercial shipping, particularly to service oil and gas operations, should not be considered by the DNP as this would constrain mining operations in the area.
- There is a loss of access for commercial fisheries—specifically including commercial trawling and fishing prospectivity.

Arafura Commonwealth Marine Reserve

- The canyon area is currently not protected from main threats, particularly from oil and gas and angling.
- As a KEF for Australia's marine life, the Arafura Canyons (north-east of Darwin) are Australia's largest canyon system in tropical waters. Please establish marine sanctuaries to protect these canyons' marine life.
- An MNPZ in the reserve, as recommended by the CSIRO, would satisfy the Government's long standing commitment to create an MNPZ within the Arnhem-Wessel bioregion and protect the tropical canyon system.
- Habitat zones should be created over any non-prospective areas of the Arafura reserve.
- Establish an MNPZ in the reserve to highlight the importance of protecting this area, which sits adjacent to the Coburg Peninsula World Heritage Area.
- Advocated that 10% of the reserve should be MNPZ, particularly around KEFs as there were clear indications of important foraging areas for turtles, though little was understood about exact locations.
- The south-eastern tip of the reserve should be changed to an SPZ to allow gillnetting for grey mackerel.
- Change the zoning in the reserve to allow gillnetting and demersal trawling.
- If certain fisheries were excluded from CMR zones near the boundary of Australia's EEZ, these areas would be illegally fished by overseas fishers. Better to have these areas fished by managed Australian fisheries than illegally fished by overseas fishers.

Arnhem Commonwealth Marine Reserve

- An MNPZ in the reserve, as recommended by the CSIRO, would satisfy the Government's longstanding commitment to create an MNPZ within the Arnhem-Wessel bioregion.
- The North CMR Network could significantly improve the protection of marine life by the total removal of pelagic gillnetting and set mesh nets (demersal gillnets) from this reserve.
- Establish an MNPZ in the reserve, as the potential loses for future tourism (recreational fishing) would be outweighed by the benefits to biodiversity conservation.
- The reserve will impact commercial fishing for grooved tiger prawn around Cape Arnhem.
- Oil and gas and seabed mining should be prohibited in the reserve.

Wessel Commonwealth Marine Reserve

- HPZs should be created over the MUZ.
- Consideration should be given to how IPAs and marine reserves can complement one another and the importance of Indigenous consultation.
- Indigenous organisations would like to manage the overlap of the IPA with the CMR as seamlessly as possible. This highlights the need for Indigenous consultation so as to not limit the commercial opportunities available to the Indigenous communities.
- There is also an opportunity to expand the Wessel Marine National Park region to protect a broader section of the marine bioregion from oil and gas, seabed mining and fishing impacts and to support substantial opportunities for cultural tourism from the town of Nhulunbuy.
- There are concerns that trawling displaced by the Wessel CMR would impact Browns Cove.
- Negative impacts for commercial fishers and downstream processing—change 'green zone' to 'blue zone' to allow continued access to historical trolling grounds.
- Allow demersal (bottom) trawl fishing in an area of the CMR and allow all forms of gear endorsed by the fishery within the area of overlap between the reserve and the demersal fishery.
- The north-west tip of the reserve (extending over north Wessel Islands) should be changed to an SPZ.

Limmen Commonwealth Marine Reserve

- The reserve needs a SZ as recommended by the CSIRO and is under threat from seabed mining.
- Limmen Bight is under threat from seabed mining and contains no marine sanctuaries. At a minimum, a zoning scheme which bans mining in the Limmen reserve should be applied.
- An MNPZ in this reserve would satisfy the Australian Government commitment regarding the United Nations Environment Programme for dugongs. The MNPZ should join the adjoining state reserve.
- The area is remote, supports very significant conservation values, and is central to large communities at Borroloola and Robinson River. Inadequate levels of protection for Limmen CMR may impact the opportunity to create an ecotourism hub in this region. There is an opportunity to connect the Limmen CMR to the Limmen Bight National Park.
- There are concerns about potential commercial fishing effort shift into the areas used by recreational fishers as a result of the zoning in the Limmen CMR.
- Greater protection is needed as this location has been recognised as integral for marine life by state and federal governments, yet remains without any marine sanctuaries and is under threat from potential seabed mining.
- At a minimum the zoning for this reserve should prohibit seabed mining as the reserve covers the only portion of the Gulf of Carpentaria coastal zone of NT waters.
- Seabed mining and associated pollution will destroy the benthic habitat that had been identified as having an internationally significant population of dugong.

- Change the reserve to an MNPZ. The small geographic area of this reserve should not belie its significance as a marine hotspot, particularly as a breeding ground for dugong.
- There is support for the zoning and a preference to increase the level of protection for this 'forgotten treasure' reserve and the dugong population.
- A Habitat Protection zoning for the reserve would prohibit trawling operations while catering for the social and economic needs of the local communities.

Gulf of Carpentaria Commonwealth Marine Reserve

- The reserve does not contain an MNPZ and is under threat from seabed mining.
- The western branch, north of Wellesley Islands, should be listed as RUZ (IUCN II). This is an area of high species diversity composed of many oceanic species of seabirds and sea snakes, particularly leatherback sea turtles.
- Traditional owners and Indigenous ranger groups are often the only groups with capacity to undertake management actions in remoter areas such as this reserve, so there should be a focus on working with these peoples in development and implementation of management plans.
- Traditional owners would like the MNPZ extended west within the reserve to include areas to the north of Mornington Island that are critical habitat due to prolific turtle nesting areas.
- Traditional owners were disappointed with the zoning change in the management plan to allow trawl operations in the reserve. Traditional owners would not support moving the MNPZs northward as this would reduce protection for green turtles that were a significant part of their culture.
- The NPF supports the solutions-based amendment to the zoning as proposed in the set-aside management plan for the reserve to change the zoning to include a GUZ allowing continued access for the fishery to this highly productive fishing ground that was also part of a survey network (with the CSIRO).
- An unintended consequence of the revocation of the North CMR Network management plan is that the 'general purpose' zone established to minimise impacts on the NPF in the reserve has now resorted back to a 'light blue' zone which will have the effect of prohibiting trawling in the area. Reinstate the 'general purpose zone' to allow bottom trawling to continue.
- Amend the Commonwealth Displaced Effort Policy so that it aligns with the Fisheries Queensland guidelines prior to any adjustments being rolled out for the reserves.
- This reserve has negative impacts for commercial fishers and downstream processing. Change 'green zone' to 'blue zone' to allow continued access to historical trolling grounds and safe operations of fishing vessels.
- The area to the west of Mornington Island is an important fishing area for tiger prawns.

West Cape York Commonwealth Marine Reserve

- The area is not suitable for MNPZ as it is subject to heavy ship traffic, polluted with marine debris and has regular illegal fishing incursions, and the Carpentaria Shoal has been destroyed by AMSA light ship mooring and the associated 'maintenance'. Change the 'green zone' to 'blue zone' to allow continued access for commercial trolling.

- The North Marine Reserves Network could significantly improve the protection of marine life by the total removal of pelagic gillnetting and set mesh nets (demersal gillnets) from this reserve.
- The bordering light-blue MUZ near the 3 nm mark needed to be changed to dark-blue SPZ and extended 7 nm for the N3 offshore pelagic gillnet.
- There is concern about loss of access to prime commercial fishing grounds in the green zone in the West Cape York CMR.
- Amend the Commonwealth displaced effort policy so that it aligns with the Fisheries Queensland guidelines prior to any adjustments being rolled out for the reserves.

NORTH-WEST COMMONWEALTH MARINE RESERVES NETWORK

Entire region

Feedback on the North-west CMR Network in its entirety, without specifying a particular CMR within the network, included:

- Every bioregion in the North-west network should contain an SZ or MNPZ.
- The zoning plan should be adjusted to ensure that destructive fishing practices are fully removed from the North-west CMR Network.
- Expand the level of protection within the North-west region and increase the area of MNPZs on the shelf and upper slope areas. The boundaries of the existing reserves satisfy the conservation goals of CMR network policy while not unduly restricting access to areas which are potentially prospective for hydrocarbons.
- The protection of a comprehensive and representative reserve system in the long term will also require a greater emphasis on Sanctuary and Limited Use Zones as opposed to the overabundance of MUZs in a marine reserve.
- The North-west network seems to lack significant wildlife corridors between the reserves, which is concerning considering Guiding Principle 13. Size and shape should be orientated to account for inclusion of connectivity corridors and biological dispersal patterns within and across marine reserves.
- The zoning scheme for the North-west CMR Network should not allow mining in those areas where mining leases do not currently exist.
- The main issue is policing the zones and, without the support of the local communities and user groups of these marine parks, they will be abused.
- Ensure sufficient resourcing of the proposed zoning scheme, including education, communication and enforcement programs.
- Changes are needed to the activities list to allow some flexibility and enable the zoning to achieve its conservation values.
- Management plans' cultural heritage should be protected and plans should integrate Indigenous values at all levels of management, and Indigenous peoples should be included as key partners in management of reserves.
- To maintain consistency with native title rights, limitations on activities should explicitly state that they do not apply to Indigenous activities.
- The time frame to develop the previous management plans did not provide adequate time for engagement with Aboriginal peoples.
- Indigenous objectives, values, rights and interests should be reflected throughout the management plan and not only within separate Indigenous strategies or chapters.
- Each marine reserve management plan should require the establishment of a formal management committee inclusive of all affected stakeholders.
- Increased protection in the network will assist the emerging dive tourism sector.
- The zoning information around ballast water exchange states that 'restrictions may be applied in some areas'. Clarification is needed on what these restrictions are and where they would occur and whether vessels that are compliant with IMO ballast water exchange requirements would be affected.

- Marine reserve management plans should set out clear guidelines for reviewing allowed activities within zoning throughout the lifespan of a 10-year plan, covering topics such as issues to trigger a review, scientific monitoring of zoning effects and mechanisms that reduce administrative, compliance and cost inefficiencies.
- The objectives of the North-west CMRs, not just at a network level but at a reserve and zone level, need to be more clearly articulated.
- Allow recreational/sport fishing/trolling in MNPZs
- Future research priorities should focus on the impacts of petroleum exploration and development on biodiversity, and provide valuable baseline data to benchmark management effectiveness and the status of conservation areas.
- Zoning should allow for access to reserves by titleholders in the event of an emergency (such as oil spill response).
- Special arrangements for aquaculture will need to be incorporated into the management plan for activities such as pearl fishing and the associated tasks such as holding, seeding and turning.
- Allow demersal gillnet and demersal longline in Multiple Use zoning arrangements and remove SPZs.
- The North-west CMRs do impact fishing grounds, eliminating sandy bottom demersal trawl sustainable scallop fisheries.
- If a project has been assessed under various other forms of legislation, then no additional approval/permit should be required.
- Concerns that the proposed zoning in the Kimberley CMR may hamper future growth opportunities for ports and future port developments in King and Yampi sounds.
- Opposition to any changes to multiple use zoning which may restrict or complicate future pipeline construction affecting the oil and gas industry.

Shark Bay Commonwealth Marine Reserve

- Retain the existing zoning and increase the level of protection for the reserve, with MNPZs connecting outer shelf regions.
- Establish an MNPZ in this reserve to protect important seagrass beds from longline and gillnets.

Carnarvon Canyon Commonwealth Marine Reserve

- Retain the existing zoning within the reserve.
- A portion of the western HPZ should be changed to MUZ to reduce impacts on deep-sea crab fishers and address issues with drift by pelagic longliners. The area proposed for the MUZ is in the south-eastern corner, in order to allow access to the 1000 m depth contour.

Ningaloo Commonwealth Marine Reserve

- The zone over Ningaloo Reef needs to be changed to an MNPZ to provide protection for humpback whales and whale sharks.
- An MNPZ in this region would improve the diversity of marine habitats protected in the North-west Marine National Park.

- MNPZs should be placed adjacent to Cloates sanctuary in areas least used by recreational fishers.
- Retain the existing zoning and increase the level of protection for the reserve, with an MNPZ connecting outer shelf regions.
- Increase the level of protection for whale sharks.
- Marine sanctuaries are a major asset to the dive industry and include some of our most iconic and popular dive sites, such as the Ningaloo Reef.
- Ningaloo Reef is a 'forgotten treasure' and home to the iconic whale shark and a marine hotspot off Australia's north-west, and therefore requires additional protections such as an MNPZ.
- It is necessary to increase Sanctuary/high-level protection zones that are proven mechanisms to assist in the recruitment of hig.h-value food species and for the protection of less well represented species. Most critical areas are closely bordered by MUZs that allow endangering activities such as the passage of oil tankers and the undertaking of oil and gas exploration. Ningaloo is a case in point with the gas flare-off from drilling clearly visible from the coastline.
- Ningaloo needs to be fully protected as it is vital as a nursery for whale sharks and as a breeding ground for many other tropical fish.
- Ningaloo is also managed well, although the SZs could be slightly smaller. Bag limits seem fair and from my experience fishing has not impacted on stocks.
- There should be a regulated shark fishing industry as whaler species in particular are becoming very bold and aggressive in the Ningaloo marine park.
- Engage Ningaloo Coast World Heritage Advisory Committee in future stakeholder engagement processes.

Gascoyne Commonwealth Marine Reserve

- The area within the reserve south of 21°39.923'S should be rezoned to MNPZ (IUCN Category II) with no depth limit applied.
- The waters adjacent to the Muiron Islands Marine Management Area should be included in the Gascoyne CMR—with a minimum protection level of IUCN VI.
- The HPZ should be extended eastward along the northern and southern boundaries to join with the outer (western) boundary of the Ningaloo CMR. This will provide adequate protection for the canyon systems that supply nutrients to Ningaloo Reef.
- A 10 km 'buffer' zone around Ningaloo Reef CMR would inhibit access to portions of a number of petroleum leases for areas with proven economic quantities of hydrocarbons.
- Create an MNPZ extending from the edge of Ningaloo Reef (within 150 km) all the way out to the deep ocean.
- The potential oil extraction from areas as close as 45 km to Ningaloo should not be allowed to occur.
- The MNPZ should be changed to an HPZ to allow recreational fishing and pelagic longlining which has no contact with the seafloor.
- There should be continued access for trawling in the MUZ.

Montebello Commonwealth Marine Reserve

- Disagree with allowing oil and gas expansion/exploration within the reserve.
- Establish a new MNPZ in the Montebello CMR.

Dampier Commonwealth Marine Reserve

- Retain the existing zoning for the reserve.
- The reserve should be allocated an SPZ that incorporates restricted anchorage, no diving and no commercial activities unless it is trolling, and restrict recreational fishing to trolling only.
- Should the SPZ (Ports) be implemented as per the set-aside management plan, then clear statements that no further approvals for port-related activities are needed under the plan if the activity has prior approval under the EPBC Act.
- The North-west CMR Network Management Plan should clearly state no further approvals are required for port-related activities in the SPZ (Ports) (IUCN VI) if the activity (1) has been approved under Part 9 of the EPBC Act, (2) is subject to a decision under Part 7 of the EPBC Act that the action is not a controlled action if taken in a particular manner, or (3) is authorised by a permit issued under the Sea Dumping Act. If class approval is required, parameters (such as scope, timeline, decision-making authority, process) should be detailed.
- The HPZ should be changed to an SPZ (Ports) as negotiated in the development of the set-aside management plan. Existing (and approved) port-related activities within the current HPZ appear inconsistent with that IUCN classification.
- Consideration should be given to aligning objectives of 'SPZ (Ports)' to objectives for an IUCN Category VI zone.
- Existing activities approved prior to the declaration of the reserve should be recognised and not require additional approval.
- If a class approval is needed for an SPZ (Ports), then any additional requirements should be clearly articulated in the plan.
- The protection of the area covered by the MNPZs should be downgraded to an IUCN IV or VI zone that would continue to protect the seafloor habitat without unduly restricting other activities.
- The MNPZ should be modified to allow recreational fishing, or move the MNPZ to the north-east part of the reserve or change to an HPZ.
- MNPZs should be modified to allow recreational fishing. If there are benthic zones such as coral, sponges or others that require additional protection, then a special management area should be identified in a footnote to the zoning. An alternative solution is to move the IUCN Category II zone to the north east corner of the yellow zone and to retain it as green but apply the same access as proposed above.
- The MNPZ should be moved to the east of the reserve and prohibit anchoring in the reserve.

Eighty Mile Beach Commonwealth Marine Reserve

- The MNPZ does not compliment the adjoining state marine reserve. Portions of the reserve adjacent to the state reserve should be zoned SPZ, with special consideration given to allow pearling and recreational fishing activities.

- MNPZs should be placed adjacent to existing state sanctuaries in areas least used by recreational fishers.
- The reserve zoning could be changed to an HPZ as this would be compatible with commercial uses such as pearling and charter fishing.
- A new MNPZ (IUCN II) should be created adjacent to Anna Plains state SZ to protect a nursery area for juvenile Spanish Mackerel.
- The reserve should include a SZ or at least a RUZ in the northern portion (near Port Smith).
- Create an MNPZ that connects to the outer shelf region.
- Establish a new MNPZ to meet conservation objectives while minimising impact on the pearl dive fishery.
- Increase the protection for the reserve by changing the entire reserve to an MNPZ.
- Change the MUZ IUCN VI to an SPZ (Pearling) (IUCN VI) to allow the continuation, or expansion, of pearl oyster fishing and farming activities (and related ancillary activities). This zone should include all activities save the high-risk and high-impact activities of demersal fishing, oil and gas and mining, which are expressly excluded.

Roebuck Commonwealth Marine Reserve

- Increase the protection in this reserve to protect snubfin dolphins.
- Increase the protection for the reserve by changing the entire reserve to an HPZ.
- In the Roebuck CMR the MUZs should become MNPZs or at least well-regulated RUZs, which should complement the soon-to-be-announced state Roebuck Bay Marine Park and protect whale migration routes.
- Anchoring in the area of Disaster Rock is causing extensive damage and an SPZ over Disaster Rock is needed to prohibit anchoring in that area.
- The reserve zoning should be changed to an HPZ as this would be compatible with commercial uses such as pearling and charter fishing.
- Change the MUZ IUCN VI to an SPZ (Pearling) (IUCN VI) to allow the continuation, or expansion, of pearl oyster fishing and farming activities (and related ancillary activities). This zone should include all activities save the high-risk and high-impact activities of demersal fishing, oil and gas and mining, which are expressly excluded.
- Change the zoning from Multiple Use to Recreational Use (IUCN II) to protect dolphins, whales and turtles and prohibit anchoring at Disaster Rock.
- The current Broome Port outer pilot boarding area is adjacent to the southern boundary line of the Roebuck CMR. lt is suggested that this boundary is lowered to limit any future conflicts between the marine reserve and port activities.

Mermaid Reef Commonwealth Marine Reserve

- Zoning for Mermaid Reef should be changed from SZ to RUZ (IUCN II), with a SZ on the cod hole and the zone constricted to catch and release only.
- Retain the existing zoning.

Argo-Rowley Terrace Commonwealth Marine Reserve

- The MNPZ should be extended to include, at a minimum, the significant canyon systems that lie in the north-east of the reserve that are important for a range of cetaceans and seabirds.
- In the Argo-Rowley Terrace CMR, an MNPZ (IUCN II) should be created south of 16°58'S and east of 118°48.400'E
- Extend the SZ in the north-east to cover the canyon habitat.
- An MNPZ, or a well-regulated RUZ, is needed around all three Rowley Shoals.
- A MNPZ (IUCN II) should be created south of 16°58'S and east of 118°48.400'E to protect some of the world's healthiest coral reefs and to provide baseline data for scientists to measure the health of coral reefs elsewhere.
- The Argo-Rowley Terrace CMR MNPZ (IUCN II) should be extended eastwards from 118°59'E, 15°10'S to the eastern and northern boundary of the reserve to protect important ecosystems that support large aggregations of sperm whales, beaked whales and seabirds.
- Mermaid Reef should be changed from SZ to RUZ (IUCN II) sanctuary, with a SZ on the cod hole and the zone constricted to catch and release only.
- The oil and gas industry did not bid for leases near the globally significant Rowley Shoals and the review should capitalise on this and create an MNPZ around the shoals.
- The Rowley Shoals is threatened by oil and gas mining and therefore an MNPZ is essential to protect this area.
- This area is highly targeted by illegal foreign fishers and the reserve will need to be adequately 'policed'.
- Change a portion of the MUZ around the Rowley Shoals into an SPZ or HPZ to allow continued access for commercial fishers and change the area below the Rowley Shoals into an HPZ.

Kimberley Commonwealth Marine Reserve

- The MNPZ should be maintained and ideally increased to provide protection to the calving, nursing and resting areas for the largest population of humpback whales in the southern hemisphere.
- An MNPZ should be created to complement state reserves and protect the waters adjacent to Maret Islands, Long Reef, Cassini Island and Holothuria Reef.
- The MNPZ should be moved further south adjacent to the Camden Sound Marine Park to allow recreational fishers to access this important fishing area. Alternatively an HPZ (IUCN IV) or RUZ (IUCN II) should be extended south of Cape Leveque to allow recreational fishing while protecting the area.
- Boundaries should remain unchanged, or Regional Panels should engage in direct consolations with affected oil and gas titleholders.
- An MNPZ should be created around the Adele and Lacapede islands to protect important sites for dugong, turtles and whales.
- The MNPZ (IUCN II) should be extended northwards to 122°21'E, 15°00'S and eastwards to the Western Australian boundary. A new MNPZ (IUCN II) should be established from 125°26'E to 126°26'E to the Western Australian boundary.

- An MNPZ should be established in the eastern part of the reserve as it is the least used area.
- Change the MUZ into an HPZ to provide adequate protection for the main calving and feeding areas for humpback whales.
- The MNPZ should be modified to allow recreational fishing or changed to an HPZ.
- Entry and speed limits for commercial shipping, particularly to service oil and gas operations, should not be considered by the DNP as this would constrain port and mining operations in the area.
- The definition of vessel transit need to be clarified for circumstances such as inclement weather or marine hazards that preclude transiting via the most direct route, and whether anchoring or drifting in the reserve are permitted activities.
- Change the MUZ IUCN VI to an SPZ (Pearling) IUCN VI to allow the continuation, or expansion, of pearl oyster fishing and farming activities (and related ancillary activities). This zone should include all activities save the high-risk and high-impact activities of demersal fishing, oil and gas and mining, which are expressly excluded.
- Move the MNPZ western boundary east approximately 8 nm to allow commercial fishing (mackerel) on reef AUS 323.
- Extend the MNPZ in the Camden Sound area.
- The MNPZ should be moved further south adjacent to the Camden Sound Marine Park. Alternatively a HPZ (IUCN IV) or RUZ (IUCN II) should be extended South of Cape Leveque.
- The MNPZ should be changed to allow pelagic trolling/line for mackerel at the shoals. A small area within the current MNPZ could be made HPZ, but would need to retain access to a reef at 16°01.209'S, 122°26.655'E.
- The vast areas of the Kimberley are not heavily fished by recreational fishers; however, they are an important drawcard for many tourists and the increasing reliance on tourism by Indigenous communities. The area immediately to the north-west of Cape Leveque is a popular seasonal fishing area for species such as mackerel, sailfish and other pelagic species.
- Management plans should integrate Indigenous values at all levels through aligning with the management plans and values contained in state and terrestrial conservation protection regimes, National Heritage listings and Saltwater Country Plans. The management plan should allow for the extension of IPAs over saltwater country.
- The enormous green zone has been put close to where Indigenous and non-Indigenous tourism operators operate. Allow recreational fishing in the IUCN II and reduce the size to create a buffer zone around the tourism operators.
- The MNPZ to the west could restrict charter business opportunities for Aboriginal communities; so that MNPZ should be changed to yellow and the MNPZ could be increased in the east of the reserve.
- An SPZ should be created to mitigate concerns raised about shipping and associated anchorage areas in or just outside the reserve.
- The MNPZ should be relocated as far away as possible from access points such as Cape Leveque.

- Intersperse the MUZs with HPZs where there are no oil and gas leases and provide an MNPZ over the holothurian banks.

Ashmore Reef Commonwealth Marine Reserve

- There is support for the existing zoning to ensure species are protected.

Cartier Island Commonwealth Marine Reserve

- There is support for the existing zoning to ensure species are protected.

SOUTH-WEST COMMONWEALTH MARINE RESERVES NETWORK

Entire region

Feedback on the South-west Network in its entirety, without specifying a particular CMR within the network, included:

- There is support for the existing zoning, with a view to flexibility of the boundaries in the management plans to enable tailoring zones to changing climactic conditions.
- There is support for MNPZs and the positive effects for the dive and tourism industry and the flow-on/spill-over effects for recreational fishers in terms of larger fish and greater catches.
- Add Marine Sanctuary zoning in the Southern Kangaroo Island, Western Kangaroo Island, Western Eyre and Great Australian Bight CMRs to include sperm whale feeding grounds in these reserves.
- Priority areas for high levels of protection should be the bathymetrically complex areas of the shelf edge between 50 m and 200 m depth; none of the green zones designated in the Perth Canyon, Two Rocks, Jurien and Abrolhos plans encompass such areas. The green zones are too far offshore and their significance with respect to the abyssal biota is not clear. The insignificant green zone in the Two Rocks reserve doesn't seem to have an identifiable objective and Jurien appears superimposed over an existing experimental Western Australian fisheries closure.
- Zoning should be simplified, consistently colourised, allow the same activities, be fully coordinated with and not duplicate state reserves in regard to the representative habitat captured in reserves.
- The MNPZs at the head of the Perth Canyon, Two Rocks and Jurien Bay should all be increased to at least 100 km2 to bring them into line with recent scientific research.
- Dedicated funding for research and monitoring, including publically available network 'report cards' on the networks would add to the existing knowledge base and assist decision-making.
- Promote the benefits of joint management with Indigenous organisations or natural resource management groups.
- Management plans must clearly articulate the decision-making framework, quantifiable audits and reviews of assessments as well as cost-effective compliance, monitoring and reporting activities.
- Further restrictions on oil and gas operations must also consider the social and economic impacts for Australia's energy security.
- Remove oil and gas mining/exploration as an allowable activity, such as by changing the SPZ to HPZ or SPZ (Oil and Gas Exclusion).
- The Great Australian Bight reserves should exclude oil and gas.
- The network needs better balance with regard to greater protection against oil and gas operations/exploration and seabed mining, with over 80% of the reserves allowing these activities.
- Changes to zoning including changing all Multiple Use and SPZs outside oil and gas leases to CPZs; removing pelagic longlining from MUZs; removing pelagic longlining, demersal gillnetting and longlining from SPZs; and changing SPZs (Oil and Gas) to Conservation Zones.

- A future research priority should be the impact of, and potential mitigation measures for, oil and gas exploration/mining in the network.
- Restrict the use of midwater trawling and purse-seine netting in shallower parts of the South-west Marine Region due to the potential for significant impacts on non-target species and seafloor ecosystems.
- The zoning plan for the South-west CMR Network should remove trawling, longlining and gillnetting from all marine reserves.
- Note the benefits of geo-fencing that provides GPS alerts when entering an MNPZ to assist fishers to comply with zoning arrangements.
- MNPZs appear too far offshore to encompass the local processes driving epipelagic ecosystems, and their significance with respect to abyssal biota is unclear.
- Increasing the size and number of MNPZs to ensure adequate protection for whales and sea lions is required.
- Fewer and larger MNPZs would have a superior conservation outcome.
- Prospective fishing rights should be recognised socially and economically in the South-west.
- Tuna fishing is highly opportunistic and fishers need to follow the fish stocks and catch/spot the highly migratory fish in the right conditions in order to fill their quota. The industry had invested heavily in shallow water nets that did not interact with the seafloor.
- Spatial shifts in southern bluefin tuna migration and catching areas need to be incorporated into the zoning arrangements.
- The issue surrounding towing of fish through MNPZs should be resolved in the South-west CMR Network, following the recent allowance of these activities in the same zone type in the South-east CMR Network.
- Support allowing longlining for tuna in MNPZs and HPZs.
- MNPZs are too big and too permanent. Consideration should be given to geographically relocating them on a five-yearly basis.

Southern Kangaroo Island Commonwealth Marine Reserve

- Add further MNPZs to protect the feeding grounds of blue and sperm whales.
- Remove oil and gas mining/exploration as an allowable activity within the CMR through changing the SPZ to HPZ or SPZ (Oil and Gas Exclusion).
- Designate the entire CMR a MPZ to allow for flexibility in commercial sardine and rock lobster fishing.

Western Kangaroo Island Commonwealth Marine Reserve

- Add further MNPZs to protect the feeding grounds of blue and sperm whales and the Kangaroo Island Canyon.
- Remove oil and gas mining/exploration as an allowable activity within the CMR through changing the SPZ to HPZ or SPZ (Oil and Gas Exclusion).
- Designate the entire CMR a MPZ to allow for flexibility in commercial sardine and rock lobster fishing.

- Change the MNPZ to Habitat Protection to allow commercial fishing for southern bluefin tuna that now frequent the zone due to changed migratory patterns due to climate change.
- Remove the MNPZ in this reserve as it duplicates and protects the same conservation values as the adjoining state reserve.

Western Eyre Commonwealth Marine Reserve

- Support the existing zoning, particularly the MNPZs near the Pearson Island group, as a good balance for conservation and compliance.
- Add further MNPZs to protect the feeding grounds of blue and sperm whales.
- Propose altering the SPZs to SPZ (Oil and Gas Exclusion) to increase protection against exploration activities, waste discharge and accidental spills.
- Oil and gas exploration and mining is a significant risk to the most significant whale nurseries in the world, located in the Great Australian Bight. All MNPZs should remain and all other zones should be oil and gas exclusion zones.
- Remove oil and gas mining/exploration as an allowable activity within the CMR.
- The CMR network complements the state network of marine reserves in not only achieving connectivity, replication and adequacy but also being designed in a manner that will enable ease of compliance effort and management practices.
- The zoning is inadequate and the CMR appears to have been engineered to avoid limitations on commercial fishing, which is ridiculous considering this is the primary adverse activity occurring in the CMR.
- New information was available that there was a biodiversity hotspot that attracted divers near Pearson Islands in the CMR.
- The Perth Canyon CMR should include recreational fishing as a permitted activity in the MNPZs and relocate the small MNPZ to the south-westernmost canyon head.
- Change a small area of the south-west corner of the SPZ (at 34°24'S) to MUZ with demersal trawl permitted as it overlaps with the tuna fishery. The zone could be called an SPZ (Trawl).
- There is concern about loss of access for commercial fisheries, including commercial purse seining (sardines and tuna) and trapping (rock lobster)
- Change the MNPZ near Pearson Islands to Habitat Protection where water depths exceed 40 m for commercial sardine fishers and also for southern bluefin tuna that now frequent the zone due to changed migratory patterns due to climate change. The MNPZ could possibly be extended north of Pearson's Island provided no commercial fishers were impacted.
- Change the MNPZ near Pearson Islands to SPZ to allow for commercial rock lobster fishing.
- Change the southernmost MNPZ to Habitat Protection to allow commercial fishing for southern bluefin tuna that now frequent the zone due to changed migratory patterns due to climate change.
- Alter the MNPZ near Pearson Islands to remove the dogleg resulting in a straight north–south zone boundary that could possibly be extended southward provided no other fishers were impacted.

- The north-eastern boundary of the MNPZ should be squared up to a line at 33°59.6'S.
- Extending the SUZ southward to assist commercial tuna fishers.

Murat Commonwealth Marine Reserve

- Change the entire reserve to an SPZ to allow the continued operation of the Northern Zone Rock Lobster Fishery in that CMR.

Great Australian Bight Commonwealth Marine Reserve

- Extending the MNPZ to the western boundary of the CMR would increase protection for southern right and blue whales with minimal impact on commercial fishers.
- Remove oil and gas mining/exploration as an allowable activity within the CMR.
- Commercial fishing industries sought confirmation that there would be no east–west temporal closure once the South-west CMR Network Management Plan came into effect.
- The SPZ in the reserve runs through the only viable part of the trawl fishery and the zone should therefore permit demersal trawl, as this does not pose a threat to the muddy bottom seafloor.
- Alter the SPZ to an SPZ (Oil and Gas Exclusion) to increase protection against exploration activities, waste discharge and accidental spills.

Twilight Commonwealth Marine Reserve

- Support the zoning in this reserve without change.
- The Australian sea lion colony located in the Twilight CMR is very isolated and may even be a sub-species. Conservation and monitoring is critical.
- It was disappointing that the MNPZ/CMR was not included in the initial reserve development/consultation in order for stakeholders to make holistic/cumulative assessments of CMR impact.
- Reduce the MNPZ to 10 nm across and change the remaining reserve to an MUZ (that allows gillnetting) to maintain conservation values and minimise the impact on rock lobster fishers.
- There is concern about loss of access for commercial fisheries, including commercial gillnetting and rock lobster trap.

Eastern Recherche Commonwealth Marine Reserve

- Change part of the MNPZ into a Special Purpose scallop zone (IUCN VI) to allow fishers to selectively trawl these areas and for rock lobster and gillnet fishers.
- Change the MNPZ in the lower part of the reserve to match the 1000 m depth contours.
- There is concern about loss of access for commercial fisheries, including commercial trolling and gillnetting.

South-west Corner Commonwealth Marine Reserve

- Support the zoning, in particular the MNPZ, to maintain and protect biological diversity and tourism. Advocate changing the HPZ, MUZ, SPZ and SPZ (Oil and Gas Exclusion) to MNPZ to allow for connectivity of protection for mobile species including whales.

- The boundaries of the MNPZ should be aligned with adjoining state reserves such as the Cape Freycinet and Ngari Capes state reserves.
- Although it is not heavily fished, the misalignment with the state boundary is confusing and will cause unnecessary compliance issues and unnecessary confusion.
- Remove oil and gas mining/exploration as an allowable activity within the entire Mentelle Basin.
- Alter the operation of the MNPZs (IUCN II) to allow recreational fishing.
- Altering the boundaries of the two MNPZs west of Cape Naturaliste and rezoning some areas as HPZs will ensure the viability of the West Coast Demersal Scalefish Fishery.
- Move the southernmost MNPZ boundary south off the continental shelf to 36°S.
- Change the southernmost MNPZ to an SPZ or divide it up into smaller MNPZs within an SPZ.
- Change the SPZ to an MUZ to exclude commercial gillnetting and longlining.
- The MNPZ south-east of Augusta could possibly be moved towards Augusta.
- The MNPZ near the Investigator Islands should be extended south to provide a full transect of the shelf and slope, including the Swan Canyon.
- The green and yellow zones in the South-West Corner CMR cover the very best areas for catching bigeye tuna and southern bluefin tuna in the WTBF Fishery, affecting commercial fishing and fishing prospectivity.
- Remove the MNPZ south-east of Augusta as this is the highest priority area for handline and gillnet fishing. The zone could also be changed to allow shark fishing.
- Change the MNPZ over the shelf below Walpole to an MUZ.
- The MNPZ near Margaret River affects gillnet and handline fisheries and these activities should be allowed in that area.
- Change the north-eastern SPZs and MNPZs into MUZs. Extend the HPZ east to 117°20'E. The SPZ near Walpole should be changed to an MUZ. The most northern MNPZ should be changed to an HPZ due to gear drift from pelagic longliners. The most western MNPZ should be changed to an HPZ due to the impact on longline fishers.
- At Donnelly Bank (south of Augusta), the MNPZ would impact shark, lobster and finfish fisheries. This zone should be changed to SPZ (Oil and Gas Exclusion). There is a need to consider the cumulative impacts on the Augusta region from Western Australian state marine parks over the shelf area.

Bremer Commonwealth Marine Reserve

- Retain and/or expand the MNPZ to include the Bremer Canyon in order to protect diversity and nursery/feeding/calving grounds for southern right whales and Australian sea lions.
- Remove oil and gas mining/exploration as an allowable activity within the CMR through oil and gas exclusion zoning, or rezone to SPZ (Oil and Gas Exclusion).
- The current reserve network should be retained and the oil and gas exclusion zone expanded to cover the entire Mentelle Basin.
- The MNPZ should be extended to cover the entire reserve.

- The continued growth of the tourism industry is reliant on a diversity of high-quality experiences like those found in the Bremer Canyon. The MNPZ at Bremer Bay should now be extended southwards over the rest of the Bremer CMR to secure this major new regional tourism asset for the region.
- Establish a marine sanctuary over the Bremer Canyon, which would support a whale watching and research industry in the canyon, and protect a unique and poorly understood marine environment.
- Alter the operation of the MNPZ (IUCN II) to allow recreational fishing, or change the zone to an HPZ.
- Any proposals to close recreational fishing will adversely affect towns nearby the Bremer CMR; allow recreational fishing in the IUCN II zone.
- Change part of the MNPZ into a Special Purpose scallop zone (IUCN VI) to allow fishers to selectively trawl these areas.

Geographe Commonwealth Marine Reserve

- Support the existing zoning and in particular the MNPZ to maintain and protect biological diversity and whale calving areas, and advocate for extension of this zone to include multiple habitat and depth zones to link inshore habitats with deeper water and protect transient species.
- Maintain or increase MNPZs in the Geographe CMR and change the zoning plan to completely remove gillnetting and longlining from the marine reserve.
- Increase protection for marine habitats, marine life, birdlife and whales in the CMR by increasing the area of MNPZs or excluding oil and gas exploration/mining and seabed mining.
- The Geographe CMR does not align with the state-based Ngari Capes Marine Park and should include recreational fishing as a permitted activity in MNPZs.
- In Geographe Bay CMR, inconsistent zoning and allowed gear type arrangements between existing Western Australian state marine parks and the proposed CMR network are unworkable and nonsensical.
- The boundaries of the CMR zones should be aligned with adjoining state reserves.
- Alter the operation of the MNPZs (IUCN II) to allow recreational fishing, or change the zones to HPZs.
- Change SPZ to MUZ to exclude demersal trawl, gillnet and demersal longline. There is no room for any fishing in Geographe Bay other than properly managed recreational fishing.
- Remove gillnetting (to mitigate whale bycatch/entanglement), trawling and longlining as allowable activities within the CMR.
- Remove the westernmost MNPZ, which is used by holiday/seasonal recreational fishers.
- Change the zoning in the central portion of the CMR to GUZ (IUCN VI) to make seasonal demersal trawling for scallops an allowable activity.
- Amalgamate the SPZs and MUZs into a single zone that allows demersal gillnet and longlining.

Perth Canyon Commonwealth Marine Reserve

- Expand the MNPZs, particularly at the head of the canyon, and remove mining/exploration as an allowable activity in the CMR to protect the feeding grounds of blue and sperm whales.
- Alter the zoning and/or boundary arrangements for the MNPZ at the head of the canyon to allow recreational fishing and sport/game fishing. Alternatively move the zone to the head of the south-westernmost canyon.
- Alter the zoning for the MNPZ at the head of the canyon to an RUZ (IUCN II) to allow recreational/game fishing or change it to an HPZ.
- The Perth Canyon CMR should include recreational fishing as a permitted activity in the MNPZs and relocate the small MNPZ to a canyon head which has less activity.
- Remove gillnetting and longlining as an allowable activity within the entire CMR.
- There is concern about loss of access for commercial fisheries, including commercial pelagic longlining.
- Remove oil and gas mining/exploration as an allowable activity within the CMR.
- Change the larger western MNPZ into an HPZ and move the larger zone southward to the bottom of the reserve.

Two Rocks Commonwealth Marine Reserve

- Alter the operation of the MNPZ (IUCN II) to allow recreational fishing, or change the zone to an HPZ.
- The placement of the MNPZ was questioned as lacking an identifiable objective, as it could have been placed anywhere along the eastern edge.
- At Two Rocks, the MNPZ should be expanded over the shelf to protect a fuller diversity of depth habitats.
- Note the value of MNPZs to the dive tourism industry. This zone should be doubled in size.
- MNPZs within the Two Rocks CMR could help the South-west dive tourism industry expand by up to 150%.
- Include recreational fishing as a permitted activity in MNPZs.

Jurien Commonwealth Marine Reserve

- The MNPZ appears to be superimposed over an existing experimental fishery closure and does not appear to be a high priority bathymetrically complex area.

Abrolhos Commonwealth Marine Reserve

- Expand the MNPZ near the Houtman Canyon to include adjacent west coast canyons.
- The logic behind the main MNPZ was unclear; however, it did cover the Houtman Canyon.
- Remove oil and gas mining/exploration as an allowable activity within the CMR.
- Change the MUZ into an MNPZ.
- Move the MNPZ north of Abrolhos Islands into two possible northern locations to facilitate the rock lobster and demersal scalefish and mackerel operators.

- The HPZ should be extended south and east in a straight north–south line to reduce the impacts on the shark fishery. The triangle zone left between the HPZs and MNPZs should be changed to an MUZ. The area east of the MNPZ should be changed to an MUZ.

TEMPERATE EAST COMMONWEALTH MARINE RESERVES NETWORK

Entire region

Feedback on the Temperate East Network in its entirety, without specifying a particular CMR within the network, included:

- With only approximately 1.6% of the continental shelf area and 8% of continental slope area and Tasman front area incorporated in reserves, all of these areas should be MNPZs to protect these ecosystems and aggregation sites for dogfish and other sharks and rays. At least one seamount from each of the four major clusters of the Tasmantid Seamounts should be MNPZ.
- Increase the MNPZs throughout the bioregion, particularly those encompassing the continental shelf, canyons and seamounts that appear under-represented.
- Increasing MNPZs in the network will enable effective assessment of management, provide valuable scientific reference sites and better protect biodiversity.
- Demersal trawling is a destructive and indiscriminate fishing method and should be excluded from all reserves.
- Auto-longlining should be prohibited on Taupo and Barcoo seamounts.
- There is support for the existing zoning arrangements, in particular the economic benefits to tourism and dive operators of the MNPZs.
- Existing no-take areas are far too limited, being less than 5%, and the coverage of these areas should be much greater, particularly on the continental shelf area. MNPZs should cover 30% of each reserve.
- Oils, gas and seabed mining operations/exploration should be prohibited in the entire region.
- Accessible and credible citizen science projects would be positive engagement with the community.
- Alter the operation of the MNPZs (IUCN II) to allow recreational fishing.
- An impact of the Coral Sea zoning is that it will shift effort back into the Temperate East but because of the update of vessels in the Temperate East there is no ability to shift the effort because of the current zoning. Zoning affecting longline fishing will put pressure on limited swordfish stocks.
- As longline fishing is carried out under an ecologically sustainable management plan and does not interact with the seabed, and abatement measures are in place to avoid interaction with other sea life, longlining should be permitted in all reserves.
- Auto-longlining should be permitted in the region consistent with the South-east CMR Network Management Plan and the AFMA ruling that auto-longlining in MPZs will be permitted. Longlining should also be allowed in all zones as it does not impact the benthic habitat.
- The commercial fishing industry has adapted to the proposed zoning in the set-aside management plans, and further increases in protections would have a detrimental effect on commercial fishers and their families.
- The commercial fishing industry requires certainty that zoning will not change within the 10-year period with the flexibility to conduct new risk assessments for new gear types. Current FGRAs do not appear to be suitable to inform decision-making without

significant refinement. Changes to current zoning would require extensive additional consultation with industry.

Gifford Commonwealth Marine Reserve

- Demersal trawl should be permitted on the Gifford Seamount to allow commercial fishing of Alphonsino.
- The lack of an MNPZ is an omission that must be rectified. The entire reserve should be upgraded to an MNPZ.

Norfolk Commonwealth Marine Reserve

- The area known as 'the box' 40 nm x 67 nm around Norfolk Island needs to be recognised in the management plan, included on maps, managed by the Norfolk Island Fishing Association and dedicated for the use of Norfolk Island. Future zoning for the box should not prohibit potential future aquaculture activities from being developed.
- The single large-scale MUZ around Norfolk Island is inadequate for the protection of the shallow water habitats and ecosystems fringing Norfolk Island, Phillip Island and Nepean Island (the Norfolk group).
- The Green Zone for the northern section of the Norfolk CMR should be extended much further south to ensure a selection of seamounts, some of which rise to within 1000 m of the surface and to ensure that a good representation of the continental slope and shelf as well as abyssal depths are protected as this area.
- Provision will be required in the management plan for the discharge, disposal or release of industrial or domestic waste from the island into the surrounding ocean.
- Clarity is needed for the use of permits/class approvals for activities around and between the islands such as commercial tourism (fishing), commercial aviation such as aerial sightseeing, anchoring of commercial shipping etc.
- The HPZ should be upgraded to an MNPZ.
- The efficacy of the MNPZ would be enhanced if the zone was expanded south to protect a selection of seamounts.
- The large MUZ for Norfolk Island and other closer islands is insufficient and specific zones should be implemented for areas such as Ball Bay, Emily Bay and Slaughter Bay lagoons etc.
- The MNPZ should be extended over the Norfolk seamounts.
- The HPZ and MNPZ were issues given they prohibited harvesting of deepwater crustaceans. Access should be allowed to commercially fish crustaceans in these waters down to 800 m to 1000 m.
- The large MNPZ should be reduced to cover one seamount or canyon rather than many, with the remaining zoned as MUZ.

Lord Howe Commonwealth Marine Reserve

- The RUZ should be upgraded to MNPZ. A New MNPZ should be created in the southern region of the reserve.
- The MNPZ around Middleton Reef should be extended south to include Elizabeth Reef and the continental slope, in order to protect black cod populations.
- The MNPZ should not be reduced as it is particularly important for recreational activities such as diving and ecotourism.

- The local community on Lord Howe Island remains opposed to spearfishing in the adjacent waters.
- Spearfishing should be allowed around Lord Howe Island and Elizabeth and Middleton Reefs.
- No specific scientific evidence was provided for the extension of the MNPZ near Middleton Reef.
- Demersal trawl should be permitted on the Middleton Seamount to allow commercial fishing of Alphonsino. The MNPZ could be changed to an HPZ.
- The restrictions on fishing near the Elizabeth and Middleton Reefs should be minimised or commercial fishers should be able to retrieve their gear if it drifts into the zone.
- Longline fishing should be allowed around the in zones outside the Elizabeth and Middleton Reef IUCN II zone.
- Leave the current arrangement with the Middleton and Elizabeth Reef Park, to reduce further unnecessary difficulties being placed on remaining ETBF operators.
- Trapping should be allowed in the 10 nm to 12 nm around Lord Howe Island.

Central Eastern Commonwealth Marine Reserve

- The five seamounts and guyots north and south of the Derwent Seamount should be changed from HPZs to MNPZs to protect the habitat and species such as Harrison's dogfish.
- The western half of the MUZs should be changed to an MNPZ.
- Currently only three of the 15 Tasmantid Seamounts are protected from commercial fishing. An increased number of these seamounts should be protected in ensure connectivity. It is also known that individual seamounts do differ with respect to their biodiversity.
- The restrictions on fishing near the Derwent Hunter Seamount and other seamounts should be minimised or commercial fishers should be able to retrieve their gear if it drifts into the zone.
- The two HPZs in the Central Eastern CMR were issues given they prohibited harvesting of deepwater crustaceans. Access should be allowed to commercially fish crustaceans in these waters down to 800 m to 1000 m.

Solitary Islands Commonwealth Marine Reserve

- The MNPZ over Pimpernel Rock should be expanded north, south and west of the rock to adhere to the IUCN criterion that IUCN II zones should be 'large natural or near natural areas set aside to protect large-scale ecological processes'.
- The gap between the western arm of the Central Eastern CMR and the NSW Solitary Islands Marine Park should be closed by expanding the proposed Marine National Park zoned western portion of the Central Eastern CMR to the west, with the proposed SPZ (IUCN VI) subsumed by the higher category IUCN II zoning.
- An additional block of IUCN II zone should be added north, south and west of Pimpernel Rock extending eastwards to 153o32'E.
- The MUZ should be upgraded as it is inappropriate to site/surround an MNPZ with an area of such low protection.

- The SPZ of the reserve is highly productive for commercial trawl fishing and lobster, trap and line fishing grounds, and excluding these activities would have significant impact on the industry.
- Spearfishing should be allowed in the MNPZ over Pimpernel Rock as it is not a threat to the grey nurse shark or black cod populations.

Cod Grounds Commonwealth Marine Reserve

- Spearfishing should be allowed in the MNPZ as it is not a threat to the grey nurse shark or black cod populations.

Hunter Commonwealth Marine Reserve

- The lack of an MNPZ is an omission that must be rectified.
- The southern half of the reserve and a section of the north-east area should be zoned MNPZ.
- The Hunter reserve has been designated with the most minimal Marine National Park zoning, despite including productive waters on the continental shelf and Biologically Important Areas for humpback whales. Zoning within the reserve should be reviewed to address this gap in protection.
- In the Hunter CMR a new MNPZ IUCN II should be created whose southern boundary extends east–west at 32o50'S and northern boundary extends east–west at 32o35'S.
- A new Marine Park Zone should be created at the north-western corner of the Hunter reserve with the new boundaries defined by being two new sides parallel with existing boundaries. The new northern boundary line is to start at 153o25'E.
- The Hunter reserve consists only of MUZ (IUCN VI) and SPZ (IUCN VI). This is inadequate and some area of this large reserve should be afforded higher protection. This reserve is ideally placed to increase the protection for continental slope and the abyssal plains.
- The MUZs and SPZs offer inadequate protection and should be upgraded to increase protection for the continental slope and abyssal plains.
- The SPZ of the reserve is highly productive for commercial trawl fishing and lobster, trap and line fishing grounds, and excluding these activities would have significant impact on the industry.

Jervis Commonwealth Marine Reserve

- Lacks an MNPZ that would enhance the protection of shelf rocky reefs.
- The southern half of the reserve should be zoned MNPZ.
- The boundaries of Jervis Reserve should be extended to the limit of coastal waters, and a new MNPZ should be created at the south of the Jervis CMR by creating a northern boundary to the reserve east–west at 35o12'S.
- The MUZs and SPZs offer inadequate protection and should be upgraded to increase protection for the continental slope and abyssal plains.
- The reserve should be changed to at least an HPZ to provide minimum protection for the area without impacting commercial fishers.
- Commercial longlining and trawling should be prohibited in the reserve to protect against bycatch and habitat degradation.

- Longlining should be prohibited in the SPZs and MUZs to avoid bycatch of non-target species.

CORAL SEA

Entire region and Coral Sea Commonwealth Marine Reserve

Feedback on the region in its entirety, including the Coral Sea CMR, included:

- There is support for the existing zoning arrangements as per the management plan as these were negotiated with all parties and represented a good compromise.
- There is support for the existing zoning arrangements for the reserve.
- Implement the existing marine zoning immediately at a minimum and preferably expansion of the green zones in key iconic locations such as Osprey Reef to secure the area for the lucrative prestige yacht tourism industry and support businesses that visit the region to dive and snorkel on the reefs of the Coral Sea.
- The MNPZs represents a compromise between globally significant conservation values and a desire to keep certain areas within the reserve open to commercial and/or recreational fishers. The broad structure of this compromise was first outlined in 2011 with the release of the draft plan for the Coral Sea CMR where it was largely welcomed by both commercial and recreational fishers.
- The existing zoning has reasonably taken into account the diverse interests of stakeholders such as ecotourism operators, recreational fishers and associated businesses, and the wider tourism industry of the area, as well as those advocating for protection of the marine environment who are in agreement that the current zoning provides a good level of protection for a diverse range of marine life and ecosystems which will ensure the sustainability of both recreational and commercial interests into the future. Dive tourism is an important industry that is expected to more than double, and the reserve will be a world-class drawcard.
- Maintain current protections with minimal amendments as dive tourism operations can generate between $11 million and $15 million annually. Making changes other than minor improvements to the level of marine national park protection risks destabilising the balance of the zoning arrangements.
- The MNPZs meet the minimum Australian science community recommendations for protection for the Biologically Important Areas of endangered (IUCN red list) green turtles and for seven of the seabirds that breed and feed in the Coral Sea.
- Retain the existing zoning and enhance protection for the currently unprotected reefs with high levels of uniqueness, which should be given high protection. These include Boot and Ashmore reefs, Tregrosse Reef, Wreck Reefs, Frederick Reef and Calder Bank, Willis Islets, Queensland Plateau Inner Reefs (including Flinders Reefs, Flora Reef, Holmes Reefs, Heralds Surprise and Dart Reef).
- Recreational scuba does not impact on marine ecosystems. The considerable economic benefits of domestic and international dive tourists, who most value intact ecosystems and lots of fish, and whose activity is sustainable and non-extractive, should be recognised.
- Mooring sites should be provided in the CMR for spearfishing and other tourism operators.
- Access to lagoons for safe anchorage is a safety issue for recreational fishers and spearfishers.

- The proposed zoning in the reserve will prohibit charter fishing operators and therefore force operators out of business. The zoning should allow for charter operators to continue their activities, including spearfishing.
- The impact on recreational and charter (game) fishers is minimised by the inclusion of the HPZs, closer to the continent, that allow these activities to occur.
- Permits should be available to allow small-scale tourism vessels to catch and consume, or for spearfishing in MNPZs, but not game or commercial fishing.
- The MNPZ should allow live-aboard tourism operators the ability to take enough fish to feed their crew/passengers given the need for self-sufficiency in these remote areas.
- Preferential treatment should be considered for displaced charter vessels for government contracts in the reserves.
- That IUCN Category II reserves should be accessible for recreational and charter fishing with special management plans in place if there are zones that require additional protection.
- If the reefs in the Coral Sea are adequately protected, then there is an opportunity for the dive tourism industry to increase direct sales by an estimated $9 million each year, with critical flow-on effects for the economy of north Queensland.
- The closure of the Coral Sea MNPZ to charter and recreational fishing would provide minimal conservational benefit especially to the highly migratory species targeted by catch-and-release game fishers, but would erode a world famous sport fishing industry and the associated economic returns (AUD$20 million).
- Catch-and-release 'gold zones' could be implemented for key reefs in the Coral Sea, with a range of management strategies for each reef, to enable continued charter fishing operations.
- To offset the impacts on recreational fishers, there should be a recreational fishing trust fund established to provide education, research and infrastructure such as secure moorings, fish-attracting devices and artificial reefs.
- The Coral Sea should be defined as a 'no go' destination for game fishing to ensure it retains a high level of pristine condition.
- Lack of scientific basis for excluding ecologically sustainable spearfishing from MNPZs.
- Catch-and-release sport fishing is compatible with sustainable resource management and should be permitted in MNPZs.
- A new zone type should be created that allows for 'catch-and-release' sport fishing encompassing the major recreational sport fishing zones such as Kenn, Wreck, Frederick, Osprey and Diamond islets. This zone would be based on international fisheries models such as the Alaskan management policy for salmon and halibut.
- Split zoning of reefs in the Coral Sea would allow for protection while permitting the aquarium fish and coral industry to continue. An MNPZ on the reefs would force the industry to close down.
- An essential component of a Coral Sea CMR Management Plan and its ongoing resourcing should be a research and monitoring program to address key features/conservation values and uncertainties.

- Establish a Cairns-based marine reserve management capacity, with long-term funding, to deliver on the management actions and strategies identified under the Coral Sea and North CMR management plans.
- Organisations are offering to take a lead role in coordinating development of partnerships between agencies to improve communication and collaborative efforts, and to harmonise and clarify fisheries management and marine reserve management arrangements.
- The management plan will need to consider existing moorings put in place by charter fishing operators.
- Any future changes to the zone boundaries need to take into account new science such as seafloor data that could help to minimise potential damage to newly discovered geomorphic features, such as seamounts, knolls, canyons and benthic communities.
- There is a need for integrated management strategies between departments (the Department of the Environment and the Great Barrier Reef Marine Park Authority) managing the Coral Sea and the Great Barrier Reef.
- People have dumped things at Osprey, Shark and Vema reefs, and channel markers like those at Solitary Islands Marine Park and imposing an environmental management charge or recreational fishing license may be a good idea for ongoing management.
- There is a need for the establishment, and maintenance of larger and improved enforcement strategies such as additional monitoring programs.
- By focusing on the areas needing high levels of protection and potentially lowering protection elsewhere, the needs of a broader range of stakeholders may be accommodated. Rather than single large reserves, some scientists believe that networks of no-take areas better balance conservation needs with fisheries.
- Improve adaptive management and annual communications. Consider a five-year review time frame for the management plans and an 'annual report card' communication strategy with communities, industry, local government, regional development bodies, and others.
- It is imperative that a stakeholder consultation and reference group be established to provide comprehensive and relevant input into management recommendations both in the establishment and in the operational phases of the management plans.
- There is a need for standard monitoring protocols and methodology, and detailed knowledge of baseline conditions and temporal sampling to determine natural change.
- A coordinated, collaborative approach to gathering, managing and releasing marine environmental data needs to be developed. The results of research and monitoring must include all the raw data and especially metadata, and must be publicly accessible to enable examination and independent analysis.
- The Government should provide support to existing community science programs in the Coral Sea and consider the establishment of additional community science programs to increase the capacity of regional stakeholders to have ongoing engagement with the management of the Coral Sea CMR.
- There is a need for the development of a fair and transparent process for permitting scientific research in the region.

- Management plans for marine reserves should attract dedicated management budgets that will support activities such as surveillance and enforcement. These activities may not otherwise have been funded and provide an opportunity to reduce the existing illegal fishing, not create new illegal fishing as some parties have suggested. Furthermore, these surveillance activities are often conducted in collaboration with Coastwatch and may present opportunities to increase border security.
- The reserve is a high-seas reserve that will require substantial surveillance to ensure compliance and stop poaching from foreign fishing vessels if the commercial fishing fleet is no longer permitted in the area.
- Ship movements, particularly east coast coal exports, are a risk not addressed in the management plan.
- Clearer classification of how the various preservation categories will influence shipping channels, and greater restrictions on shipping with vessel tracking requirements, are needed for sensitive environmental areas.
- Any changes to permissible shipping routes or practices in the reserve could adversely affect the logistics chain for Hay Point coal exports. Shipping arrangements are covered by the North-East Shipping Management Plans.
- The CMR Review should define a process to permit clean port related dredged material from inshore areas to be relocated into deep offshore waters such as the MUZ of the reserve.
- A future research priority should be the impact and mitigation of petroleum exploration on biodiversity, which may be able to facilitate future exploration in sedimentary basins including the Townsville Basin.
- An assessment regarding the impacts of commercial fishing practices and transiting shipping on the MNPZ should be undertaken.
- There is strong community support for a ban on demersal and midwater trawling, seafloor mining and oil and gas exploration.
- The net social and economic value or the Coral Sea CMR is estimated to be $1.2 billion, with positive effects outweighing restrictions for recreational and commercial fishers.
- Protection from seabed mining and oil and gas mining is needed to protect the Coral Sea and adjacent GBRMP from oil spills and the impacts of these activities.
- The Coral Sea CMR contains Australia's largest MNPZ, which extends over 51% of the CMR. This is one of the few places in the world where such a large marine sanctuary for relatively intact tropical marine life can be established, making the conservation values of the area of global significance.
- The HPZ (seamount) is a thoughtfully devised solution to protect the seamounts, and the southern half of this zone could be extended to the west.
- Protection needs to be extended to incorporate in-shore areas to protect from shipping, dredging and dumping.
- Increase protection of the unique seamounts in the southern Coral Sea by prohibiting longlining.
- The MNPZ should be improved and expanded, with longlining removed north of 22°S and around Wreck Reef.

- Protection should be maintained in the biologically important area in the Coral Sea (Bellona Reef) that includes humpback whale breeding and calving areas.
- Increase environmental protection in the southern Coral Sea, where only seven out of 25 reefs are protected.
- In order to be effective, MNPZs should be a minimum of 100 km2. Therefore the MNPZs for Coringa Islets, Magdelaine Cays, Bougainville Reef, Marion Reef and the Osprey group of reefs should be expanded to ensure effectiveness. Furthermore, the currently unprotected reefs with high levels of uniqueness should be given high protection. These include Boot and Ashmore reefs, Tregrosse Reef, Wreck Reefs, Frederick Reef and Calder Bank, Willis Islets, Queensland Plateau Inner Reefs (including Flinders Reefs, Flora Reef, Holmes Reefs, Heralds Surprise and Dart Reef).
- Increase the level of protection of reefs, shoals, cays and all seamounts by including them in proposed Marine National Park zoning as well as habitats crucial to the continued survival of shark species and nautilus.
- Simplify the zoning scheme and prohibit longlining down to 22°S and provide adequate structural adjustment assistance to commercial fishers. All zones above 22°S that are not MNPZs and the HPZ (seamounts) below should be designated CPZs. Retain the MUZ south of 22°S and change the GUZ in this area to an MUZ.
- Flexibility is needed for commercial fishing operations that drift into reserves when retrieving gear or where gear drifts into reserves.
- Commercial fishers should be able to set their lines within the yellow zones and let the lines drift/retrieve their lines wherever the current takes them as lines can drift 100 nm a day.
- Auto-longlining should be permitted in the reserve consistent with the South-east CMR Network Management Plan. It is inconsistent that demersal trawl is permitted, and provided a GUZ for this purpose but auto longlining is prohibited in the reserve.
- The eastern boundary of the MNPZ should be moved westerly to 150.00'E to allow commercial fishing in that area, opening up opportunities for the remaining commercial fishers while protecting the valuable spawning grounds. The general area east of 150.00'E should allow longline fishing whilst providing protection against fishing methods that interact with the seafloor. The area west of 150.00'E and north of 'area E' could be a no-take zone.
- The best outcome for a sustainable commercial fishing industry is to allow longline fishing in MNPZs as this form of fishing does not interact with or damage the benthic habitat.
- Tuna longlining does not affect the benthic conservation values of the marine reserves or reef habitats and therefore should be permitted within the reserve.
- A CPZ should replace the MNPZ as it provides protection to the seafloor habitats while allowing longlining and other commercial fishing operations that do not interact with the seafloor.
- Longlining should not be excluded as it is managed as a sustainable fishery under the statutory Eastern Tuna and Billfish Management Plan. Owners of statutory fishing rights would be eligible for compensation for loss of those rights if longlining is prohibited.
- Any restrictions within the Coral Sea for longline fishing will immediately close established, family owned and operated commercial fishing businesses. Longline

fishing is an interactive type of fishing method and the drift from ocean currents means fishers need to ensure sufficient space so lines do not drift into a marine park, thus creating a much larger area restricted to fishing.

- There is a need for increased protection for the southern portion of the reserve, especially the reefs located there, to ensure that preserved areas are not disjointed and unconnected.
- Undertake a supplementary, comprehensive and detailed socio-economic analysis including calculation of the future value of lost fishing opportunity; the impact on upstream and downstream businesses; the cumulative impact on the Cairns and Gulf regions; the community impacts on remote towns; and quantification of economic benefits from the marine reserves.
- There is no scientific basis for closing the 'green zones' to surface longlining in the ETBF. The fishery complies with the EPBC Act and adheres to the strict limitations of its total allowable catches regardless of where the fish are caught in the ETBF zone. Commercial fishers need flexibility on where they can fish in order to catch their quota of highly migratory species.
- There is a lack of support for the MNPZs in the reserve as there has, to date, been no scientific justification for the size of the zone and the area is a sustainably managed fishery.
- Prawn trawling has been proven not to be unacceptable within a CMR through research undertaken within the GBRMP. Therefore, zoning and management plans should allow demersal (trawl) fishing over a greater area to mitigate the impact on other operators of shifting fishing effort. Without access to this area, the commercial fishing business would become unviable and the only viable option would be for the Commonwealth to buy out the business.
- Restricting purse seining in the Coral Sea would limit the ability to develop new fisheries and impact Australia's food security.
- Continue access to the Coral Sea (including reefs), for trap, line and beche-de-mer fishing that although not currently viable may be a viable alternative in the future.
- Extend the GUZ further north (past Marion Reef) and east (past Saumarez Reef) to allow commercial fishers to expand to capture emerging international markets.
- The lack of access to the reserve by commercial ETBF fishers will result in businesses closing, with a flow-on effect for shore-based processing/supply businesses with high levels of capital investment. This will also result in a diminished supply of locally caught fresh seafood. Static zoning is not an adequate method for the protection or management of migratory pelagic species such as tuna that migrate over the international boundaries and are being caught in large numbers outside the reserve.
- Trolling should be allowed at Osprey, Shark and Vema reefs and the other reefs in the Coral Sea because it only targets pelagic fish. Demersal fishing should not be allowed. A zoning system that would allow only trolling in an area adjacent to reef edges should be considered (referring to old 'olive zones' used in zoning the GBR as an example).
- The MNPZ east of the HPZ should be changed to a CPZ to allow further access for commercial fishers and yachts.

- There should be a corridor from Cairns to Papua New Guinea that provides for troll and handline fishing. This would allow charter fishing while in transit to PNG and provide fishing access for yachts transiting the area.
- Change the zoning east of the 150° meridian to CPZ to allow pelagic fishing of the area as this method does not interfere with the seafloor.
- It would be better to have smaller MPAs for areas which are special, such as the wrecks of warships, and there are ways they could be protected without having an impact on commercial fisheries. Instead of having one vast MNPZ, it would be better with smaller, more focused, better identified areas.

Osprey Reef

- Interim protection should be provided to this reef during CMR Review, and protection should be increased as an outcome to protect the shark populations on the western side of the reef.
- The boundary of the MNPZ should be updated to fully protect this reef.
- Expand and improve upon MNPZ. Not only are these reefs a key piece of environmental infrastructure for tourism, they also have a different evolutionary history to most of the other reefs in the Coral Sea.
- Two other specific sites on Osprey Reef should also be included within an MNPZ. They are 'Around the Bend' and 'False Entrance', which are not only popular dive sites but also important sites for reef sharks. In particular, white tip and grey reef sharks at Osprey Reef have been shown to be highly site attached, making them vulnerable to targeted fishing. Protecting these areas under no-take MNPZs is important to secure these populations.
- Expand the MNPZ to the boundaries of the HPZ proposed in the 2011 draft zoning plan.
- Revise and expand the MNPZs to increase protection of reef.
- Extend the zoning boundary out 1.5 km to 2 km away from the reef edge, or as recommended in the scientific literature to protect shark species.
- Complete protection for Osprey Reef should be considered. The dive sites around Osprey, such as North Horn, are justifiably world famous. Australia competes for the tourist dollar and ensuring the robust protection of top dive sites, with a generous buffer, will ensure we continue to attract international tourists seeking to experience nature unencumbered by extractive activities.
- The zoning over Osprey Reef should be simplified with 500 m buffer to ensure the adequate protection of the important reef slopes.
- The MNPZ over Osprey, Shark and Vema reefs is a key piece of regional infrastructure. Expand the MNPZ to the 2011 draft zoning plan's HPZ boundary.
- The formerly proposed HPZ should be changed to a CPZ and the south-western face of Osprey Reef should have Marine National Park zoning.
- Keep the top third of Osprey as an MNPZ and change the bottom two-thirds to a CPZ, as long as access to the lagoon opening remains open. Moorings have been placed at Osprey and, while mooring is allowed within an MNPZ, it would prevent bait-fishing and there is no reason to stop that.

- Changing the zone in the bottom half of the reef to CPZ would allow the continued access for rotational sea cucumber harvesting.
- Split the zoning at Osprey, to allow for protection at the top half of Osprey while maintaining access to the lagoon for safety.
- Zoning boundaries along the reef edge, but excluding the reef itself, allowing spearfishing would be difficult to comply with for charter operators and not marketable to the customer base. Splitting the zoning over the reef may alleviate this issue.
- The zoning should be amended to be a conservation zone IUCN IV to allow spearfishing.
- Spearfishers, game fishers and associated charter operators require access to this reef as it, as opposed to Shark and Vema reefs, offers shelter and fishing opportunities in strong winds.
- There is damage to the dive tourism industry by game and commercial fishers at various reefs killing valuable fish species. Increase the MNPZ to 100 km2.

Vema Reef

- Revise and expand the MNPZs to increase protection of reef.
- Expand and improve upon MNPZ. Not only are these reefs a key piece of environmental infrastructure for tourism but they also have a different evolutionary history to most of the other reefs in the Coral Sea.
- The MNPZ over Osprey, Shark and Vema reefs is a key piece of regional infrastructure. Expand the MNPZ to the 2011 draft zoning plan's HPZ boundary.
- Damage to the dive tourism industry by game and commercial fishers at various reefs killing valuable fish species. Increase the MNPZ to 100km2.
- The zoning should be amended to be a Conservation Zone IUCN IV to allow spearfishing.

Shark Reef

- Revise and expand the MNPZs to increase protection of reef.
- Expand and improve upon MNPZ. Not only are these reefs a key piece of environmental infrastructure for the tourism, they also have a different evolutionary history to most of the other reefs in the Coral Sea.
- The zoning over Shark reef should be simplified with 500m buffer to ensure the adequate protection of the important reef slopes.
- There is damage to the dive tourism industry by game and commercial fishers at various reefs killing valuable fish species. Increase the MNPZ to 100 km2.
- The MNPZ over Osprey, Shark and Vema Reefs is a key piece of regional infrastructure. Expand the MNPZ to the 2011 draft zoning plan's HPZ boundary.
- The formerly proposed HPZ should be changed to a CPZ.
- Shark and Vema reefs should be changed to CPZ.
- The zoning should be amended to be a conservation zone IUCN IV to allow spearfishing. A quarter-mile zone is needed on either side of the reef to be viable.

Bougainville Reef

- The boundary of the MNPZ should be updated to fully protect this reef.
- Expand and improve upon MNPZ. This reef is home to a spawning aggregation of endangered Maori wrasse and it is the only biologically important whale shark aggregation site in eastern Australia.
- Expanding this small marine sanctuary to include all of the mapped whale shark aggregation site would be a major improvement to the protection of whale sharks and would bring the boundaries into line with the recommendations of recent scientific research.
- Revise and expand the MNPZs to increase protection for endangered Maori wrasse and the only mapped biologically important whale shark aggregation site in eastern Australia.
- There has been damage to the dive tourism industry by game and commercial fishers at various reefs killing valuable fish species. Increase the MNPZ to 100 km2.
- The MNPZ should be a minimum of 100 km2 and include buffer zones. Expand the MNPZ to include the entire mapped whale shark aggregation site.
- Change the zoning on the eastern edge to allow spearfishing and allow charter/recreational fishing in the lagoon area as this reef is an important stopover point for charter fishing operators.

Marion Reef

- The boundary of the MNPZ should be updated to fully protect this reef.
- Expand and improve upon MNPZ at Marion Reef, which will increase protection of reef, cay and herbivorous fish of the Marion Plateau, which is one of the KEFs of the Coral Sea.
- To include the whole reef and associated banks, terraces, aprons and fans, including a buffer zone of sand and deep water around the reef, the MNPZ should be expanded to the boundaries of the HPZ proposed in the 2011 draft zoning plan.
- While the Marine National Park zoning of the interior of the reef is an extremely positive development, the decrease in the proposed level of protection for the exterior of the reef seems very undesirable. It should have CPZ (but commercial fishing of any sort should not be permitted).
- The zoning should be amended to be a conservation zone IUCN IV to allow spearfishing.
- There has been damage to the dive tourism industry by game and commercial fishers at various reefs killing valuable fish species. Increase the MNPZ to 100 km2 and include buffer zones.
- A special management area encompassing the southern component of Marion is required to allow for recreational fishing activities.
- Marion Reef zoning should match the zoning for Frederick and Wreck reefs—MUZ to allow for recreational/charter fishing.
- The reef is a priority fishing reef for hand-collection of sea cucumber. Fishers would consider split zoning (MNPZ and CPZ) to allow continued access to sea cucumber at the southern end of the reef.

Kenn Reefs

- The zoning should be amended to be a conservation zone IUCN IV to allow spearfishing and trap and line fishing.
- There is no justification to extend the HPZ to include this reef. Both reefs should remain MNPZs.
- The Kenn Reefs system is an important area for recreational anglers and a special management area is required to encompass the area, including an area 10 km surrounding the reefs.

Holmes Reefs

- An MNPZ over this unprotected reef would have significant economic benefit and mitigate against the potential loss of other dive sites due to natural or manmade disasters.

Flinders Reefs

- An MNPZ over this unprotected reef would have significant economic benefit and mitigate against the potential loss of other dive sites due to natural or man-made disasters.

Lihou Reef

- There would be substantial benefit from having a relatively small section of the MNPZ boundary extend to the south-west, such that the relevant section of the boundary becomes a line between the south-west corner of the existing Coringa-Herald National Nature Reserve and the south-west corner of the existing Lihou Reef National Nature Reserve (that is, a more-or-less diagonal line between those two points).
- A special management area to allow recreational fishing should be established over the southern section of Lihou Reef. This would allow for sustainable recreational fishing and tourism activities as well as safe anchorage for operators.

Coringa-Herald

- The boundary of the MNPZ should be updated to fully protect this reef.
- The MNPZ should be a minimum of 100 km2 and include buffer zones. An extension of the marine sanctuary southwards in this area from 17o11' to 17o26' will bring the boundaries into line with the recommendations of recent scientific research at almost negligible costs to users.
- There would be substantial benefit from having a relatively small section of the MNPZ boundary extend to the south-west, such that the relevant section of the boundary becomes a line between the south-west corner of the existing Coringa-Herald National Nature Reserve and the south-west corner of the existing Lihou Reef National Nature Reserve (that is, a more-or-less diagonal line between those two points).

Dianne Banks, Moore Reef, Willis Island

- Willis Islets CPZ contains 99% of the Coral Sea's biologically important breeding habitats for red-footed boobies and 79% of the biologically important breeding habitats for wedge-tailed shearwaters. However, the Government's desire to maintain access to the area for the Coral Sea aquarium fishery has led to it becoming a CPZ rather than an MNPZ.

Appendix H: Network-level changes in representation of conservation features in Sanctuary Zone, Marine National Park Zone and Habitat Protection Zones

Table H1 Changes from recommended zoning in the North CMR Network

Type of conservation feature	Name of conservation feature	CMR in which the change will occur	Change to conservation feature
Provincial Bioregion	Northwest Shelf Transition	Oceanic Shoals	Newly included in MNPZ (IUCN II) and HPZ (IUCN IV)
	Northeast Shelf Transition	West Cape York	Newly included in HPZ (IUCN IV)
	Northern Shelf Province	West Cape York	
		Gulf of Carpentaria	
		Limmen	
		Wessel	
		Arafura	
Meso-scale Bioregion	Oceanic Shoals	Oceanic Shoals	Newly included in MNPZ (IUCN II) and HPZ (IUCN IV)
	Pellew	Limmen	Newly included in MNPZ (IUCN II) and HPZ (IUCN IV)
	Torres Strait	West Cape York	Newly included in HPZ (IUCN IV)
	West Cape York		
	Carpentaria	West Cape York	
		Wessel	
	Karumba-Nassau	Gulf of Carpentaria	
	Arnhem Wessel	Wessel	
	Arafura	Wessel	
		Arafura	
	Cobourg	Arafura	
	Bonaparte Gulf	Oceanic Shoals	
	Tiwi		
Depths by	Northwest Shelf Transition Coast	Oceanic Shoals	Newly included in

Provincial Bioregion	to Shallow Shelf Transition		MNPZ (IUCN II) and HPZ (IUCN IV)
	Northwest Shelf Transition Shallow Shelf		
	Northwest Shelf Transition Shallow Shelf to Deep Shelf Transition		
	Northeast Shelf Transition Coast to Shallow Shelf Transition	West Cape York	Newly included in HPZ (IUCN IV)
	Northern Shelf Province Coast	Limmen	
	Northern Shelf Province Coast to Shallow Shelf Transition	West Cape York	
		Gulf of Carpentaria	
		Limmen	
		Wessel	
		Arafura	
	Northwest Shelf Transition Coast	Oceanic Shoals	
Key Ecological Features	Plateaux and saddle north-west of the Wellesley Islands	Gulf of Carpentaria	Newly included in MNPZ (IUCN II)
	Carbonate bank and terrace system of the Van Diemen Rise	Oceanic Shoals	Newly included in MNPZ (IUCN II) and HPZ (IUCN IV)
	Gulf of Carpentaria basin	Wessel	Newly included in HPZ (IUCN IV)
	Gulf of Carpentaria coastal zone	Gulf of Carpentaria	
		Limmen	
Biologically Informed Seascapes	Timor mid-shelf (North Cluster 6)	Oceanic Shoals	Newly included in MNPZ (IUCN II) and HPZ (IUCN IV)
	Timor outer-shelf (North Cluster 8)		
	Cootamundra Shoals area (North Cluster 19)		
	South-west and East Carpentaria coast (North Cluster 13)	Limmen	
	South-west and East Carpentaria nearshore (North Cluster 18)		
	Eastern Carpentaria Basin (North Cluster 1)	West Cape York	Newly included in HPZ (IUCN IV)
		Arafura	
		Oceanic Shoals	
	Joseph Bonaparte Gulf/Beagle Gulf (North Cluster 2)	Oceanic Shoals	

	Timor-Arafura shelf-break (North Cluster 10)		
	Arnhem Land/Kimberley coast (North Cluster 15)		
	Arafura mid-shelf (North Cluster 3)	Wessel	
		Arafura	
	South-west Carpentaria inner shelf (North Cluster 7)	Limmen	
	Melville/Coburg nearshore (North Cluster 11)	West Cape York	
		Arafura	
		Oceanic Shoals	
	North region inner shelf (North Cluster 12)	West Cape York	
		Gulf of Carpentaria	
		Limmen	
		Oceanic Shoals	
	Western Torres Strait (North Cluster 14)	Limmen	
	Northern Carpentaria-Arnhem inner shelf (North Cluster 16)	West Cape York	
		Wessel	
		Arafura	
		Oceanic Shoals	
	Carpentaria sand patches (North Cluster 20)	Gulf of Carpentaria	
		Limmen	
Seafloor types	Plateau	Gulf of Carpentaria	Newly included in MNPZ (IUCN II)
	Pinnacle	Oceanic Shoals	Newly included in MNPZ (IUCN II) and HPZ (IUCN IV)
		West Cape York	Newly included in HPZ (IUCN IV)
		Wessel	
	Reef	West Cape York	
	Shelf	West Cape York	
		Gulf of Carpentaria	
		Limmen	
		Arafura	

		Oceanic Shoals	
	Basin	Wessel	
	Sill		
	Bank/shoals	Wessel	
		Oceanic Shoals	
	Terrace	Wessel	
		Oceanic Shoals	
	Deep/hole/valley	Arafura	
		Oceanic Shoals	
	Tidal sandwave/sandbank	Oceanic Shoals	

Table H2 Changes from recommended zoning in the North-west CMR Network

Type of conservation feature	**Name of conservation feature**	**CMR in which the change will occur**	**Change to conservation feature**
Meso-scale Bioregion	Canning	Kimberley	Newly included in HPZ (IUCN IV), no longer included in SZ (IUCN Ia)/ MNPZ (IUCN II)
	Pilbara (nearshore)	Dampier	Newly included in HPZ (IUCN IV)
	Northwest Shelf	Kimberley	
Depths by Provincial Bioregion	Timor Province Deep Continental Slope	Argo-Rowley Terrace	Newly included in SZ (IUCN Ia)/ MNPZ (IUCN II)
	Central Western Transition Deep Mid-Slope	Gascoyne	Newly included in HPZ (IUCN IV)
	Central Western Transition Shallow Mid-Slope		
	Northwest Shelf Transition Shallow Shelf to Deep Shelf Transition	Kimberley	
	Northwest Shelf Province Coast	Dampier	No longer included in HPZ (IUCN IV)
Seafloor types	Plateau	Kimberley	Newly included in HPZ (IUCN IV)

Table H3 Changes from recommended zoning in the South-west CMR Network

Type of conservation feature	Name of conservation feature	CMR in which the change will occur	Change to conservation feature
Depths by Provincial Bioregion	Southwest Transition Deep Upper Slope to Shallow Mid-Slope Transition	Perth Canyon	Newly included in MNPZ (IUCN II) and HPZ (IUCN IV)
	Southwest Transition Shallow Mid-Slope		
	Southwest Transition Deep Mid-Slope		Newly included in HPZ (IUCN IV)
	Southwest Transition Deep Upper Slope		
Biologically Informed Seascapes	Western shelf (South-west Cluster 20)	South-west Corner	No longer included in MNPZ (IUCN II)

Table H4 Changes from recommended zoning in the Temperate East CMR Network

Type of conservation feature	Name of conservation feature	CMR in which the change will occur	Change to conservation feature
Depths by Provincial Bioregion	Central Eastern Shelf Transition Coast to Shallow Shelf Transition	Solitary Islands	Newly included in MNPZ (IUCN II)
	Norfolk Island Province Abyssal Plain above Calcite Compensation Depth	Norfolk	Newly included in MNPZ (IUCN II)
	Norfolk Island Province Shelf Edge		Newly included in MNPZ (IUCN II) and HPZs (IUCN IV)
	Norfolk Island Province Shelf Edge to Shallow Upper Slope Transition		Newly included in MNPZ (IUCN II) and HPZs (IUCN IV)
	Central Eastern Province Abyssal Plain below Calcite Compensation Depth	Hunter	Newly included in HPZs (IUCN IV)
	Central Eastern Province Deep Upper Slope		
	Central Eastern Province Deep Upper Slope to Shallow Mid-Slope Transition		
	Central Eastern Province Continental Rise	Jervis	
		Hunter	

		Central Eastern	
	Central Eastern Province Deep Continental Slope	Jervis	
		Hunter	
		Central Eastern	
	Central Eastern Province Deep Mid-Slope	Jervis	
		Hunter	
		Central Eastern	
	Central Eastern Province Shallow Mid-Slope	Jervis	
		Hunter	
		Central Eastern	
	Norfolk Island Province Coast to Shallow Shelf Transition	Norfolk	
	Norfolk Island Province Deep Shelf		
	Norfolk Island Province Deep Shelf to Shelf Edge Transition		
	Norfolk Island Province Shallow Shelf		
	Norfolk Island Province Shallow Shelf to Deep Shelf Transition		
	Norfolk Island Province Shallow Upper Slope		
Key Ecological Features	Canyons on eastern continental slope	Jervis	Newly included in HPZs (IUCN IV)
		Hunter	
		Central Eastern	
	Norfolk Ridge	Norfolk	
Seafloor Types	Ridge	Norfolk	Newly included in MNPZ (IUCN II)
	Bank/shoals		Newly included in HPZs (IUCN IV)
	Shelf		
	Canyon	Jervis	Newly included in HPZs (IUCN IV)
		Hunter	
		Central Eastern	

Table H5 Changes from recommended zoning in the Coral Sea CMR

Type of conservation feature	Name of conservation feature	Change to conservation feature in Coral Sea CMR
Provincial Bioregion	Central Eastern Transition	Newly included SZ (IUCN Ia)/ MNPZ (IUCN II) and in HPZs (IUCN IV)
Depths by Provincial Bioregion	Central Eastern Transition Continental Rise	Newly included in SZ (IUCN Ia)/ MNPZ (IUCN II) and in HPZs (IUCN IV)
	Central Eastern Transition Deep Continental Slope	
	Central Eastern Transition Deep Mid-Slope	
	Central Eastern Transition Deep Upper Slope	
	Central Eastern Transition Deep Upper Slope to Shallow Mid-Slope Transition	
	Central Eastern Transition Shallow Mid-Slope	
	Central Eastern Transition Shallow Upper Slope	
	Central Eastern Transition Shallow Upper Slope to Deep Upper Slope Transition	
	Kenn Transition Coast	Now wholly included in SZ (IUCN Ia)/MNPZ (IUCN II), no longer included in HPZs (IUCN IV)
	Kenn Transition Coast to Shallow Shelf Transition	
	Kenn Transition Deep Shelf	
	Kenn Transition Deep Shelf to Shelf Edge Transition	
	Kenn Transition Shallow Shelf	
	Kenn Transition Shallow Shelf to Deep Shelf Transition	
	Kenn Transition Shelf Edge	
	Kenn Transition Shelf Edge to Shallow Upper Slope Transition	
	Cape Province Coast	Newly included in HPZs (IUCN IV)
	Cape Province Coast to Shallow Shelf Transition	
	Cape Province Deep Mid-Slope	
	Cape Province Deep Shelf	

	Cape Province Deep Shelf to Shelf Edge Transition	
	Cape Province Deep Upper Slope	
	Cape Province Deep Upper Slope to Shallow Mid-Slope Transition	
	Cape Province Shallow Mid-Slope	
	Cape Province Shallow Shelf	
	Cape Province Shallow Shelf to Deep Shelf Transition	
	Cape Province Shallow Upper Slope	
	Cape Province Shallow Upper Slope to Deep Upper Slope Transition	
	Cape Province Shelf Edge	
	Cape Province Shelf Edge to Shallow Upper Slope Transition	
	Central Eastern Transition Abyssal Plain above Calcite Compensation Depth	
	Central Eastern Transition Continental Rise	
	Central Eastern Transition Deep Continental Slope	
	Central Eastern Transition Deep Mid-Slope	
	Central Eastern Transition Deep Upper Slope	
	Central Eastern Transition Deep Upper Slope to Shallow Mid-Slope Transition	
	Central Eastern Transition Shallow Mid-Slope	
	Central Eastern Transition Shallow Upper Slope	
	Central Eastern Transition Shallow Upper Slope to Deep Upper Slope Transition	
	Northeast Transition Abyssal Plain above Calcite Compensation Depth	
Seafloor types	Deep/hole/valley	Newly included in HPZs (IUCN IV)

Appendix I: Coral Sea reefs

Table I1 Comparison of areas of zone types between proclaimed and recommended zoning for reefs in the Coral Sea CMR

	Proclaimed zoning area (km$^{2)}$					Recommended zoning area (km^2)			
Reef name	**MUZ (IUCN VI)**	**HPZ (Coral Sea) (IUCN IV)**	**HPZ (Seamount) (IUCN IV)**	**CPZ (IUCN IV)**	**MNPZ (IUCN II)**	**HPZ (IUCN IV)**	**HPZ (Reefs) (IUCN IV)**	**MNPZ (IUCN II)**	**SZ (IUCN Ia)**
Abington Reef		4				4			
Ashmore Reef	639					639			
Boot Reef	9					9			
Bougainville Reef					13		13		
Cairns Seamount		0.06				0.06			
Calder Bank			1			1			
Cato Reef			159				159		
Coringa Islets/ Magdelaine Cays		292			2,090		44	2 338	
Dart Reef				9			9		
Diane Bank				1,105			1 105		
Flora Reef		24				24			
Frederick Reef			89				89		
Herald Cays					65			65	
Heralds Surprise				11			11		
Holmes Reefs				204			81	124	
Kenn Reefs					276			276	
Lihou Reef					2,378				2 378
Malay Reef		42				42			
Marion Reef	31				870		464	437	
McDermott Bank		39				39			
Mellish Reef					36			36	
Moore Reefs				10			10		
North Flinders Reefs				806			806		
Osprey Reef		2			188		52	138	
Saumarez Reefs				750			750		
Shark Reef				7			7		
South Flinders Reefs				83				83	
Tregrosse Reefs		3,725					3 725		
Unnamed reef 1					66			66	
Unnamed reef 2		21				21			
Unnamed reef 3		58					58		
Vema Reef					3		3		
Willis Islets				737			737		
Wreck Reefs			183					183	
Total area (km^2)	**680**	**4,207**	**431**	**3,723**	**5,984**	**779**	**8 124**	**3744**	**2378**

Note: All figures are rounded to the nearest km^2 (and therefore can appear to not always add up to the totals supplied).

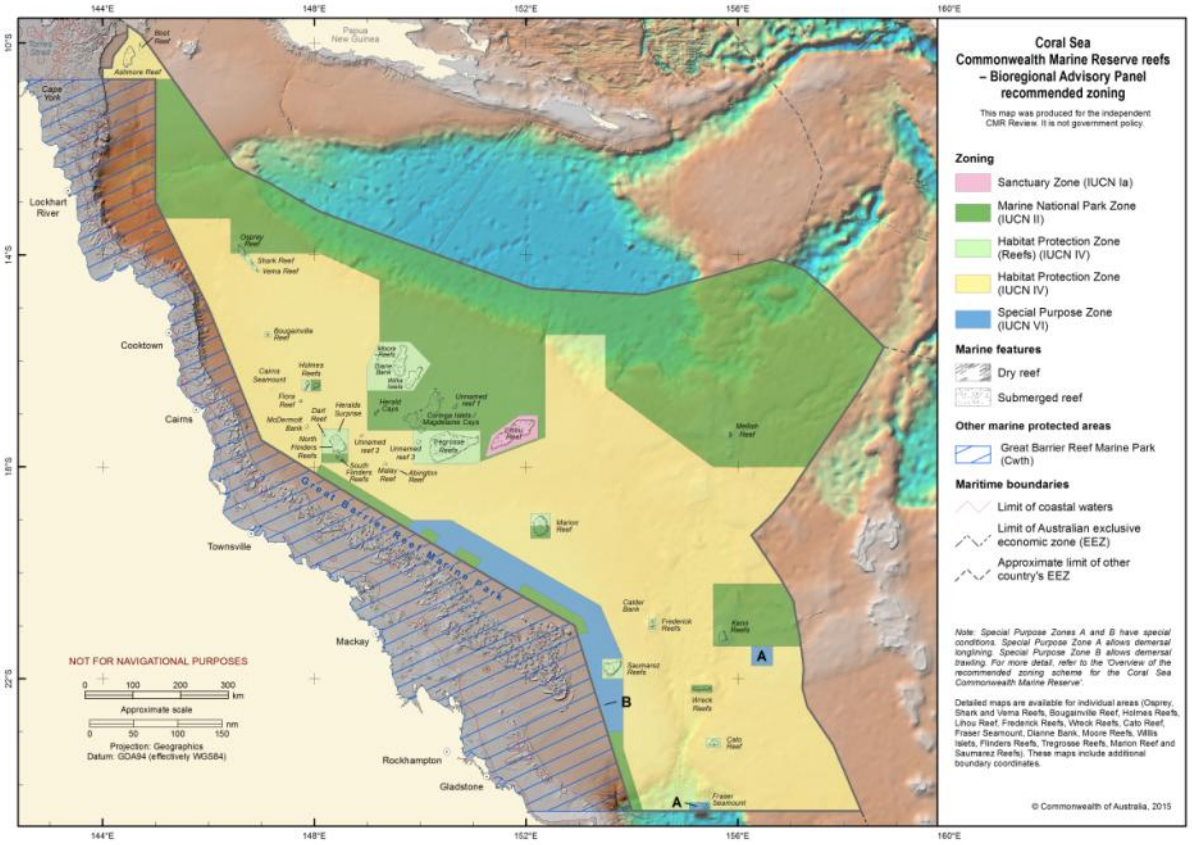

Figure I1 Recommended zoning for reefs in Coral Sea CMR

Table I2 Changes in representation of Coral Sea reefs in SZ, MNPZ and HPZs

Name of reef	Change to zoning
Lihou Reef	Newly included in SZ (IUCN Ia), no longer included in MNPZ (IUCN II)
Holmes Reefs	Newly included in MNPZ (IUCN II)
South Flinders Reefs	Newly included in MNPZ (IUCN II), no longer included in HPZs (IUCN IV)
Wreck Reefs	
Bougainville Reef	Newly included in HPZs (IUCN IV), no longer included in MNPZ (IUCN II)
Vema Reef	
Ashmore Reef	Newly included in HPZs (IUCN IV)
Boot Reef	
Marion Reef	

Glossary

Benthic/benthos	Refers to the bottom of the sea, the seafloor and including some sub-surface layers, as well as benthic marine organisms living on or within the seafloor.
Biologically Important Areas (BIAs)	Areas where individuals of a species are known to display biologically important behaviour such as breeding, foraging, resting and migration. These areas in a marine region are particularly important for the conservation of protected species.
Bioregion	An area that is defined by relatively homogenous and characteristic types of plants, animals and environmental conditions. In Commonwealth waters, those bioregions as defined in the IMCRA v4.0.
Bioregional Advisory Panel (BAP)	The Bioregional Advisory Panel of the Commonwealth Marine Reserves Review. It included five separate Regional Panels, one for each of the five marine regions (North, North-west, South-west and Temperate East, and the Coral Sea). Two co-Chairs worked across all panels, as well as the ESP.
Comprehensive, adequate and representative (CAR) principles	These were identified as the principles in the ANZECC Guidelines for Establishing a National Representative System of Marine Protected Areas (1998), defined as: Comprehensive—includes the full range of ecosystems recognised at an appropriate scale within and across each bioregion. Adequate—has the required level of reservation to ensure the ecological integrity and viability of populations, species and communities. Representative—areas that are selected for inclusion in MPAs should reasonably reflect the biotic diversity of the marine ecosystems from which they derive.
Class approval	An approval to conduct a class of activities, within a particular industry sector, that already require approval, permits or licences from another government agency responsible for regulating that sector
Commonwealth Marine Reserve	Also known as 'Commonwealth reserve'. A reserve established and managed under Division 4 of Part 15 of the EPBC Act, which must be assigned an IUCN category and may be subdivided into a number of different zones with different management objectives and IUCN categories.
Commonwealth waters	'Commonwealth waters' (also known as 'Commonwealth marine area') refers to any part of the sea, including the waters, seabed, and airspace, within Australia's EEZ and/or over the continental shelf of Australia, excluding state and Northern Territory coastal waters. Generally, Commonwealth waters stretch from 3 nm from the territorial sea baseline to the outer limit of the EEZ, 200 nm from the baseline. The territorial sea baseline is normally the low water mark along the coast.
Demersal	Living on or near the bottom of the sea.

Director of National Parks (DNP)	The Director of National Parks as determined under section 514A of the EPBC Act, including any person to whom the Director has delegated powers and functions under the EPBC Act in relation to the Commonwealth marine reserves.
Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)	The Australian Government's key environmental Act, which came into effect on 16 July 2000; includes any Act amending, repealing or replacing the Act.
Exclusive Economic Zone (EEZ)	The sovereign waters of a nation, recognised internationally under the United Nations Convention on the Law of the Sea as extending up to 200 nm from the shoreline.
Expert Scientific Panel (ESP)	The Expert Scientific Panel of the Commonwealth Marine Reserves Review. It comprised five members including a Chair to review the science supporting the current marine reserves. The two co-Chairs of the BAP were also members of the ESP.
Fishing Gear Risk Assessment (FGRA)	Expert assessment of the potential risk that a fishing gear type poses to the marine reserves' conservation objectives/values. A key input in the application of Principles 19 and 20 (see Goals and Principles) and decisions on whether fishing with that gear type is allowed or prohibited in a reserve or network.
Goals and Principles	The Goals and Principles for the Establishment of the National Representative System of Marine Protected Areas in Commonwealth Waters comprise four Goals and 20 Principles to guide the identification of areas suitable for inclusion in the NRSMPA. Together, they provide direction on how to ensure that all types of marine ecosystems and their biodiversity are represented within the national network of marine reserves.
Gross Value of Production (GVP)	A value obtained by multiplying the volume of catch (whole weight equivalent) by the average per unit beach price. In the case of a multispecies fishery, the fishery's GVP is the sum of the GVP of each species.
Indigenous Protected Area (IPA)	An area of Indigenous-owned land or sea where traditional owners have entered into an agreement with the Australian Government to promote biodiversity and cultural resource conservation.
Integrated Marine and Coastal Regionalisation of Australia (IMCRA or IMCRA v4.0)	A spatial framework for classifying Australia's marine environment into bioregions that form the basis for the development of a NRSMPA.
International Union for the Conservation of Nature (IUCN)	IUCN, established in 1948, is the world's largest global environmental organisation, with almost 1300 government and non-government organisation members and more than 15 000 volunteer scientists and experts in 185 countries. IUCN's work is supported by almost 1000 staff in 45 offices and hundreds of partners in public, non-government organisation and private sectors around the world.
IUCN category	Has the meaning given by section 346 of the EPBC Act and

	prescribed in Schedule 8 of the EPBC Regulations. There are six IUCN protected area categories, based on and differentiated by their key management objective, that are international standards for protected areas.
Key Ecological Feature (KEF)	Large-scale ecological features that support distinct or important ecological communities at a regional scale. Where these features are considered to be of regional importance for either a region's biodiversity or its ecosystem function and integrity, they are known as KEFs. The criteria used to identify KEFs in a region are: - a species, group of species or community with a regionally important ecological role, where there is specific knowledge about why the species or species group is important to the ecology of the region, and the spatial and temporal occurrence of the species or species group is known - a species, group of species or community that is nationally or regionally important for biodiversity, where there is specific knowledge about why the species or species group is regionally or nationally important for biodiversity, and the spatial and temporal occurrence of the species or species group is known - an area or habitat that is nationally or regionally important for enhanced or high biological productivity - aggregations of marine life - biodiversity and endemism.
Management Plan	Under the EPBC Act all Commonwealth reserves (terrestrial and marine) must have a management plan. Once a marine reserve has been proclaimed, the DNP must develop a management plan for the reserve as soon as practicable. Management plans are prepared by the DNP, with public input, and approved by the Minister for the Environment before being tabled in both Houses of Parliament for a period of 15 sitting days, during which a motion of disallowance can be moved. The plans provide for the protection and conservation of the reserve. They must set out how the reserve is to be managed, what activities will be allowed and how those activities are to be carried on. Management must be consistent with the relevant Australian IUCN Reserve Management Principles. Management plans have a maximum life of 10 years.
Marine Protected Area (MPA)	Any area of intertidal or sub-tidal terrain, together with its overlying water and associated plants, animals, historical or cultural features, which has been reserved by law or other effective means to protect part or all of the enclosed environment.
Minister	The minister administering the EPBC Act.

National Representative System of Marine Protected Areas (NRSMPA)	A CAR system of MPAs that contribute to the long-term ecological viability of marine and estuarine systems, maintain ecological processes and systems, and protect Australia's biological diversity at all levels.
Parks Australia	A division of the Department of the Environment that supports the DNP.
Pelagic	Associated with the surface or middle depths of the water column (for example, fish swimming freely in the open sea).
Primary conservation features	The collective term that includes Provincial Bioregions, Meso-Scale Bioregions, Depth Ranges by Provincial Bioregion, KEFs, Biologically Informed Seascapes and Seafloor Features
Proclamation	A proclamation by the Governor-General that is registered on the Federal Register of Legislative Instruments.
Provincial Bioregions	Large areas of the oceans with broadly similar characteristics that have been classified by scientists based on the distribution of fish and other marine species, seafloor types and ocean conditions.
Regional Panel	One of the five Regional Panels that formed part of the BAP. Each comprised three members selected by the Minister for their expertise and included one or both of the BAP co-Chairs.
Sea country	A term used to refer to a place of origin for Indigenous peoples; it may include bays, open ocean, beaches, dunes, reefs, coastal wetlands, or features of landscapes now submerged due to rising sea levels.
State/territory waters	State or territory waters are the coastal waters that extend from the territorial sea baseline for 3 nm seawards, and are under the jurisdiction of the adjacent Australian state or territory. The normal territorial sea baseline is the low water mark measured along the coast.
Upwelling	The phenomenon of deep ocean water rising to the surface, usually bringing nutrients that can increase biological productivity.
Zoning	The spatial definition and segregation of areas that are to be managed in a specific way for a specific purpose, consistent with the IUCN category and relevant management principles. Please refer to the activity matrices for each Commonwealth marine reserves network/reserve for specific details.

Acronyms

ABARES	Australian Bureau of Agricultural and Resource Economics and Sciences
AFMA	Australian Fisheries Management Authority
AMSA	Australian Maritime Safety Authority
ANZECC	Australian and New Zealand Environment and Conservation Council
BAP	Bioregional Advisory Panel
CAR	Comprehensive, Adequate and Representative
CBD	Convention on Biological Diversity
CMR	Commonwealth marine reserve
CPZ	Conservation Park Zone
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DNP	Director of National Parks
EEZ	Exclusive Economic Zone
ENGO	environmental non-government organisation
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
ESD	Ecologically Sustainable Development
ESP	Expert Scientific Panel
ETBF	Eastern Tuna and Billfish Fishery
FGRA	Fishing Gear Risk Assessment
GBRMP	Great Barrier Reef Marine Park
GUZ	General Use Zone
GVP	gross value of production
HPZ	Habitat Protection Zone
ILUA	Indigenous Land Use Agreement
IMCRA	Integrated Marine and Coastal Regionalisation of Australia
IPA	Indigenous Protected Area
IUCN	International Union for Conservation of Nature
KEF	Key Ecological Feature
MBH	Marine Biodiversity Hub
MNPZ	Marine National Park Zone
MPA	Marine Protected Area
MUZ	Multiple Use Zone
NPF	Northern Prawn Fishery
NOI	Notice of Intent
NOPSEMA	National Offshore Petroleum Safety and Environmental Management Authority
NRSMPA	National Representative System of Marine Protected Areas
NSW	New South Wales
NT	Northern Territory
RUZ	Recreational Use Zone
SA	South Australia
SESSF	Southern and Eastern Scalefish and Shark Fishery
SPZ	Special Purpose Zone
SZ	Sanctuary Zone
UNCLOS	United Nations Convention on the Law of the Sea
VMS	vessel monitoring system
WA	Western Australia

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