Convention on Biological Diversity

UNDP

Aichi Biodiversity Target 11 Country Dossier: AUSTRALIA

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GLOSSARY

AZEs	Alliance for Zero Extinction sites
CEPF	Critical Ecosystem Partnership Fund
EBSA	Ecologically or Biologically Significant Marine Area
EEZ	Exclusive Economic Zone
GCF	Green Climate Fund
GD-PAME	Global Database on Protected Area Management Effectiveness
GEF	Global Environment Facility
IBA	Important Bird and Biodiversity Area
ICCAs	Indigenous and Community Conserved Area Area (may also be referred to as territories and areas conserved by Indigenous peoples and local communities or "territories of life")
IPLC	Indigenous Peoples and Local Communities
KBA	Key Biodiversity Area
MEOW	Marine Ecosystems of the World
MPA	Marine Protected Area
NBSAP	National Biodiversity Strategy and Action Plan
OECM	Other Effective Area-Based Conservation Measures
PA	Protected Area
PAME	Protected Area Management Effectiveness
PPA	Privately Protected Area
PPOW	Pelagic Provinces of the World
ProtConn	Protected Connected land indicator
SOC	Soil Organic Carbon
TEOW	Terrestrial Ecosystems of the World
WDPA	World Database on Protected Areas
WD-OECM	World Database on Other Effective Area-Based Conservation Measures

Disclaimer

The designations employed and the presentation of material in this dossier do not imply the expression of any opinion whatsoever on the part of the Secretariat of the Convention on Biological Diversity (SCBD) or United Nations Development Programme (UNDP) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. The information contained in this publication do not necessarily represent those of the SCBD or UNDP.

This country dossier is compiled by the UNDP and SCBD from publicly available information. It is prepared, within the overall work of the Global Partnership on Aichi Biodiversity Target 11, for the purpose of attracting the attention of the Party concerned and other national stakeholders to facilitate the verification, correcting, and updating of country data. The statistics might differ from those reported officially by the country due to differences in methodologies and datasets used to assess protected area coverage and differences in the base maps used to measure terrestrial and marine area of a country or territory. Furthermore, the suggestions from the UNDP and SCBD are based on analyses of global datasets, which may not necessarily be representative of national policy or criteria used at the national level. The analyses are also subject to the limits inherent in global indicators (precision, reliability, underlying assumptions, etc.). Therefore, they provide useful information but cannot replace analyses at a national level nor constitute a future benchmark for national policy or decision-making.

The preparation of this dossier was generously supported by: the Government of the Federal Republic of Germany, *Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GMbH*; the European Commission; the Government of the United Kingdom of Great Britain and Northern Ireland; and the Government of Japan (Japan Biodiversity Fund). The dossier does not necessarily reflect their views.

EXECUTIVE SUMMARY

This document provides information on the coverage of protected areas (PAs) and other effective area-based conservation measures (OECMs), as currently reported in global databases (the World Database on Protected Areas (WDPA) and World Database on Other Effective Area-Based Conservation Measures (WD-OECM)). It also includes details on the status of the other qualifying elements of Aichi Biodiversity Target 11 based on this data. These statistics might differ from those reported officially by countries due to difference in methodologies and datasets used to assess protected area coverage, differences in the base maps used to measure terrestrial and marine area of a country or territory, or if global datasets differ from the criteria and indicators used at the national level. Where available, data from national statistics for the elements of Target 11 are included alongside records from these global databases. This dossier also provides a summary of commitments made under Aichi Biodiversity Target 11, and a summary of potential opportunities regarding elements of the target for future planning.

The dossier has been developed in consultation with the UN Environment Programme World Conservation Monitoring Centre (UNEP-WCMC), which manages the WDPA, WD-OECM and Global Database on Protected Area Management Effectiveness (GD-PAME). Parties to the CBD are requested to contact protectedareas@unep-wcmc.org with any updates to the information in these databases.

Aichi Biodiversity Target 11 Elements: Current status and opportunities for action

Coverage - Terrestrial & Marine

- **Status:** as of May 2021 (per the WDPA), terrestrial coverage in Australia is 1,571,078 km^2 (20.3%) and marine coverage is 3,299,969 km^2 (36.3%); national statistics indicate coverage of 20.73% terrestrial and 36.7% marine coverage.

- **Opportunities for action:** opportunities for the near-term include recognizing and reporting OECMs to the WD-OECM. In the future, focus on relatively intact areas, while addressing the elements in the following sections, could be considered when planning new PAs or OECMs.

Ecological Representativeness– Terrestrial & Marine

- **Status:** Australia contains 42 global terrestrial ecoregions, 24 marine ecoregions, and 2 pelagic provinces: the mean coverage by reported PAs and OECMs is 23.6% (terrestrial), 40.3% (marine), and 34.6% (pelagic); 1 terrestrial ecoregion and 1 marine ecoregion have no coverage by reported PAs and OECMs (both of which cover <0.1% of the country). All 89 **terrestrial Australian bioregions** have some representation in Australia's protected area network, the National Reserve System; 27 have <10% protected.

- **Opportunities for action:** there is opportunity for Australia to increase protection in terrestrial bioregions, as well as marine ecoregions and pelagic provinces, that have lower levels of coverage by PAs or OECMs.

Areas Important for Biodiversity

- **Status:** Australia has 338 Key Biodiversity Areas (KBAs): the mean protected coverage of KBAs by reported PAs and OECMs is 59%, while 53 KBAs have no coverage by reported PAs and OECMs.

- **Opportunities for action:** there is opportunity for Australia to increase protection of KBAs that have lower levels of coverage by PAs and OECMs; priority could be given to those with no current coverage.

Areas Important for Ecosystem Services

- **Status:** coverage of areas important for ecosystem services: In Australia, the area of public forest managed primarily for protective functions, including protection of soil and water values is 36.6 million hectares, as of 2016.

- **Opportunities for action:** for carbon, there is opportunity for Australia focus on effective management for PAs and OECMs in marine and terrestrial areas with high carbon stocks. Protecting areas with high carbon stocks secures the benefits of carbon sequestration in the area.

- For water, there is opportunity to increase the area of the water catchment under protection by PAs and OECMs, or in cases where there is high levels of protection, focus on effective management for these areas. Protecting the current area of forested land and potentially reforesting would have benefits for improving water security.

Connectivity and Integration

- **Status:** coverage of protected-connected lands is 5.7%.

- **Opportunities for action:** there is opportunity for the targeted designation of connecting PAs or OECMs and to focus on PA and OECM management for enhancing and maintaining connectivity. Increasing connectivity increases the effectiveness of PAs and OECMs and reduces the impacts of fragmentation.

- As well, a range of suggested steps for enhancing and supporting integration are included in the voluntary guidance on the integration of PAs and OECMs into the wider land- and seascapes and mainstreaming across sectors to contribute, inter alia, to the SDGs (Annex I of COP Decision 14/8).

Governance Diversity

- **Status:** the most common governance type(s) for reported PAs in Australia (by number of sites) is: 64% under Government (62.8% Sub-national ministry or agency; 1.2% Federal or national ministry or agency); Indigenous Protected Areas (IPAs), cover 740,557 km^2 and make up 46.53% of the Australian terrestrial protected areas estate.

- **Opportunities for action:** there is opportunity for Australia to complete governance and equity assessments, to establish baselines and identify relevant actions for improvement. As well, a range of suggested actions are included in the voluntary guidance on effective governance models for management of protected areas, including equity (Annex II of COP Decision 14/8).

Protected Area Management Effectiveness

- **Status:** 19.3% of terrestrial PAs and 11.7% of marine PAs have completed Protected Area Management Effectiveness (PAME) assessments reported in the GD-PAME. The Australian Government does not capture information on Protected Area Management Effectiveness (PAME) assessments for the more than 13,000 terrestrial protected areas in Australia. A management effectiveness evaluation system to capture management effectiveness information for "Australian Marine Parks" (a subset of marine protected areas comprising 84% of Australia's National Representative System of Marine Protected Areas, by area) is under development.

- **Opportunities for action:** the 60% target for completed management effectiveness assessments (per COP Decision X/31) **has not** been met for terrestrial PAs and **has not** been met for marine PAs. Therefore, there is opportunity to increase protected area management effectiveness (PAME) evaluations for both terrestrial and marine PAs to achieve the target.

- There is also opportunity to implement the results of completed PAME evaluations, to improve the quality of management for existing PAs and OECMs (e.g., through adaptive management and information sharing, increasing the number of sites reporting 'sound management') and to increase reporting of biodiversity outcomes in PAs and OECMs.

INTRODUCTION

The Strategic Plan for Biodiversity 2011-2020 was adopted at the tenth meeting of the Conference of the Parties (COP) to the Convention on Biological Diversity (CBD) held in Nagoya, Aichi Prefecture, Japan from 18-29 October 2010. The vision of the Strategic Plan is one of "Living in harmony with nature" where *"By 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people"* (CBD, 2010). In addition to this vision, the Strategic Plan is composed of 20 targets, under five strategic goals. Aichi Biodiversity Target 11 states that *"By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes."*

With the conclusion of the Aichi Biodiversity Targets in 2020, Target 11 on area-based conservation has seen success in the expansion of the global network of protected areas (PA) and other effective area-based conservation measures (OECMs). The negotiation of the post-2020 Global Biodiversity Framework (GBF) and its future targets provide an essential opportunity to further improve the coverage of PAs and OECMs, to improve other aspects of area-based conservation, to accelerate progress on biodiversity conservation more broadly, while also addressing climate change, and the Sustainable Development Goals. This next set of global biodiversity targets are to be adopted at the fifteenth meeting of the Conference of the Parties to the Convention on Biological Diversity. These new targets must aim to build upon lessons learned from the last decade of progress to deliver transformative change for the benefit of nature and people, to realize the 2050 Vision for biodiversity.

The United Nations Development Programme (UNDP) and the Secretariat of the Convention on Biological Diversity have developed the Aichi Biodiversity Target 11 Country Dossiers, which provide countries with an overview of the status of Target 11 elements, opportunities for action, and a summary of commitments made by Parties over the last decade. Each dossier can support countries in assessing their progress on key elements of Aichi Biodiversity Target 11 and identifying opportunities to prioritize new protected areas and OECMs.

This dossier provides an overview of area-based conservation in Australia. Section I of the dossier presents data on the current status of Australia's PAs and OECMs. The data presented in Section I relates to each element of Target 11. Section I also presents the PA and OECM coverage for two critical ecosystem services: water security and carbon stocks. In addition, the dossier presents potential opportunities for action for Australia, in relation to each Target 11 element. The analyses present options for improving Australia's area-based conservation network to achieve enhanced protection and benefits for livelihoods and climate change. Section II presents details on Australia's existing PA and OECM commitments as a summary of existing efforts towards achieving Target 11. This gives focus not only to national policy and actions but also voluntary commitments to the UN.

Furthermore, where data is available, this dossier provides information on potential OECMs, Indigenous and Community Conserved Areas (ICCAs; also, often referred to as territories and areas conserved by Indigenous peoples and local communities or "territories of life") and Privately Protected Areas (PPAs) and the potential contribution they will have in achieving the post-2020 targets.

The information on PAs and OECMs presented here is derived from the World Database on Protected Areas (WDPA) and World Database on Other Effective Area-Based Conservation Measures (WD-OECM). These databases are joint products of UNEP and IUCN, managed by UNEP-WCMC, and can be viewed and downloaded at www.protectedplanet.net. Parties are encouraged to provide data on their PAs and OECMs to UNEP-WCMC for incorporation into the databases (see e.g., Decisions 10/31 and 14/8). The significant efforts of Parties in updating their data in the build up to the publication of the Protected Planet Report 2020 (UNEP-WCMC and IUCN, 2021) were greatly appreciated. UNEP-WCMC welcomes further updates, following the data standards described here (www.wcmc.io/WDPA_Manual), and these should be directed to protectedareas@unep-wcmc.org. The statistics presented in this dossier are derived from the May 2021 WDPA and WD-OECM releases, unless explicitly stated otherwise. Readers should consult www.protectedplanet.net for the latest coverage statistics (updated monthly).

Some data from the WDPA and WD-OECM are not made publicly available at the request of the data-provider. This affects some statistics, maps, and figures presented in this dossier. Statistics provided by UNEP-WCMC (terrestrial and marine coverage) are based upon the full dataset, including restricted data. All other statistics, maps, and figures are based upon the subset of the data that is publicly available.

Where data is less readily available, such as for potential OECMs, ICCAs and PPAs, data has also been compiled from published reports and scientific literature to provide greater awareness of these less commonly recorded aspects. These data are provided to highlight the need for comprehensive reporting on these areas to the WDPA and/or WD-OECM. Parties are invited to work with indigenous peoples, local communities and private actors to submit data under the governance of these actors, with their consent, to the WDPA and/or WD-OECM.

Overall, PAs and OECMs are essential instruments for biodiversity conservation and to sustain essential ecosystem services that support human well-being and sustainable development, including food, medicine, and water security, as well as climate change mitigation and adaptation and disaster risk reduction. The data in this dossier, therefore, aims to celebrate the current contributions of PAs and OECMs, whilst the gaps presented hope to encourage greater progress, not just for the benefit of biodiversity and the post-2020 GBF, but also to recognize the essential role of PAs and OECMs to the Sustainable Development Goals and for addressing the climate crisis.

SECTION I: CURRENT STATUS

Aichi Biodiversity Target 11 refers to both protected areas (PAs) and other effective area-based conservation measures (OECMs). This section provides the current status for all elements of Aichi Biodiversity Target 11 where indicators with global data are available. Statistics for all elements are presented using data on both PAs and OECMs (where this data is available and reported in global databases like the WDPA and WD-OECM). It is recognized that statistics reported in the WPDA and WD-OECM might differ from those reported officially by countries due to differences in methodologies and datasets used to assess protected area coverage and differences in the base maps used to measure terrestrial and marine area of a country or territory. Details on UNEP-WCMC's methods for calculating PA and OECM coverage area available here. The global indicators adopted here for presenting the status of other elements of Target 11 may also differ from those in use nationally. Where available, results from national reporting are also included.

COVERAGE - TERRESTRIAL & MARINE

As of May 2021, Australia has 11,099 protected areas[1] reported in the World Database on Protected Areas (WDPA). 81 PAs that are proposed or have a status of 'not reported', and a further 9 UNESCO-MAB Biosphere Reserves are not included in the following statistics.

As of May 2021, Australia has **0** OECMs reported in the WD-OECM.

Current coverage for Australia (per the WDPA):

- 20.3% terrestrial (10,704 protected areas, 1,570,580.0 km^2)
  - Including all 'external territories' this is 1,571,078 km^2 (20.3%)
- 40.8% marine (839 protected areas, 3,035,629.9 km^2)
  - Including all 'external territories' this is 3,299,969 km^2 (36.3%)

Australia captures data in its Collaborative Australian Protected Areas Database (CAPAD), which is updated every two years. The most recent update was 30 June 2020,[2] and includes 13,543 properties (terrestrial coverage od 20.73%) contributing to the National Reserve System (NRS) regardless of overlaps]. The update based on the 30 June 2020 CAPAD data (plus three other known additional protected areas) was provided to WDPA on 5 August 2021 (*is not included in this dossier*).

Australia notes that, the known differences between WDPA and CAPAD are:

- Landmass areas differ between WDPA and CAPAD (CAPAD calculations are based on 768,828,859 ha landmass); WDPA/Protected Planet reanalyses the data Australia submits to the using unknown territorial boundaries that are not consistent with Australia's territorial area
- WDPA includes world heritage sites, Ramsar sites, and others. Some of these are only partly captured in CAPAD where they exist within protected area designations that are legally recognised.
- Data submitted by Australia to the WDPA does not include conservation covenants for privacy reasons, CAPAD does include these areas in its area calculations but does not make the spatial data available publicly.

Australia uses a globally agreed methodology to report on performance for marine areas for the purposes of reporting against Sustainable Development Goal 14 (around 40% coverage). Based on values from Australia's CAPAD, national status for marine areas is 36.7% from 316 protected areas as of June 2020)

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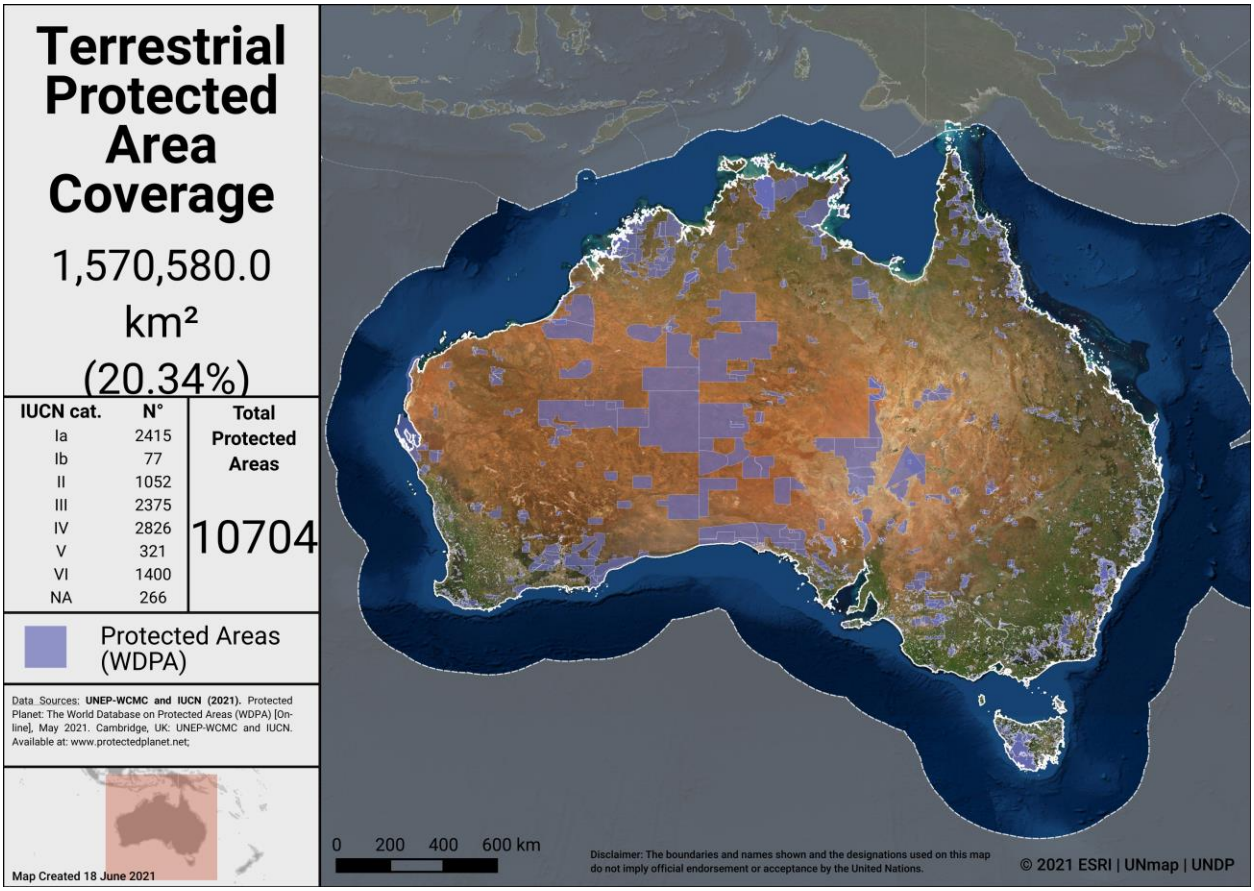
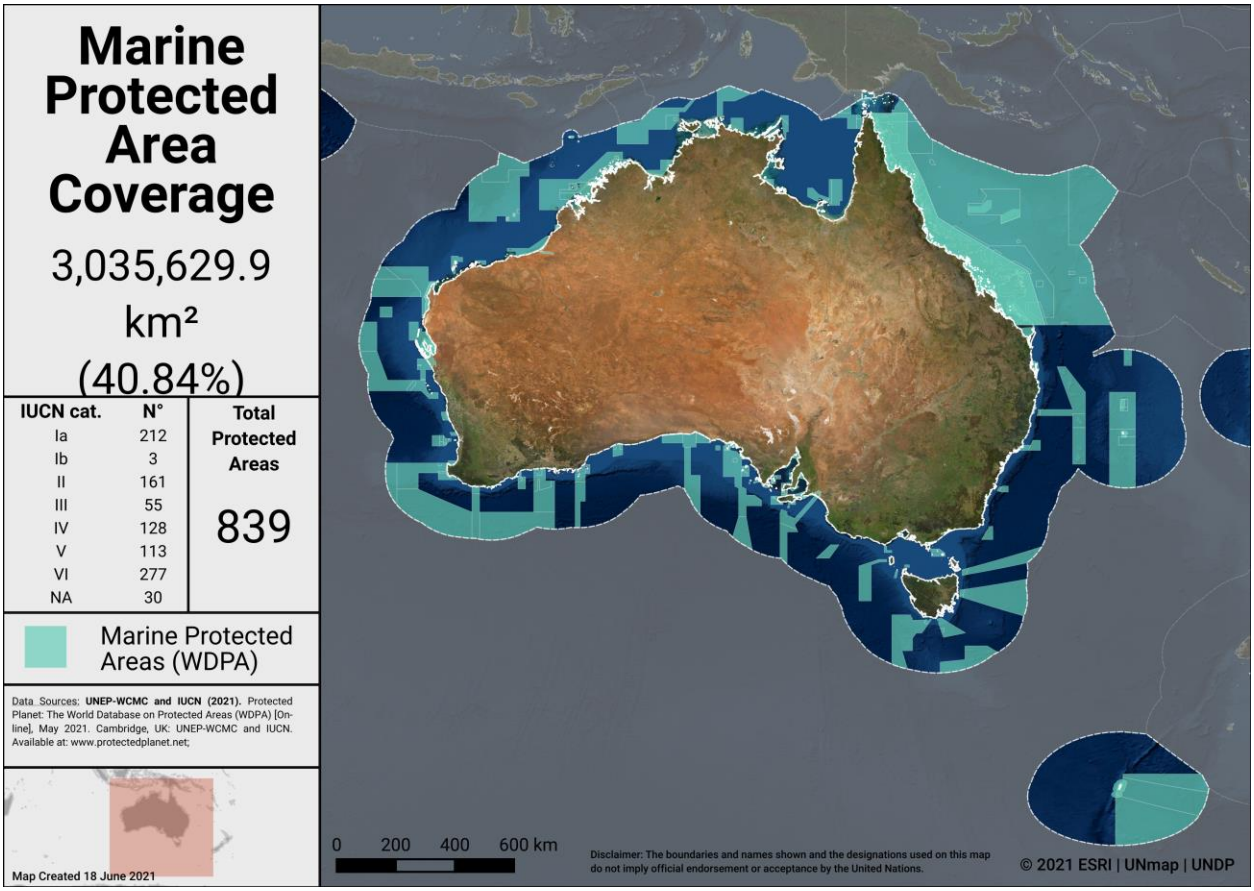
[1] WDPA counts some islands separately, these Australian external territories contain another 27 PAs (and are included in the assessment of ecoregion, KBA, and EBSA coverage)
[2] Available at: https://www.awe.gov.au/agriculture-land/land/nrs/science/capad/2020



Terrestrial Protected Areas in Australia



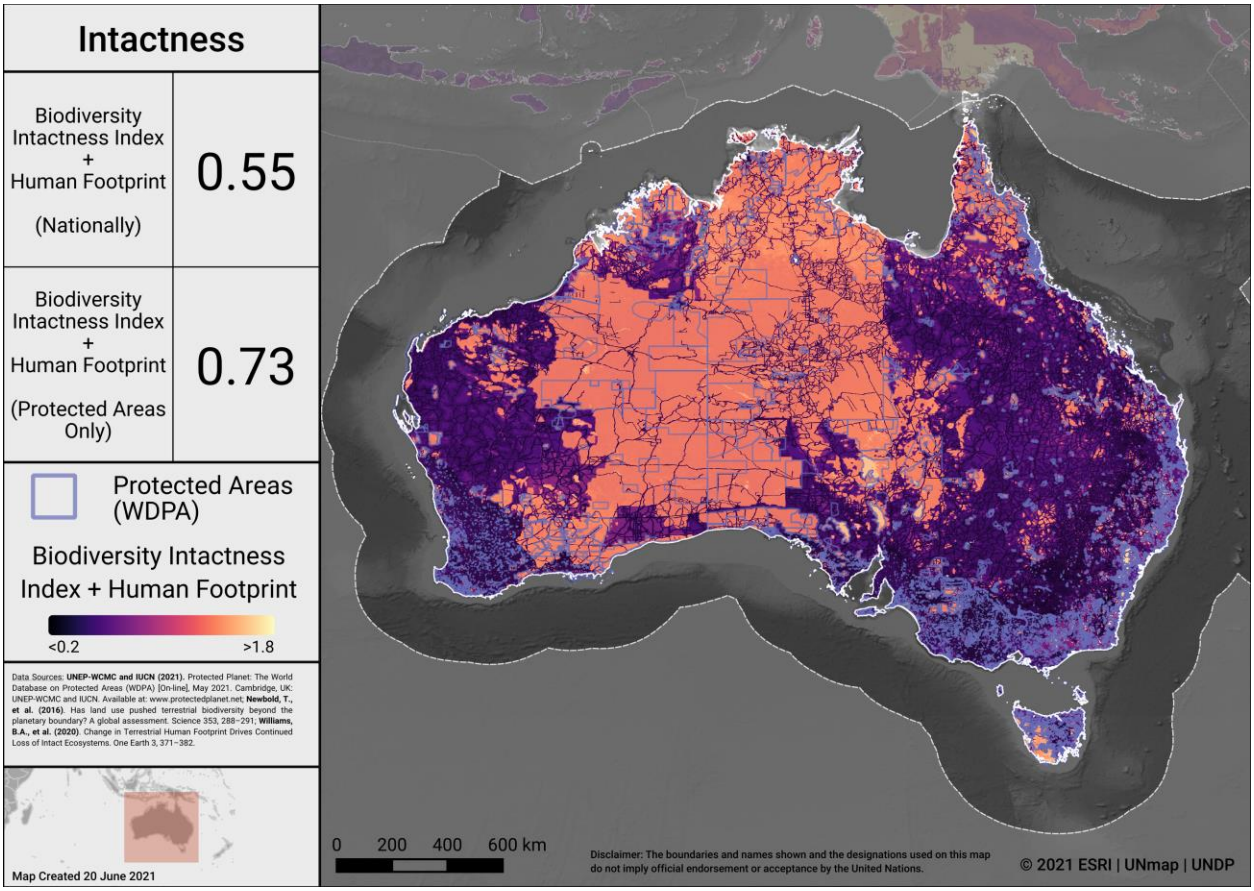
Marine Protected Areas in Australia

Potential OECMs

The Australian Government is considering the recognition and reporting of OECMs; to date, there is no agreed Australian Government position on recognizing and reporting OECMs in Australia.

Opportunities for action

Opportunities for the near-term include recognizing and reporting OECMs to the WD-OECM. In the future, as Australia considers where to add new PAs and OECMs, the map below identifies areas in Australia where intact areas are not currently protected. Focus on relatively intact areas, while addressing the elements in the following sections, could be considered if planning new PAs or OECMs.



Intactness in Australia

To explore more on intactness visit the UN Biodiversity Lab: map.unbiodiversitylab.org.

ECOLOGICAL REPRESENTATIVENESS – TERRESTRIAL & MARINE

Ecological representativeness is assessed, globally, based on the PAs and OECMs coverage of broad-scale biogeographic units. Globally, ecoregions have been described for terrestrial areas (Dinerstein et al, 2017), marine coastal and shelf ecosystems (to a depth of 200m; Spalding et al 2007) and surface pelagic waters (Spalding et al 2012).

Based on these global indicators, Australia has 42 **terrestrial** ecoregions. Out of these:

- 41 ecoregions have at least some coverage from PAs and OECMs.
- 21 ecoregions have at least 17% protected within the country.
- The average terrestrial coverage of ecoregions is 23.6%.

Based on these global indicators, Australia has 24 **marine** ecoregions and 2 **pelagic provinces**. Out of these:

- 23 marine ecoregions and 2 pelagic provinces have at least some coverage from reported PAs and OECMs.
- 19 marine ecoregions and 2 pelagic provinces have at least 10% protected within Australia's exclusive economic zone (EEZ).
- The average coverage of marine ecoregions is 40.3% and the average coverage of pelagic provinces is 34.6%.

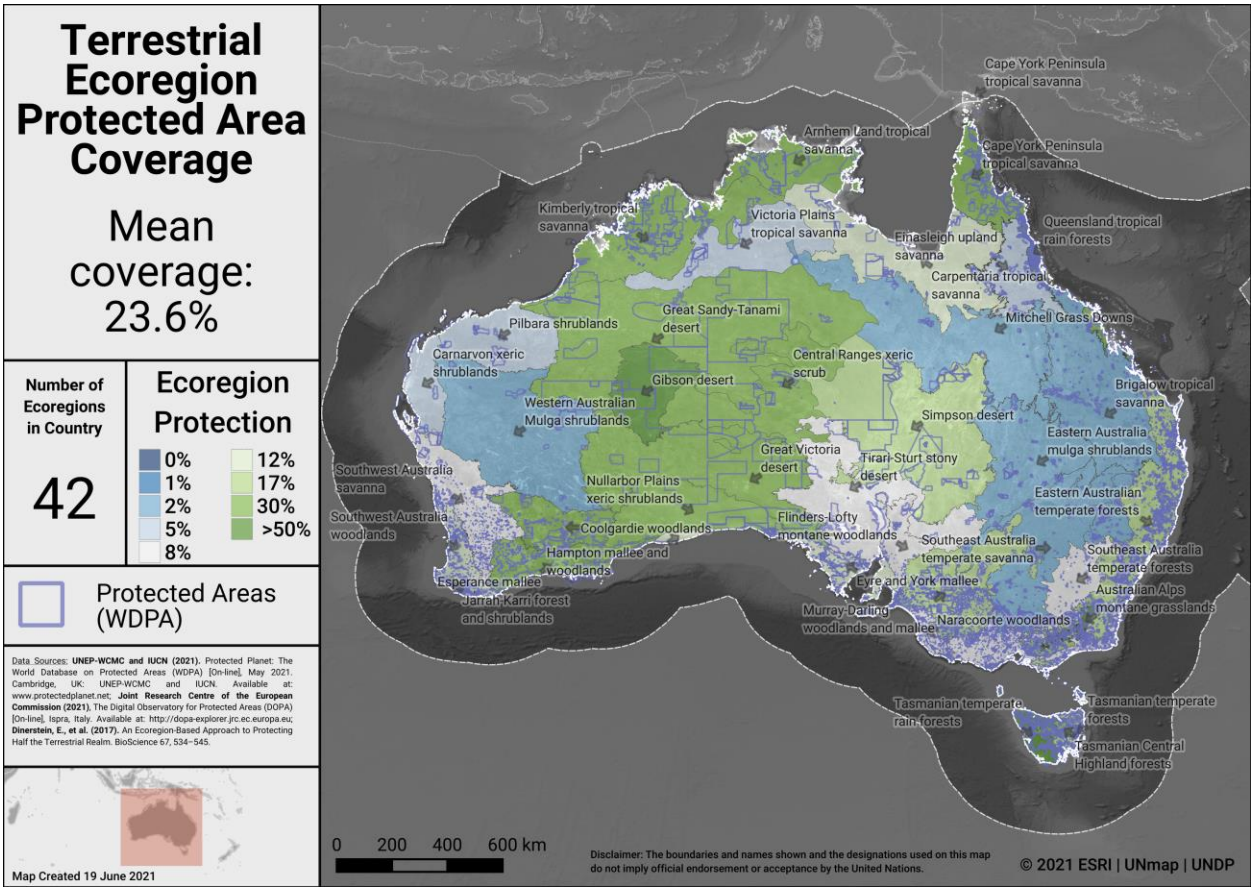
A full list of terrestrial ecoregions in Australia is available in Annex II.

Nationally, Australia uses different indicator for assessing representation:

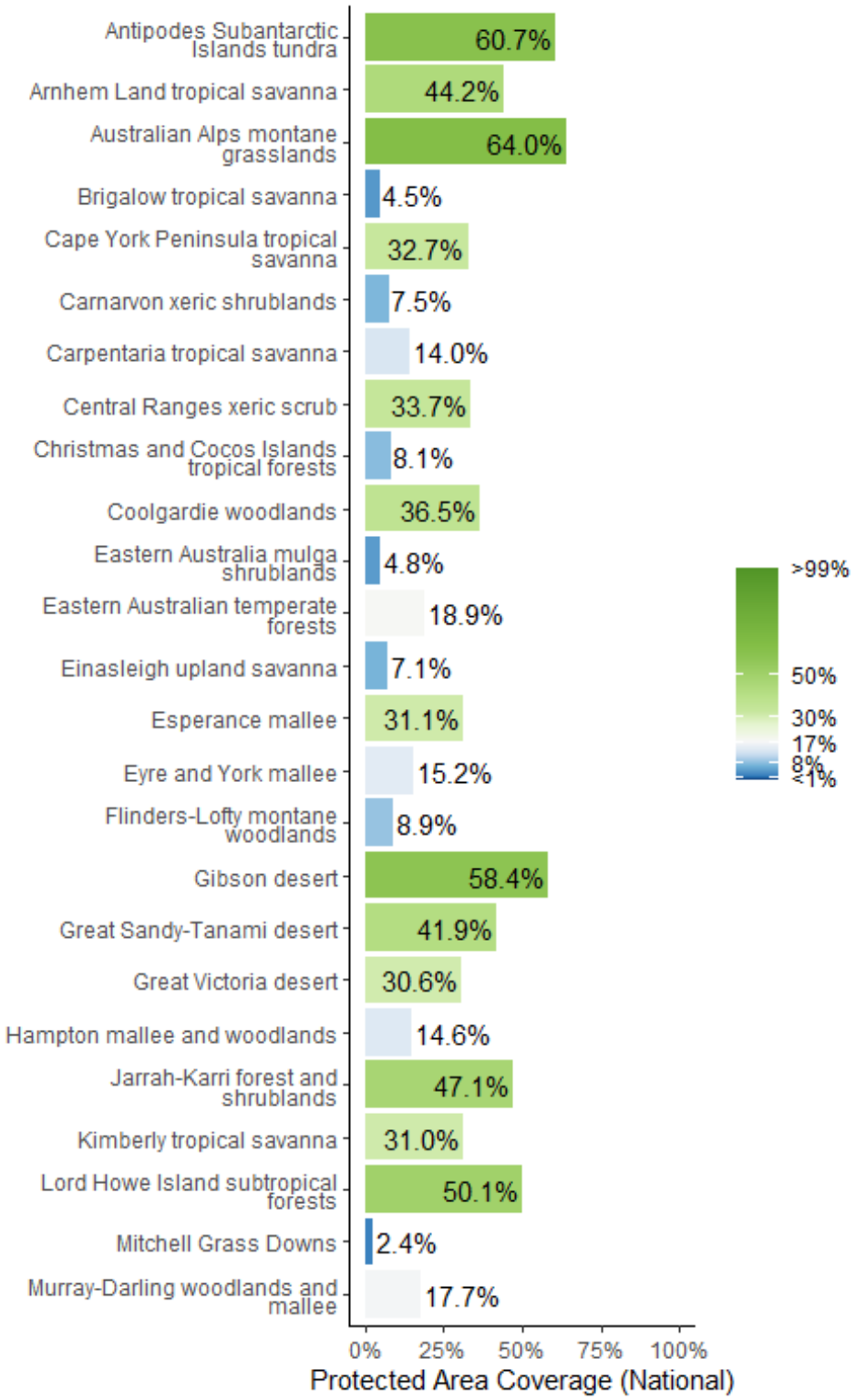
All 89 **terrestrial Australian bioregions** have some representation in Australia's protected area network, the National Reserve System.

- 62 terrestrial bioregions have more than 10 per cent protected
- 27 terrestrial bioregions have less than 10 per cent.

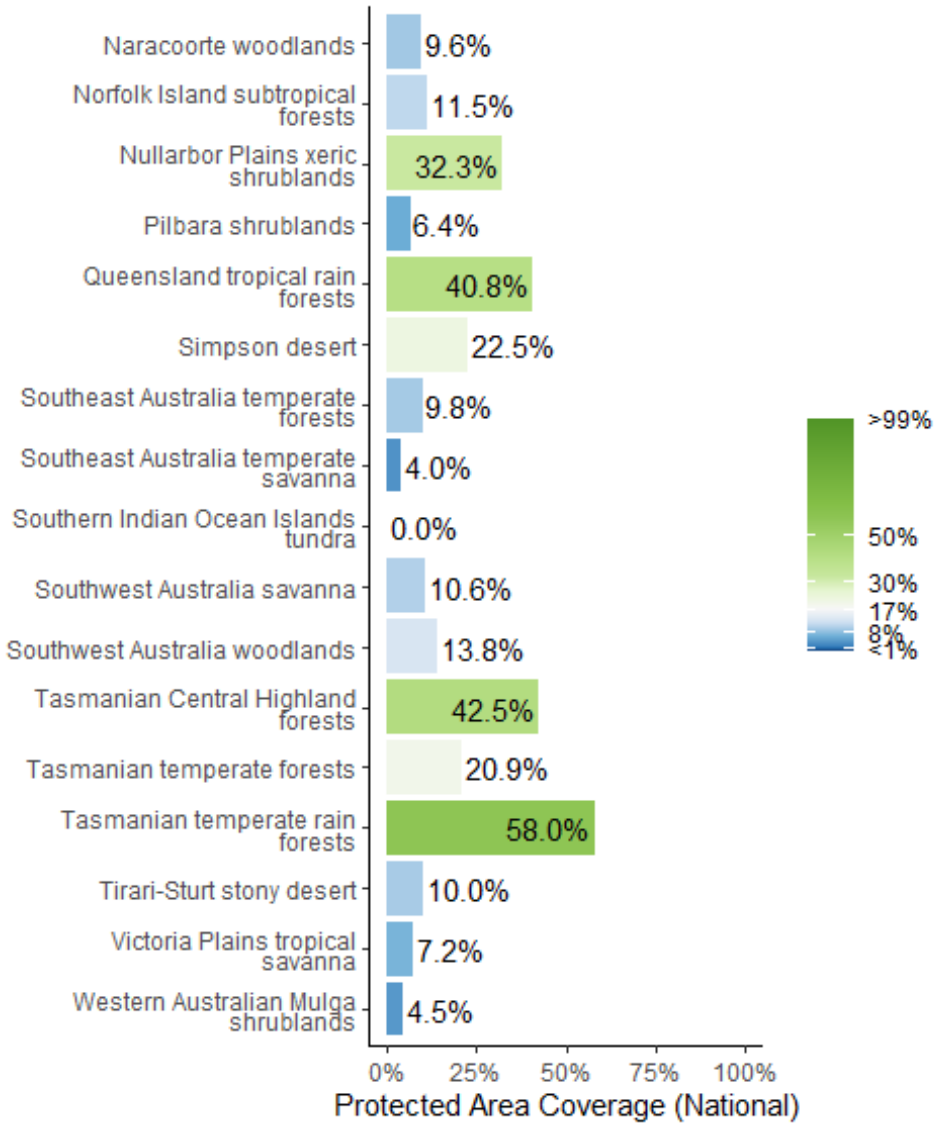
Australia has defined 41 **marine Provincial Bioregions** in Australian waters through the Integrated Marine and Coastal Regionalisation of Australia version 4.0. **39 of 41** marine Provincial Bioregions have some representation in Australia's National Representative System of Marine Protected Areas. Australia is also planning the establishment of new marine protected areas in the two Provincial Bioregions without marine protected area coverage.



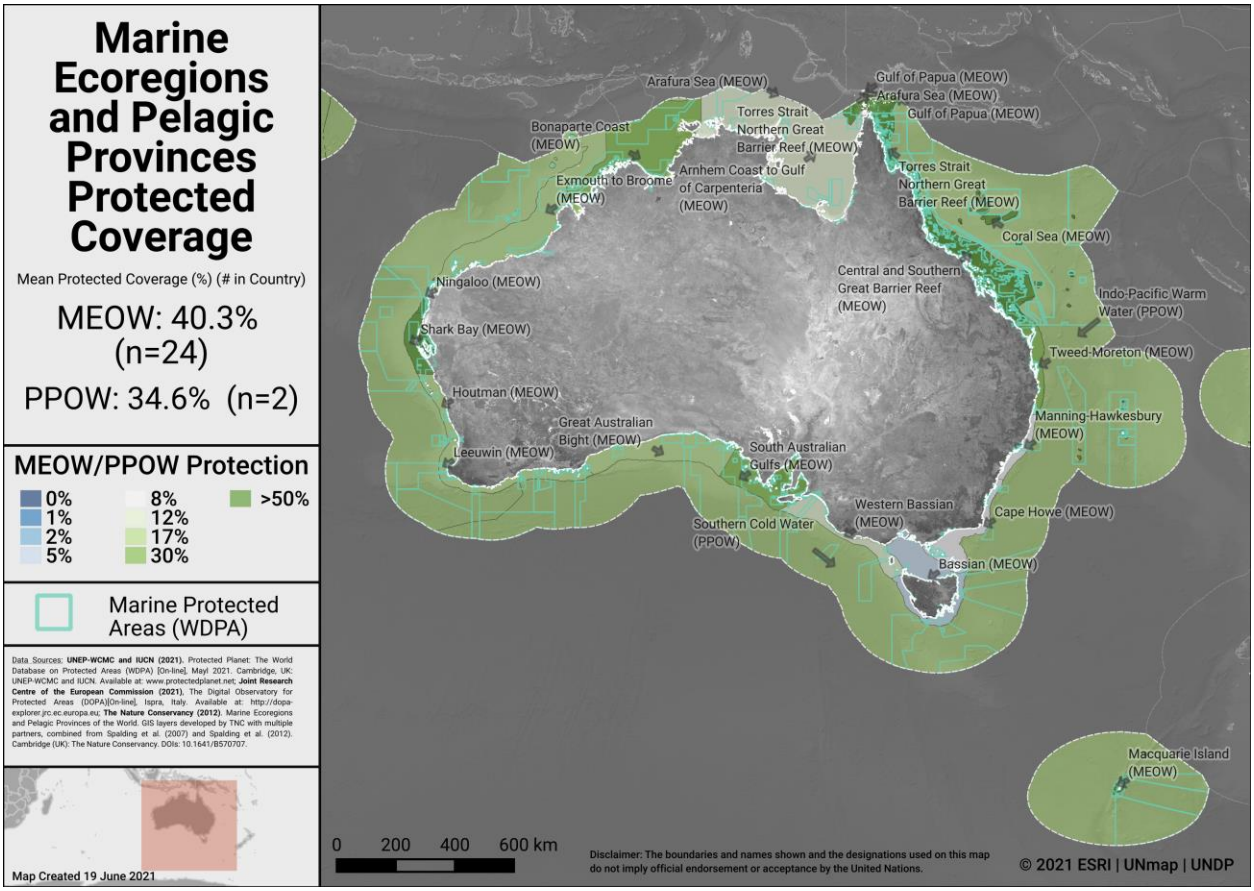
Terrestrial ecoregions in Australia



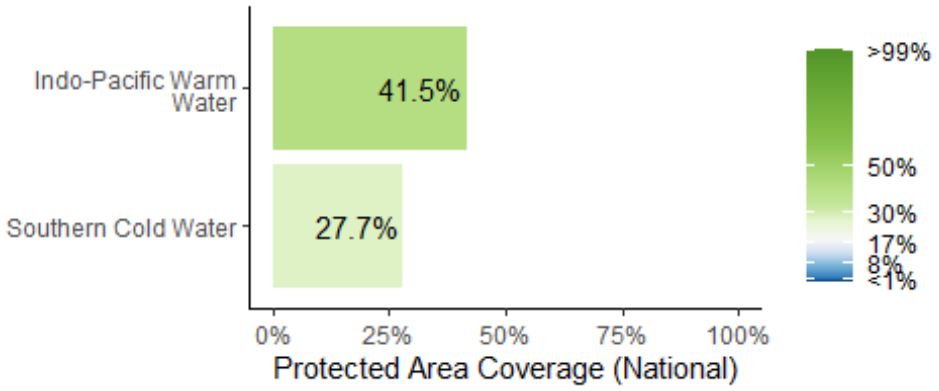
Terrestrial ecoregions of the World (TEOW) in Australia



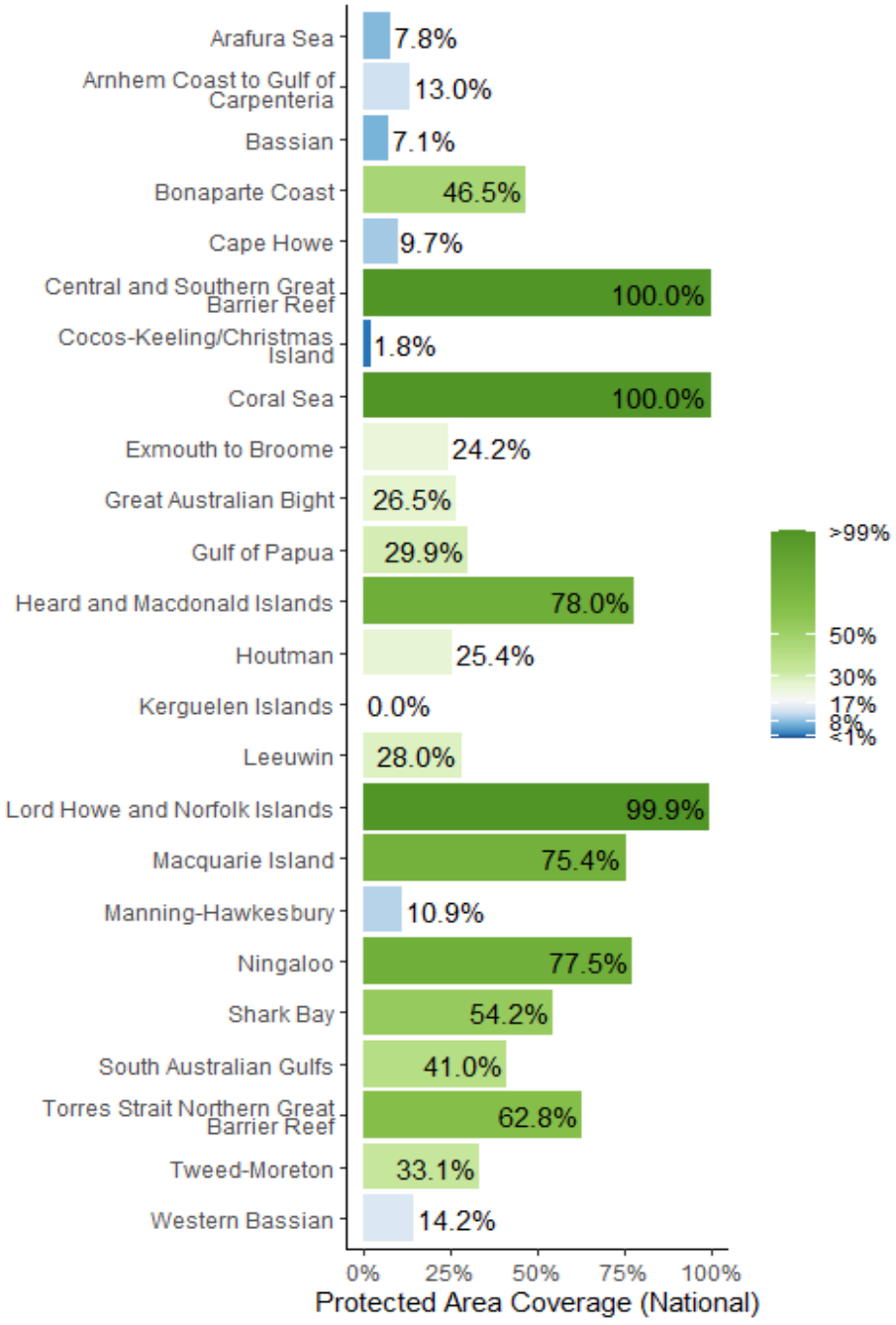
Terrestrial ecoregions of the World (TEOW) in Australia



Marine ecoregions and pelagic provinces



Pelagic Provinces of the World (PPOW) in Australia



Marine Ecoregions of the World (MEOW) in Australia

Opportunities for action

There is opportunity for Australia to increase protection in terrestrial and marine ecoregions and pelagic provinces that have lower levels of coverage by PAs or OECMs.

AREAS IMPORTANT FOR BIODIVERSITY

Australia does not formally recognise or record information on terrestrial areas important for biodiversity and does not formally use Ecologically or Biologically Significant Marine Areas.

Australia does not have an agreed approach to recognition of terrestrial areas important for biodiversity. The approach differs among states and territories within the Australian jurisdiction.

Key Ecological Features (KEFs) and Biologically Important Areas (BIAs) were used as part of the marine bioregional plans and development of Australian Marine Park[3] management plans. Key Biodiversity Areas and Ecologically and Biologically Significant Areas overlap to some extent with the KEFs and BIAs, but are not the same.

The Australian Government uses different criteria for marine areas. The Australian Marine Parks management effectiveness system recognises the existence of Key Natural Values (KNVs) within the Australian Marine Parks network that warrant special consideration. In developing the KNV criteria, other international criteria for important marine areas such as Ecologically and Biologically Significant Area criteria (EBSA – Convention on Biological Diversity), Key Biodiversity Areas (KBAs), Particularly Sensitive Sea Areas (PSSAs – International Maritime Organization), and Important Marine Mammals Areas (IMMAs - IUCN Marine Mammal Protected Areas Task Force) were also considered.

Key Biodiversity Areas (KBAs)

Protected area and OECM coverage of Key Biodiversity Areas (KBAs) provide one proxy for assessing the conservation of areas important for biodiversity at national, regional and global scales. KBAs are sites that make significant contributions to the global persistence of biodiversity (IUCN, 2016). The KBA concept builds on four decades of efforts to identify important sites for biodiversity, including Important Bird and Biodiversity Areas, Alliance for Zero Extinction sites, and KBAs identified through Hotspot ecosystem profiles supported by the Critical Ecosystem Partnership Fund. Incorporating these sites, the dataset of internationally significant KBAs includes Global KBAs (sites shown to meet one or more of 11 criteria in the Global Standard for the Identification of KBAs, clustered into five categories: threatened biodiversity; geographically restricted biodiversity; ecological integrity; biological processes; and irreplaceability), Regional KBAs (sites identified using pre-existing criteria and thresholds, that do not meet the Global KBA criteria based on existing information), and KBAs whose Global/Regional status is Not yet determined, but which will be assessed against the global KBA criteria within 8-12 years. Regional KBAs are often of critical international policy relevance (e.g., in EU legislation and under the Ramsar Convention on Wetlands), and many are likely to qualify as Global KBAs in future once assessed for their biodiversity importance for other taxonomic groups and ecosystems. To

[3] A subset of marine protected areas managed by the Australian Government that makes up 84% of Australia's National Representative System of Marine Protected Areas, by area

date, nearly 16,000 KBAs have identified globally, and information on each of these is presented in the World Database of Key Biodiversity Areas: www.keybiodiversityareas.org.

This country has established a Key Biodiversity Area (KBA) National Coordination Group which brings together a wide range of stakeholders, from government agencies, NGOs, academia and wider society. The group oversees and coordinates the identification, delineation, monitoring and promotion of conservation of KBAs, and is currently undertaking a national assessment of KBAs across all taxonomic groups and ecosystems for which data exist, building on the existing network of KBAs in the country.

Australia has **330** Key Biodiversity Areas (KBAs).

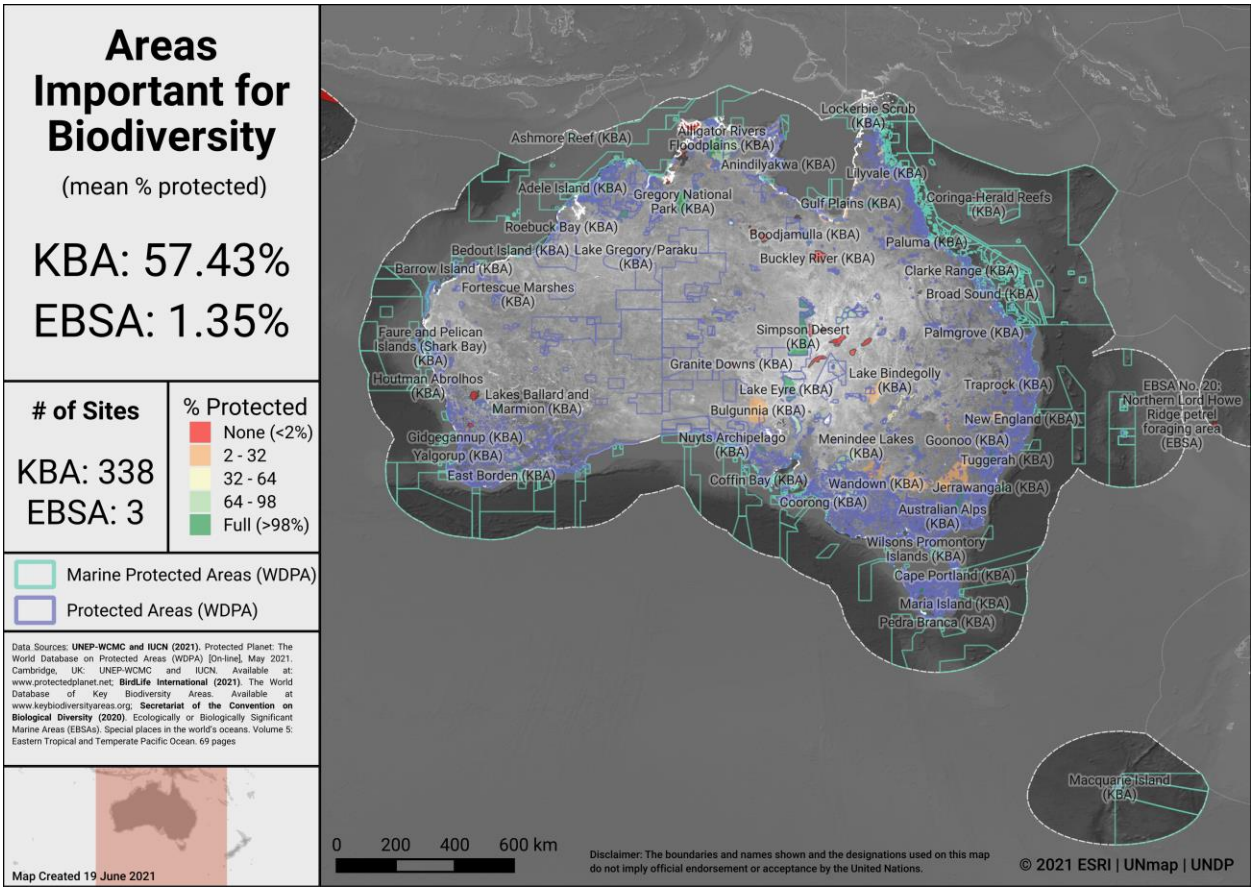
- Mean percent coverage of all KBAs by PAs and OECMs in Australia is **57.4%**.
- **100** KBAs have full (>98%) coverage by PAs and OECMs.
- **178** KBAs have partial coverage by PAs and OECMs.
- **52** KBAs have no (<2%) coverage by PAs and OECMs.
- *Another 8 KBAs have been identified in Australian external territories*

Coverage statistics for all individual KBAs in Australia is available in Annex II.

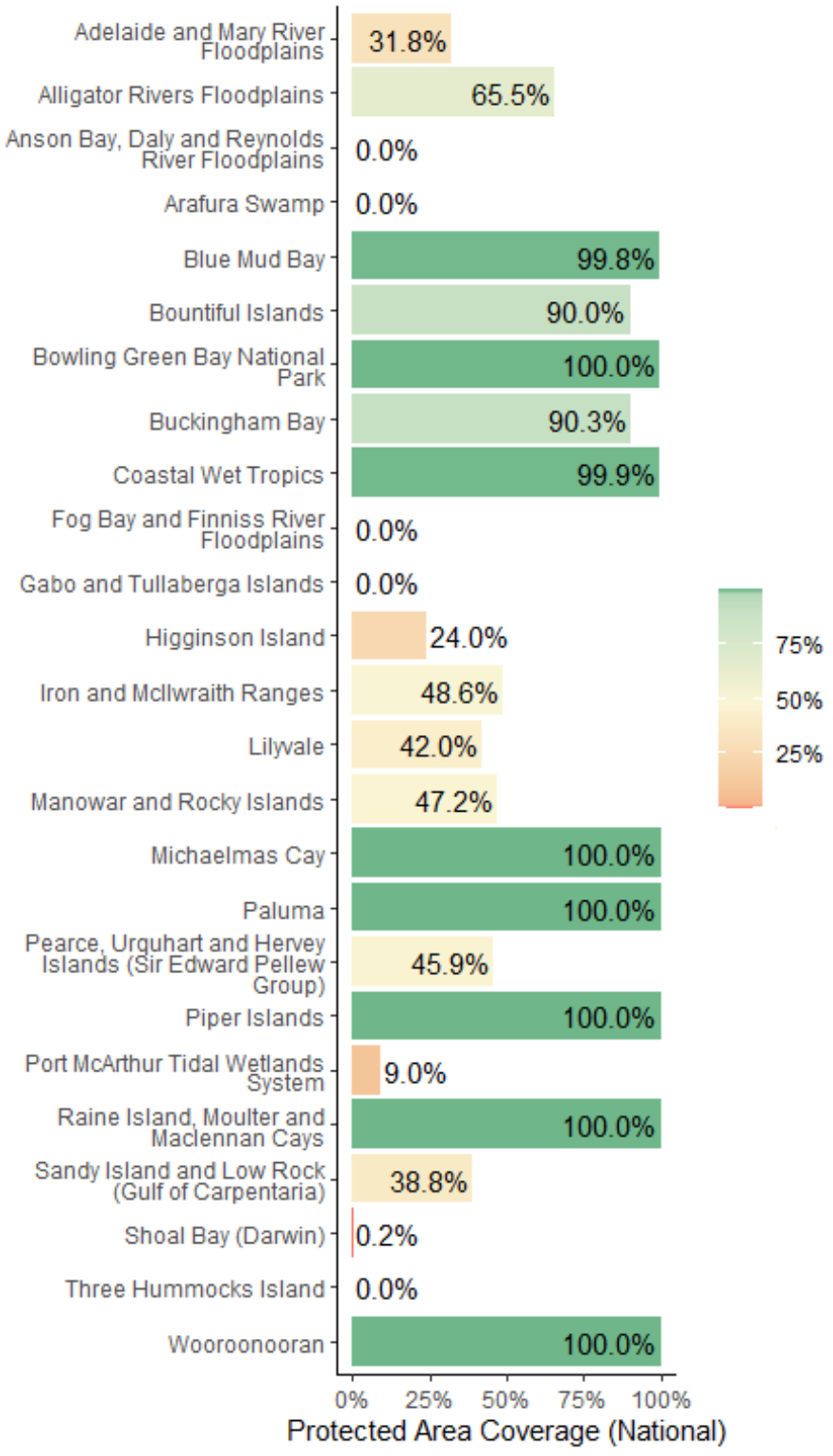
Ecologically or Biologically Significant Marine Areas (EBSAs)

Other important areas for biodiversity may also include Ecologically or Biologically Significant Marine Areas (EBSAs), which were identified following the scientific criteria adopted at COP-9 (Decision IX/20; see more at: https://www.cbd.int/ebsa/). Sites that meet the EBSA criteria may require enhanced conservation and management measures; this could be achieved through means including MPAs, OECMs, marine spatial planning, and impact assessment.

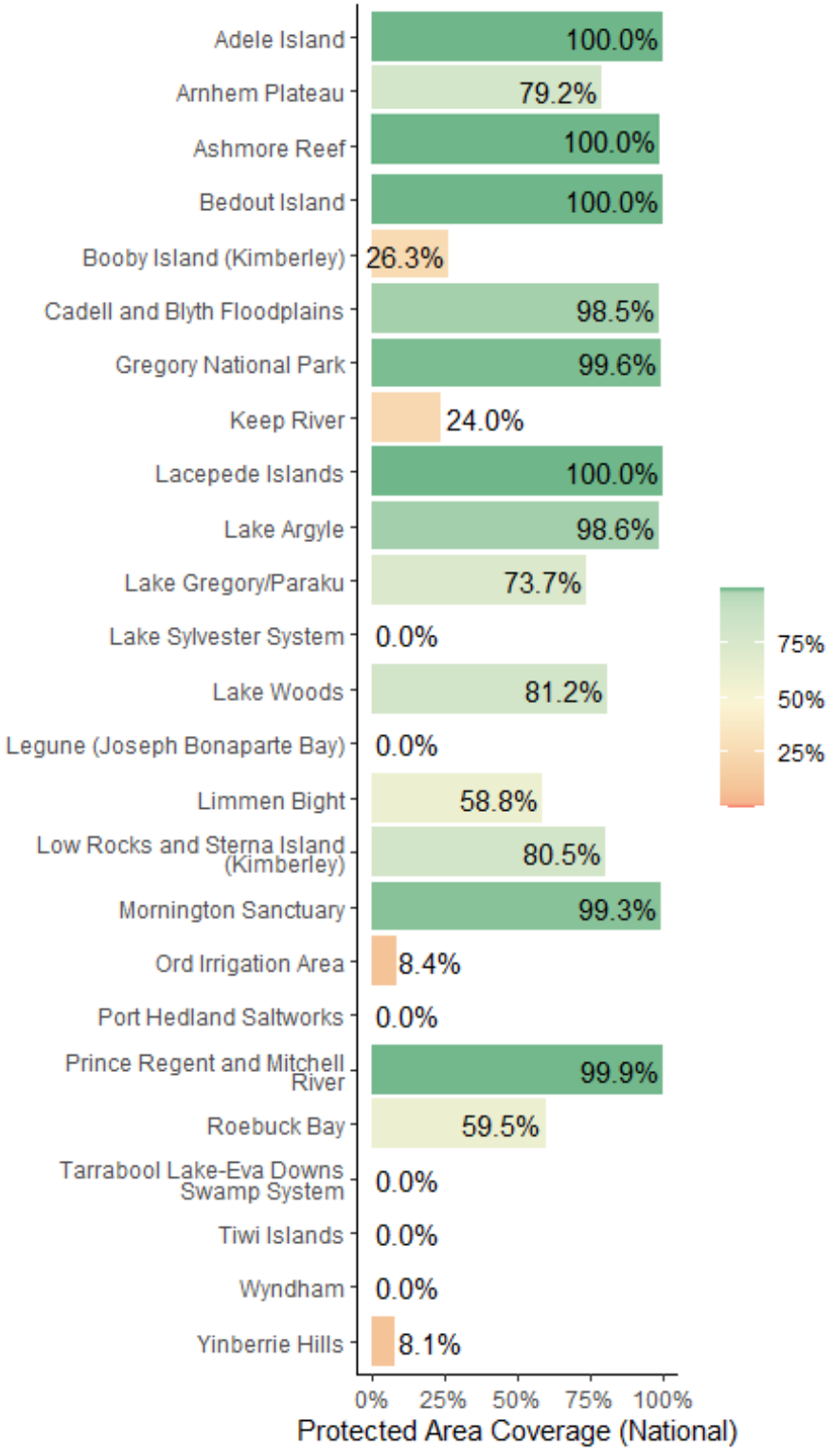
There are 3 EBSAs with some portion of their extent within Australia's EEZ, of which 2 have <0.1% coverage from PAs and OECMs (but have only a small portion of their extent within Australia's EEZ).



Areas Important for Biodiversity in Australia (total # of KBAs includes 8 from 'external territories', mean % coverage only for 330 KBAs from 'mainland' Australia)



Key Biodiversity Area Coverage (KBA) in Australia



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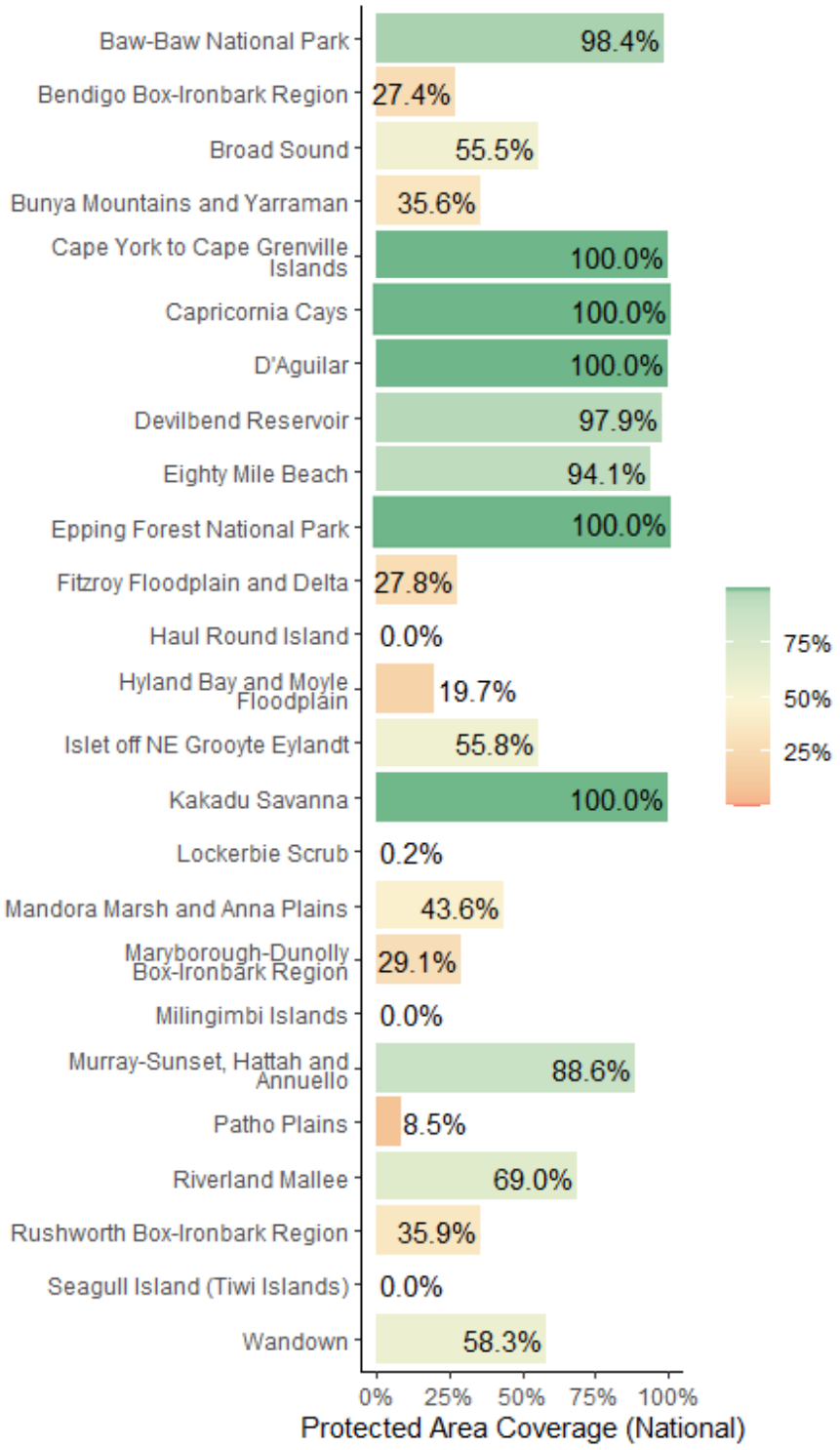
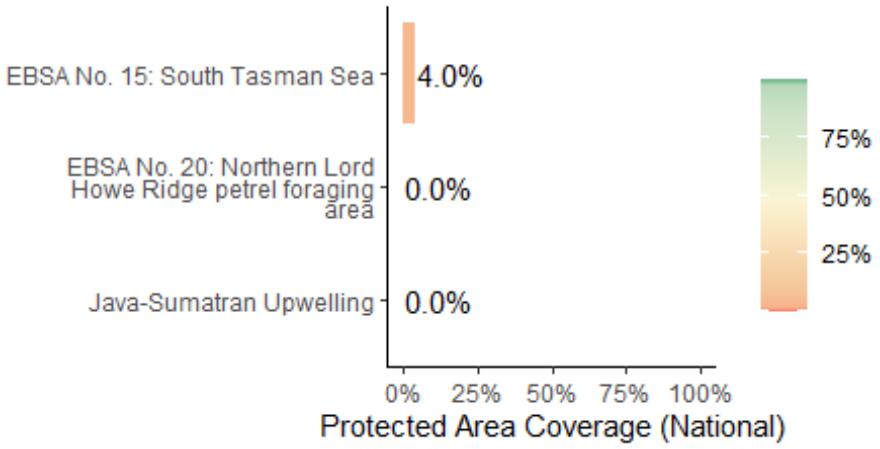


Key Biodiversity Area Coverage (KBA) in Australia

Coverage statistics for all remaining KBAs in Australia is available in **Annex II**.



Ecologically or Biologically Significant Marine Areas (EBSAs) in Australia

Opportunities for action

There is opportunity for Australia to increase protection of KBAs that have lower levels of coverage by PAs and OECMs; priority could be given to those with no current coverage.

AREAS IMPORTANT FOR ECOSYSTEM SERVICES

There is no single indicator identified for assessing the conservation of areas important for ecosystem services. For simplicity, two services with available global datasets are assessed here (carbon and water). In future, other critical ecosystem services could be explored.

Carbon

The Australian National Inventory Report to the United Nations Framework Convention on Climate Change (UNFCCC) (data for 2016) states that the country has:

- Above Ground Biomass: 8,228.3 TgC
- Below Ground Biomass: 3,053.2 TgC
- Soil Organic Carbon: 28,142.6 TgC

Australia does not identify the proportion of carbon in protected areas.

Australia's State of the Forests Report 2018[4] (Indicator 4.1a) reports that, as of 2016, the area of public forest managed primarily for protective functions including protection of soil and water values is 36.6 million hectares.

Based on data from global maps of marine sedimentary carbon stocks, standardized to a 1-meter depth (see Sala et al., 2021, and Atwood et al., 2020), Australia has 68,227.4 Tg C from marine sediment carbon, with 35.4% in protected areas.

Water

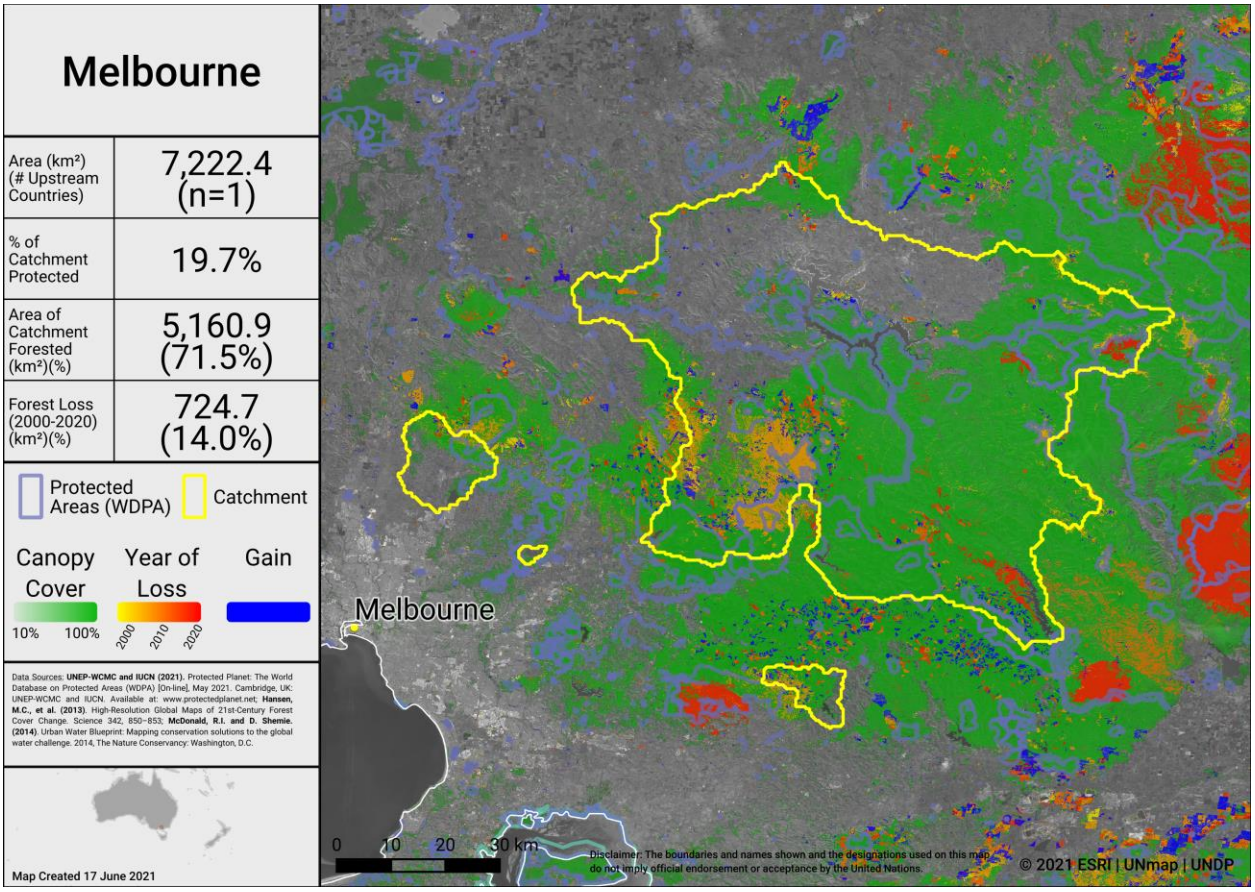
Information on the water sources for 534 cities is available via the City Water Map (CWM) and provides details on the catchment area of the watershed that supplies these cities (see McDonald et al., 2014 for details on methodology).

Forests support stormwater management and clean water availability, especially for large urban populations. Research that has examined the role of forests for city drinking water supplies shows that of the world's 105 largest cities, more than 30% (33 cities) rely heavily on the local protected forests, which provide ecosystem services that underpin local drinking water availability and quality (Dudley & Stolton, 2003).

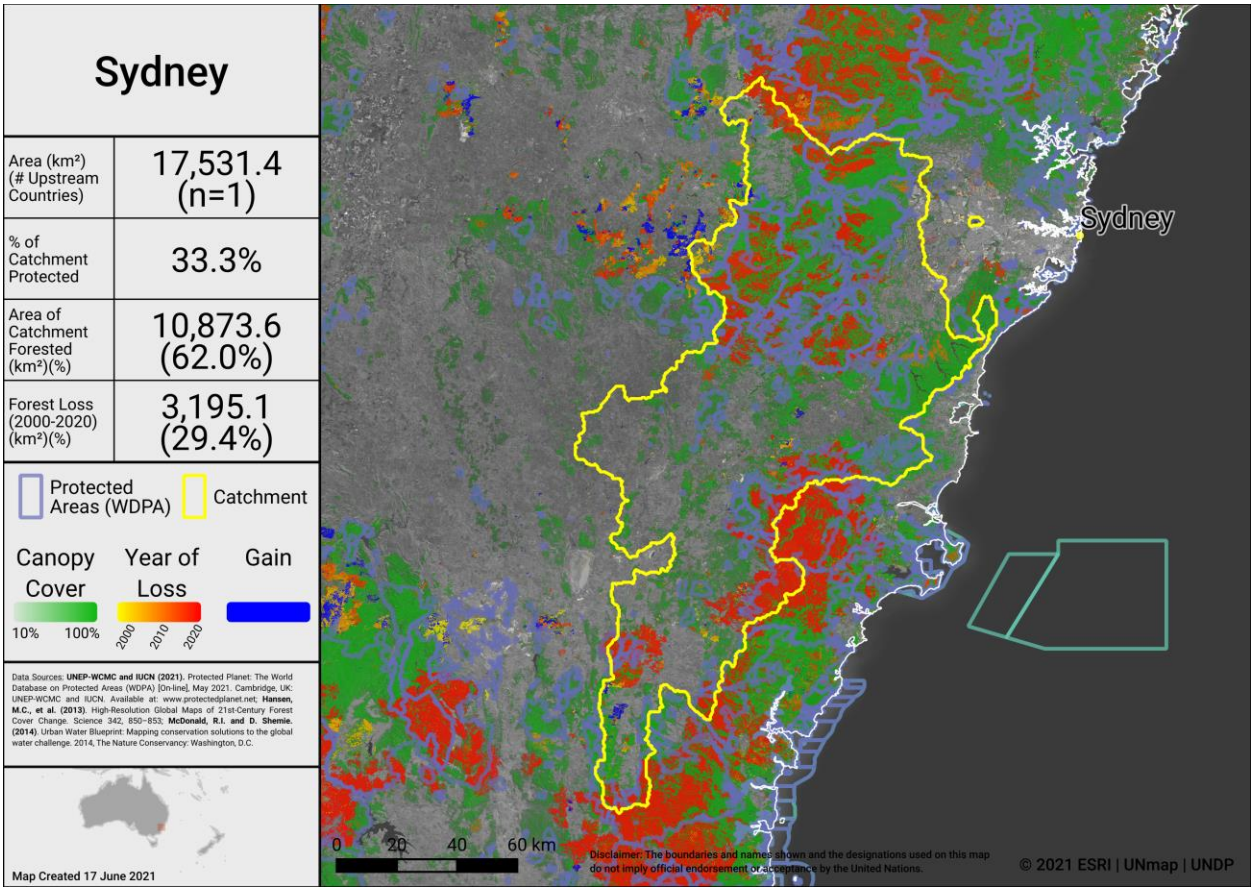
Drinking water supplies for cities in Australia similarly depend on protected forest areas within and around water catchments. Intact catchments support more consistent water supply and improved water quality. The maps below show the percentage canopy cover and the forest canopy cover loss and gain from 2000-2020 in the most heavily populated water catchments of Australia. Note that canopy cover, and its loss or gain, was determined for these maps using a method and definitions not in alignment with those used by the

[4] Available here: https://www.awe.gov.au/sites/default/files/abares/forestsaustralia/documents/sofr_2018/web%20accessible%20pdfs/SOFR_2018_web.pdf

Australian Government for determining national forest area and area change figures, and likely over-estimate forest loss.



Water supply area for the city of Melbourne



Water supply area for the city of Sydney

Opportunities for action

For carbon, there is opportunity for Australia to focus on effective management for PAs and OECMs in marine and terrestrial areas with high carbon stocks. Protecting areas with high carbon stocks secures the benefits of carbon sequestration in the area.

For water, there is opportunity to increase the area of the water catchment under protection by PAs and OECMs, or in cases where there is high levels of protection, focus on effective management for these areas. Protecting the current area of forested land and potentially reforesting would have benefits for improving water security.

CONNECTIVITY & INTEGRATION

The Australian Government does not capture information on protected area connectivity

Australia's State of the Forests Report 2018,[5] Indicator 1.1d, reports fragmentation (and its converse, connectivity) for forest across Australia.

Two global indicators, the Protected Connected land indicator (ProtConn; EC-JRC, 2021; Saura et al., 2018) and the PARC-Connectedness indicator (CSIRO, 2019), have been proposed for assessing the terrestrial connectivity of PA and OECM networks. To date there is no global indicator for assessing marine connectivity, though some recent developments include proposed guidance for the treatment of connectivity in the planning and management of MPAs (see Lausche et al., 2021).

Protected Connected Land Indicator (Prot-Conn)

As of January 2021, as reported in the Joint Research Centre of the European Commission's Digital Observatory for Protected Areas (DOPA) (JRC, 2021), the coverage of protected-connected lands (a measure of the connectivity of terrestrial protected area networks, assessed using the ProtConn indicator) in Australia[6] was 5.7%.

PARC-Connectedness Index

In 2019, as assessed using the PARC-Connectedness Index (values ranging from 0-1, indicating low to high connectivity), connectivity in Australia[7] is 0.53. This represents an increase from 0.46 in 2010.

Corridor case studies

Below are details from case studies on corridors and connectivity in Australia:

Case study title	Type of study region	Greatest threat to connectivity	Approaches to conserving ecological corridors
East Coast Conservation Corridor in Tasmania	terrestrial, rural	land-use change	• restoration • land-use planning • management for connectivity

[5] See most recent report here: https://www.awe.gov.au/sites/default/files/abares/forestsaustralia/documents/sofr_2018/web%20accessible%20pdfs/SOFR_2018_web.pdf

[6] Values for Australian external territories were calculated separately: Norfolk Island (16.9%), Christmas Island (60.9%), Cocos (Keeling) Islands (15.6%), Heard Island and McDonald Islands (100%)

[7] Values for Australian external territories were calculated separately: Christmas Island (0.56), not assessed for other external territories

Case study title	Type of study region	Greatest threat to connectivity	Approaches to conserving ecological corridors
The Great Eastern Ranges: Australia's first continental-scale ecological network for conservation	terrestrial, rural	land degradation	• restoration • conservation by private landowners • community education • biological surveys • research programs
The Great Barrier Reef – Systematically protecting connectivity without connectivity data	marine	recurrent coral reef bleaching, cyclones, invasive species outbreaks, poor water quality, unsustainable fishing, dredging and coastal development	• networks of strategically placed marine reserves • zoning based on systematic planning principles

Further details are available in Hilty et al 2020.

Opportunities for action

There is opportunity for a targeted designation of PAs or OECMs in strategic locations for connectivity and to focus on PA and OECM management for enhancing and maintaining connectivity. Improving connectivity increases the effectiveness of PAs and OECMs and reduces the impacts of fragmentation.

As well, a range of suggested steps for enhancing and supporting integration are included in the voluntary guidance on the integration of PAs and OECMs into the wider land- and seascapes and mainstreaming across sectors to contribute, inter alia, to the SDGs (Annex I of COP Decision 14/8).

GOVERNANCE DIVERSITY

There is a lack of comprehensive global data on governance quality and equity in PAs and OECMs. Here, we provide data on the diversity of governance types for reported PAs and OECMs.

As of May 2021, PAs in Australia reported in the WDPA have the following governance types (by number of sites, terrestrial and marine PAs combined):

- 63.9% are governed by **governments**
  - 1.2% by federal or national ministry or agency
  - 62.8% by sub-national ministry or agency
- 20.4% are under **shared** governance
  - by joint governance
- 14.1% are under **private** governance
  - 13.4% by individual landowners
  - 0.7% by non-profit organisations
- 0.8% are under **IPLC** governance
  - by Indigenous Peoples
- 0.8% **do not** report a governance type

OECMs

As of May 2021, there are **0** OECMs in Australia reported in the WD-OECM, and no information on governance diversity.

Territories and areas conserved by Indigenous Peoples and local communities (ICCAs)

Australia currently has 78 Indigenous Protected Areas (IPAs), covering 740,557 km^2. They are included in CAPAD and make up 46.53% of the Australian protected areas estate.

Other Indigenous lands

Lands managed and/or controlled by Indigenous Peoples cover an area of 4,023,204.0 km^2, of which 3,093,259.0 km^2 falls outside of formal protected areas. Indigenous lands with a human footprint less than 4 (considered as 'natural landscapes') cover an area of 3,302,630.0 km^2 (for details on analysis see Garnett et al., 2018).

For Australia evidence for the presence of Indigenous Peoples comes from: Indigenous Work Group on Indigenous Affairs. Indigenous World 2017 (Indigenous Working Group on Indigenous Affairs, 2017).

Boundaries of the lands Indigenous Peoples manage or have tenure rights over come from: Renwick, A. R. et al. Mapping Indigenous land management for threatened species conservation: an Australian case-study. PloS One 12, e0173876 (2017).

Opportunities for action

There is opportunity for Australia to complete governance and equity assessments, to establish baselines, and identify relevant actions for improvement. Examples of existing tools and methodologies include: Governance Assessment for Protected and Conserved Areas (Franks & Brooker, 2018), Social Assessment of Protected Areas (Franks et al 2018), and Site-level assessment of governance and equity (IIED, 2020). As well, a range of suggested actions are included in the voluntary guidance on effective governance models for management of protected areas, including equity (Annex II of COP Decision 14/8).

PROTECTED AREA MANAGEMENT EFFECTIVENESS

This section provides the percentage of land and marine areas covered by PAs and OECMs with completed protected area management effectiveness (PAME) assessments as reported in the global GD-PAME. The proportion of terrestrial and marine PAs with completed PAME assessments is also calculated and compared with the 60% target agreed to in COP-10 Decision X/31. Information is also included regarding changes in forest cover nationally within PAs and OECMs.

Protected area management effectiveness (PAME) assessments

As of May 2021, Australia has 11,126 PAs reported in the WDPA; of these PAs, 1,502 (13.1%) have management effectiveness evaluations reported in the global database on protected area management effectiveness (GD-PAME).

- 3.9% (303,985 km^2) of the terrestrial area of the country is covered by PAs with completed management effectiveness evaluations.
  - 19.3% of the area of terrestrial PAs have completed evaluations.
- 4.2% (385,858 km^2) of the marine area of the country is covered by PAs with completed management effectiveness evaluations.
  - 11.7% of the area of marine PAs have completed evaluations.

The 60% target for completed management effectiveness assessments (per COP Decision X/31) **has not** been met for terrestrial PAs and **has not** been met for marine PAs.

The Australian Government does not capture information on Protected Area Management Effectiveness (PAME) assessments for the more than 13,000 terrestrial protected areas in Australia. A management effectiveness evaluation system to capture management effectiveness information for marine areas is under development.

As of May 2021, there are 0 OECMs in Australia reported in the WD-OECM and no information available on the management effectiveness of potential OECMs.

Changes in forest cover in protected areas and OECMs

The Australian Government reports nationally via the Australia's State of the Forests Report series.[8] The most recent report was released in 2018, and identifies 134 million hectares of forest (covering 17% of Australia's land area). Of that area, a total of 33.6 million hectares, or 25% is in IUCN protected area categories (derived from CAPAD). Australia's State of the Forests Report 2018 also reports that Australia's forest area has increased progressively since 2008. The net increase in forest area over the period 2011 to 2016 was 3.9 million hectares.

[8] See most recent report here: https://www.awe.gov.au/sites/default/files/abares/forestsaustralia/documents/sofr_2018/web%20accessible%20pdfs/SOFR_2018_web.pdf

Opportunities for action

The 60% target for completed management effectiveness assessments (per COP Decision X/31) **has not** been met for terrestrial PAs and **has not** been met for marine PAs. Therefore, there is opportunity to increase protected area management effectiveness (PAME) evaluations for both terrestrial and marine PAs to achieve the target.

There is also opportunity to implement the results of completed PAME evaluations, to improve the quality of management for existing PAs and OECMs (e.g. through adaptive management and information sharing, increasing the number of sites reporting 'sound management') and to increase reporting of biodiversity outcomes in PAs and OECMs.

SECTION II: EXISTING PROTECTED AREA AND OECM COMMITMENTS

NATIONAL BIODIVERSITY STRATEGY AND ACTION PLANS (NBSAPs)

Australia has submitted an NBSAP during the Strategic Plan for Biodiversity 2011-2020 (most recent NBSAP is available at: https://www.cbd.int/nbsap/search/).

Australia's current NBSAP, *Australia's Strategy for Nature 2019-2030* and supporting website, Australia's Nature Hub, replaced the previous NBSAP in November 2019. Both the Strategy and the Nature Hub were co-developed and co-owned by the Commonwealth and state and territory governments making it a shared Strategy and brings together existing work across the country with the aim to guide the development of new and innovative approaches to biodiversity conservation. The Strategy focuses on overarching goals that support healthy and functioning biological systems by promoting a stronger connection between people and nature, improving the way we care for nature, and building and sharing knowledge. It is a shared roadmap to better understand, care for and sustainably manage nature to 2030. Australia proposes to review the Strategy once international targets in the post-2020 Global Biodiversity Framework are finalised.

The Strategy has a number of progress measures which will be used to track and report on the success of the Strategy. Progress measures relevant to Australia's terrestrial and marine protected areas include:

- 2C Number and extent of lands managed for conservation under other effective conservation measures (privately managed protected areas, covenants or stewardship arrangements)
- 4D Number and extent of terrestrial and marine areas managed by Indigenous Protected Areas (IPAs) or other co-management arrangements
- 5B Extent and representativeness of marine protected areas, including marine Indigenous protected areas
- 5D Explicit consideration of future climate scenarios in the planning and management of protected area networks.

UN OCEAN CONFERENCE VOLUNTARY COMMITMENTS

Voluntary commitments for the UN Ocean Conference are initiatives voluntarily undertaken by governments, the UN system, non-governmental organizations, among other actors—individually or in partnership—that aim to contribute to the implementation of SDG 14 (here we focus in particular on SDG 14.5). The registry of commitments was opened in February 2017, in the lead up to the first UN Ocean Conference (5 to 9 June 2017).

Other Ocean Actions

Other Ocean Actions submitted as voluntary commitments for SDG 14.5, will also create benefits for the qualifying elements of Aichi Biodiversity Target 11:

#OceanAction17908: Commonwealth Marine Reserves, by Department of the Environment and Energy (Government).

- Types of actions involved: Integrated Coastal Management; capacity-building/training related to management; indicators for monitoring.
- Target 11 element addressed: Effectively managed.
- Progress report: Australia submitted a response to a survey on progress with its commitment in 2020.
- Further details available at: https://oceanconference.un.org/commitments/?id=17908

OTHER ACTIONS/COMMITMENTS

High Ambition Coalition for Nature and People

Australia **has** joined the High Ambition Coalition for Nature and People.

The High Ambition Coalition for Nature and People (HAC) is an intergovernmental group, co-chaired by France and Costa Rica [currently including 65 countries and the European Commission]. Its objective is to support the adoption of a target aiming to protect 30% of the planet's land and 30% of its oceans by 2030 (30x30 target), within the future global framework of the Convention on Biological Diversity (CBD) for the protection of biodiversity, which is to be adopted at the next COP in China this autumn.

Global Ocean Alliance

Australia **has** joined the Global Ocean Alliance: 30by30 initiative.

The Global Ocean Alliance 30by30 is a UK led initiative [currently containing 53 countries as signatories]. Its aim is to protect at least 30% of the global ocean as Marine Protected Areas (MPAs) and Other Effective area-based Conservation Measures (OECMs) by 2030.

Australia's statement at the 2020 UN Biodiversity Summit mentions PAs, OECMs or corridors:

In addition to conventional science and technology, we recognize the importance of traditional ecological knowledge. Australia's Indigenous protected areas support Indigenous communities to manage their country, to protect environmental and cultural values for future generations. With currently 76 dedicated Indigenous protected areas, this program provides positive, long term health, education, economic and social benefits for these communities.

ANNEX I

FULL LIST OF TERRESTRIAL ECOREGIONS

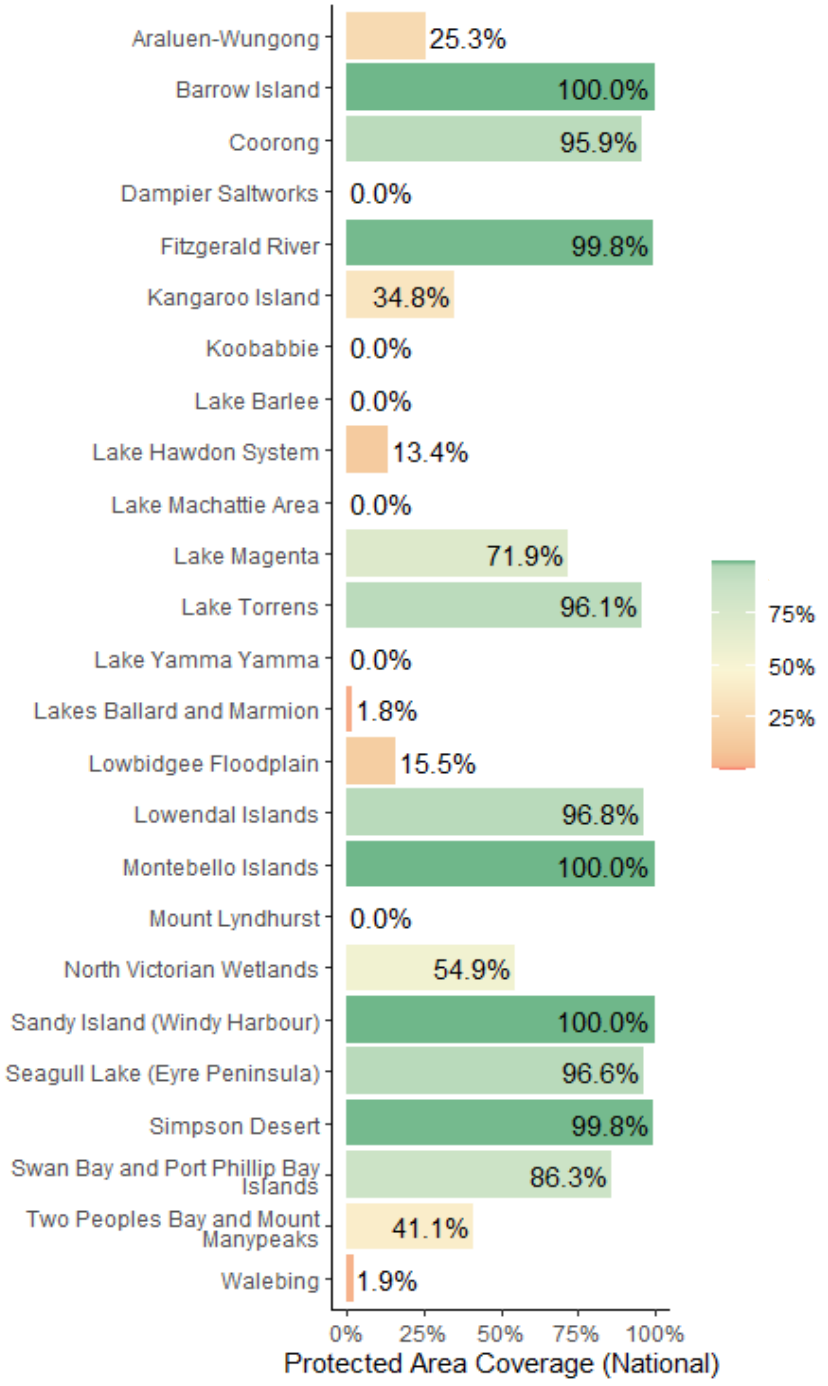
Ecoregion Name	Area (km^2)	% of Global Ecoregion in Country	% of Country in Ecoregion	Area Protected (km^2)	% Protected in Country
Antipodes Subantarctic Islands tundra	118.0	13.4	0.0	71.7	60.7
Arnhem Land tropical savanna	158,096.7	100.0	2.1	69,893.8	44.2
Australian Alps montane grasslands	12,329.8	100.0	0.2	7,884.8	63.9
Brigalow tropical savanna	408,943.1	100.0	5.3	18,412.6	4.5
Cape York Peninsula tropical savanna	122,541.3	100.0	1.6	40,060.9	32.7
Carnarvon xeric shrublands	84,301.7	100.0	1.1	6,306.6	7.5
Carpentaria tropical savanna	366,014.5	100.0	4.8	51,129.6	14.0
Central Ranges xeric scrub	287,406.3	100.0	3.7	96,727.8	33.7
Christmas and Cocos Islands tropical forests	134.0	100.0	0.0	10.9	8.1
Coolgardie woodlands	129,122.1	100.0	1.7	47,132.6	36.5
Eastern Australia mulga shrublands	251,883.3	100.0	3.3	12,041.2	4.8
Eastern Australian temperate forests	295,112.6	100.0	3.8	55,745.4	18.9
Einasleigh upland savanna	116,257.3	100.0	1.5	8,286.3	7.1
Esperance mallee	103,188.9	100.0	1.3	32,074.2	31.1

Ecoregion Name	Area (km^2)	% of Global Ecoregion in Country	% of Country in Ecoregion	Area Protected (km^2)	% Protected in Country
Eyre and York mallee	61,204.1	100.0	0.8	9,330.6	15.2
Flinders-Lofty montane woodlands	66,157.7	100.0	0.9	5,914.0	8.9
Gibson desert	156,290.1	100.0	2.0	91,273.8	58.4
Great Sandy-Tanami desert	823,783.1	100.0	10.7	345,234.3	41.9
Great Victoria desert	422,465.6	100.0	5.5	129,345.9	30.6
Hampton mallee and woodlands	10,882.0	100.0	0.1	1,593.2	14.6
Jarrah-Karri forest and shrublands	8,447.7	100.0	0.1	3,977.6	47.1
Kimberly tropical savanna	338,500.2	100.0	4.4	105,056.4	31.0
Lord Howe Island subtropical forests	14.4	100.0	0.0	7.2	50.1
Mitchell Grass Downs	471,881.2	100.0	6.1	11,244.5	2.4
Murray-Darling woodlands and mallee	207,707.6	100.0	2.7	36,821.4	17.7
Naracoorte woodlands	24,582.1	100.0	0.3	2,360.4	9.6
Norfolk Island subtropical forests	41.6	100.0	0.0	4.8	11.5
Nullarbor Plains xeric shrublands	197,227.7	100.0	2.6	63,725.6	32.3
Pilbara shrublands	178,231.3	100.0	2.3	11,413.7	6.4
Queensland tropical rain forests	34,533.1	100.0	0.4	14,084.1	40.8
Simpson desert	583,937.2	100.0	7.6	131,422.1	22.5

Ecoregion Name	Area (km^2)	% of Global Ecoregion in Country	% of Country in Ecoregion	Area Protected (km^2)	% Protected in Country
Southeast Australia temperate forests	188,725.5	100.0	2.5	18,554.5	9.8
Southeast Australia temperate savanna	277,895.8	100.0	3.6	11,008.1	4.0
Southern Indian Ocean Islands tundra	389.3	4.8	0.0	0.0	0.0
Southwest Australia savanna	177,468.3	100.0	2.3	18,811.8	10.6
Southwest Australia woodlands	60,348.7	100.0	0.8	8,356.1	13.8
Tasmanian Central Highland forests	11,832.9	100.0	0.2	5,026.5	42.5
Tasmanian temperate forests	23,268.7	100.0	0.3	4,856.6	20.9
Tasmanian temperate rain forests	33,709.6	100.0	0.4	19,534.4	57.9
Tirari-Sturt stony desert	308,046.8	100.0	4.0	30,728.3	10.0
Victoria Plains tropical savanna	223,982.4	100.0	2.9	16,034.1	7.2
Western Australian Mulga shrublands	461,958.1	100.0	6.0	20,863.8	4.5

ANNEX II

KBA GRAPHS



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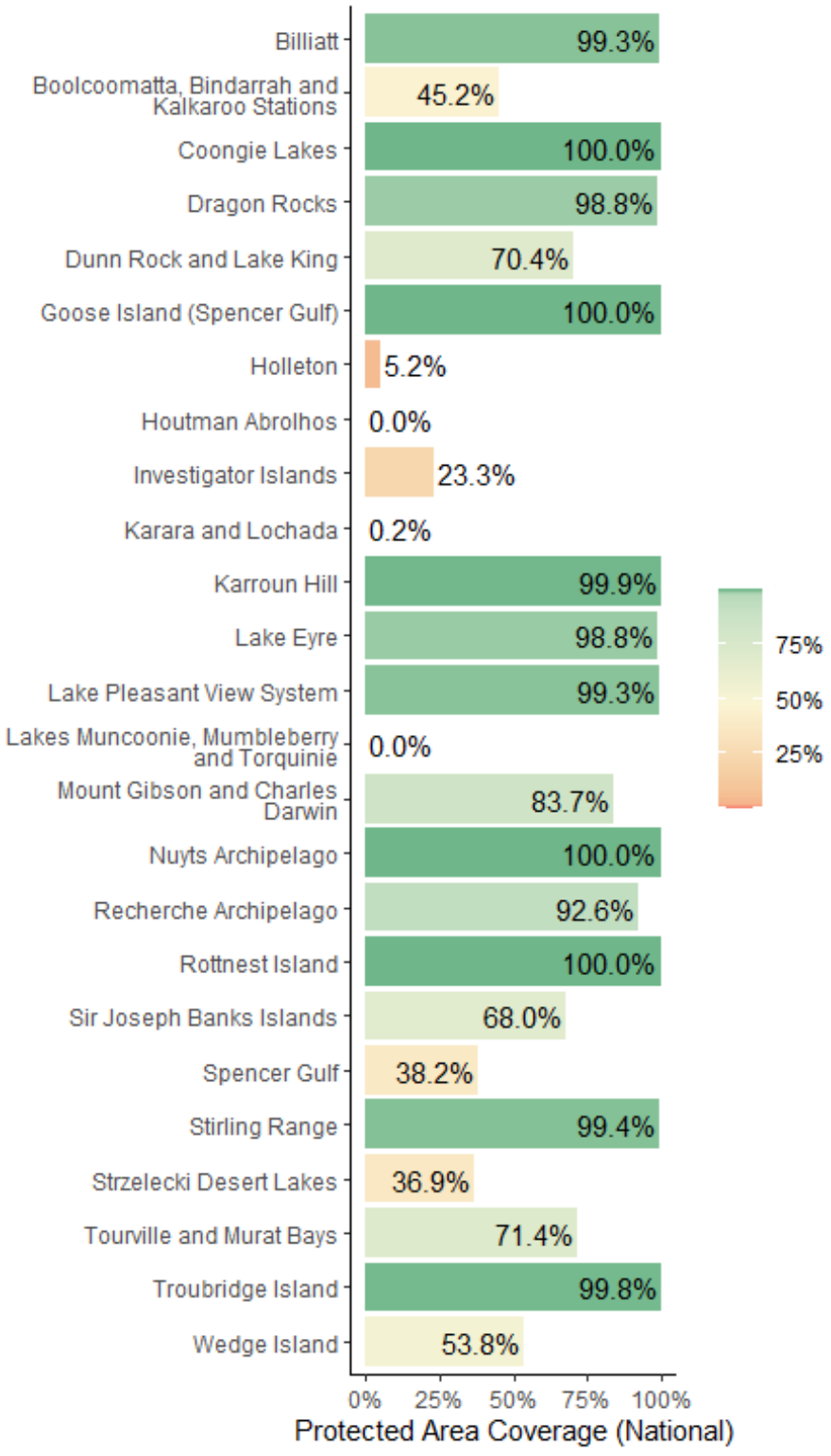

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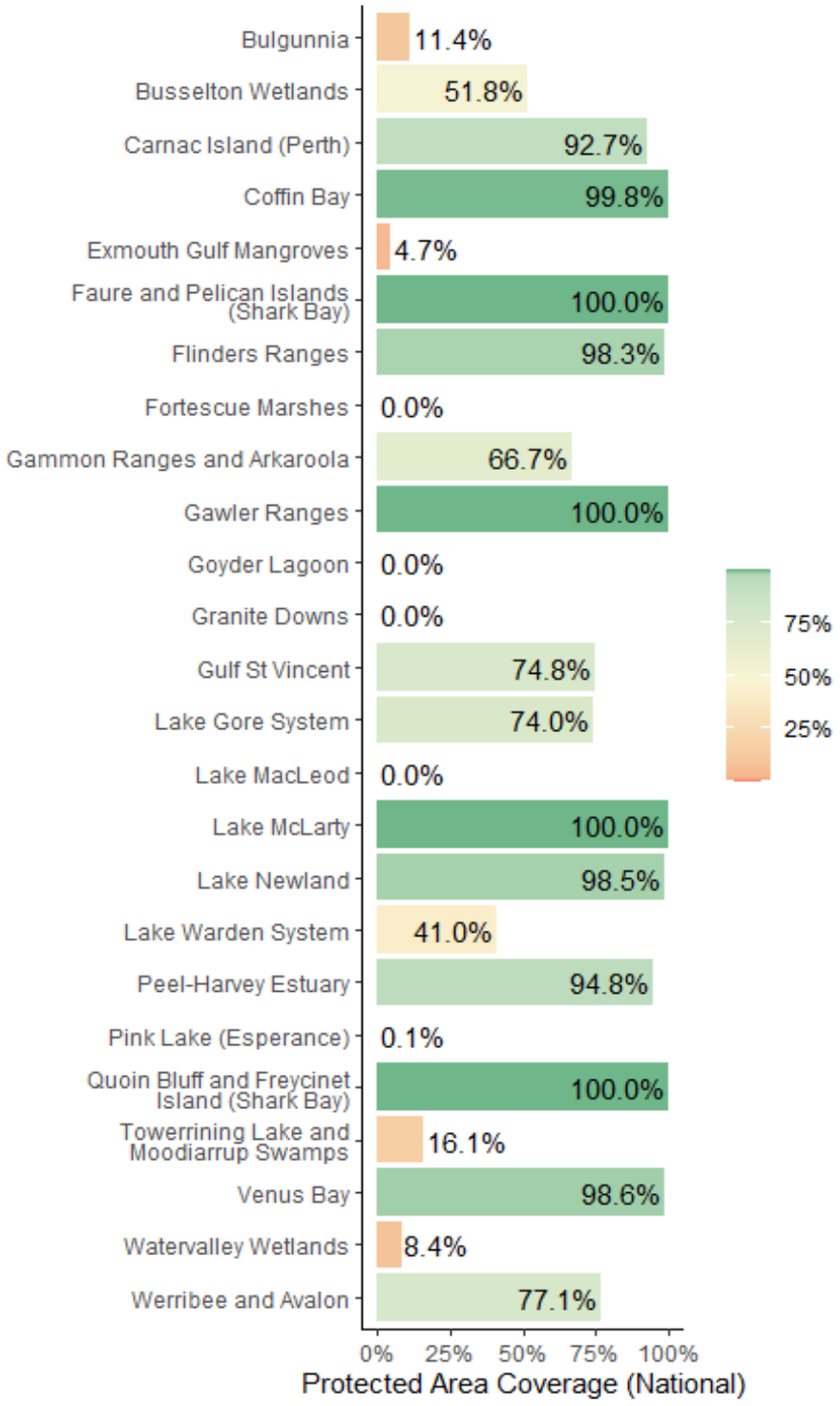

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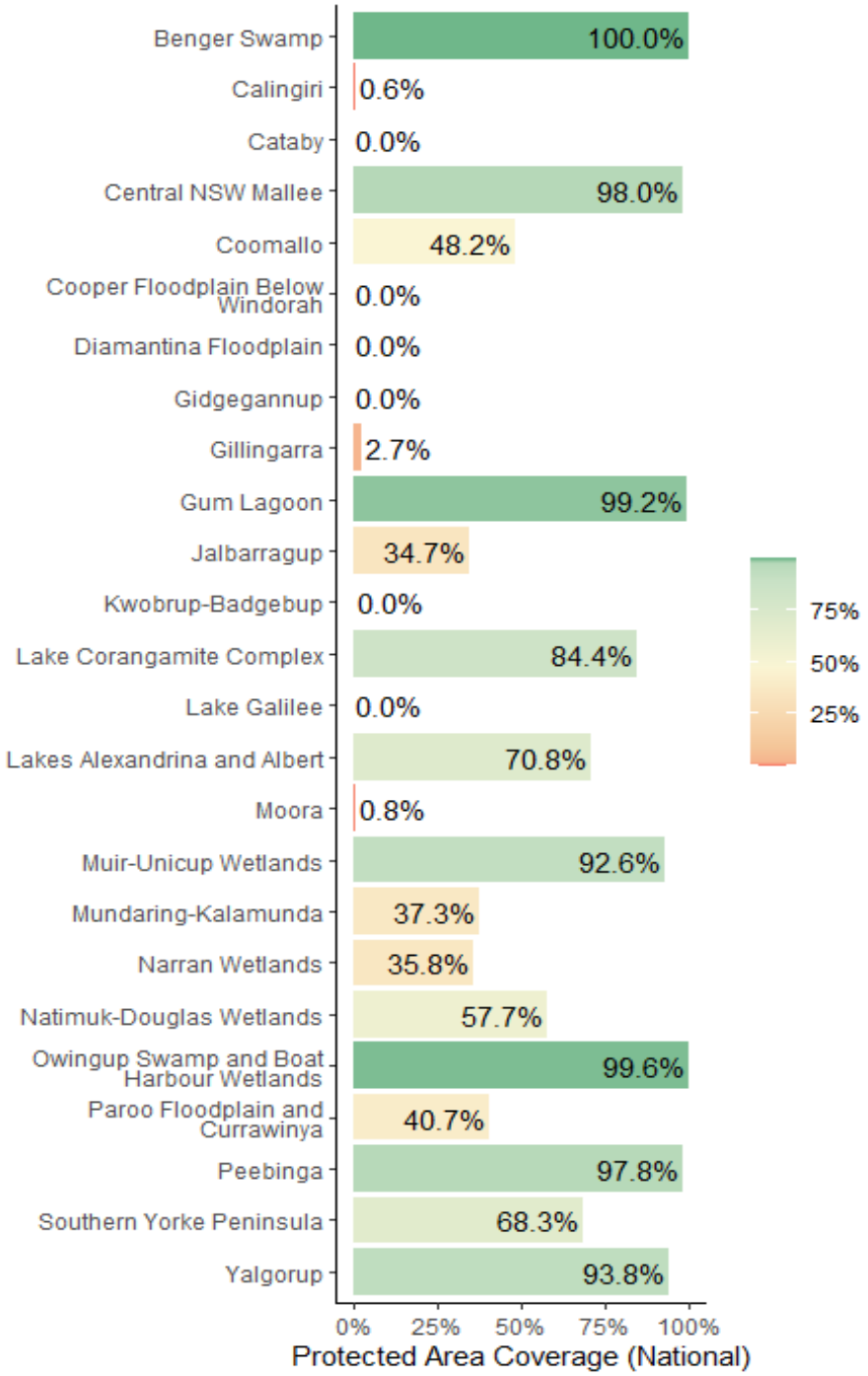

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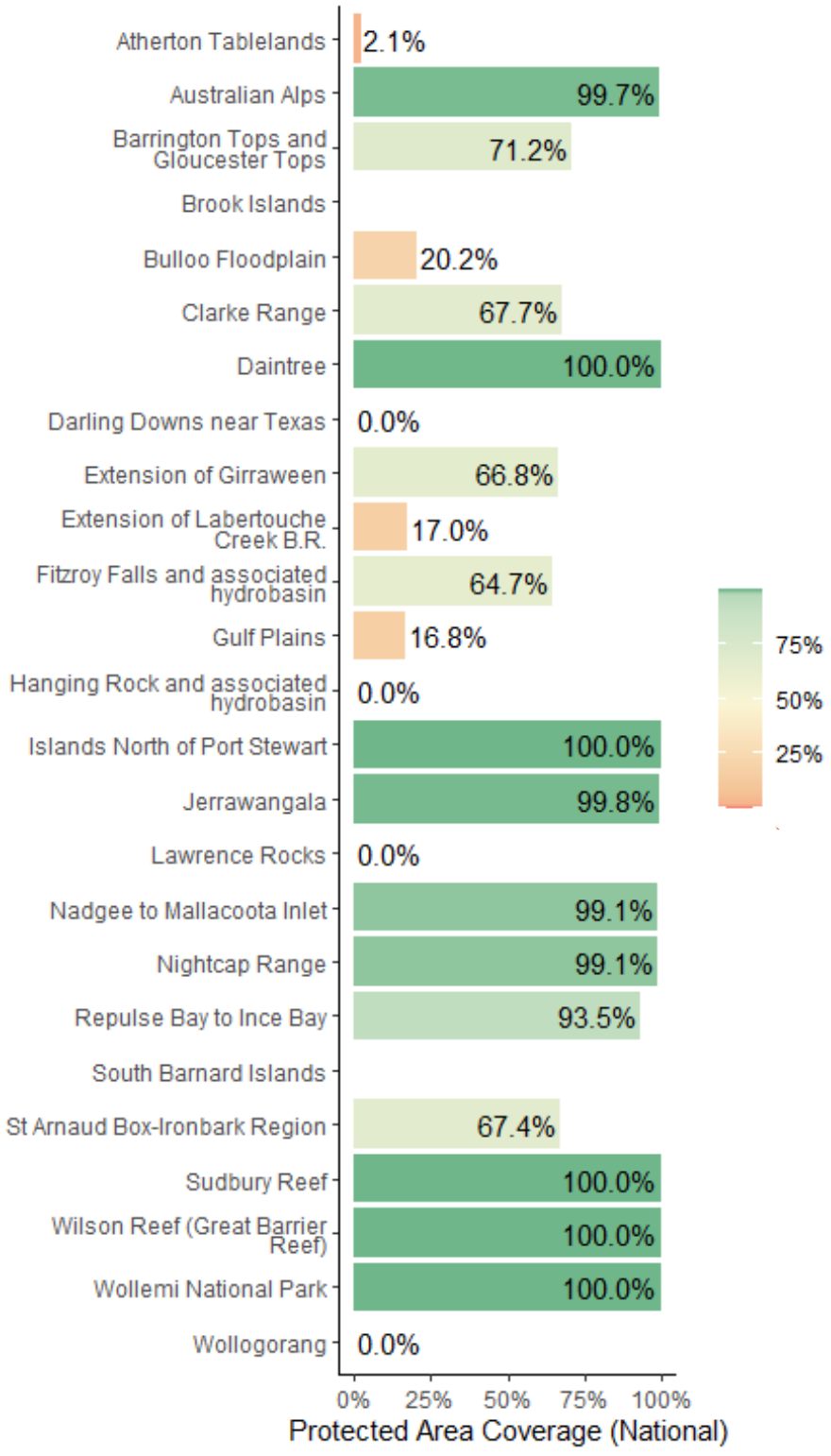

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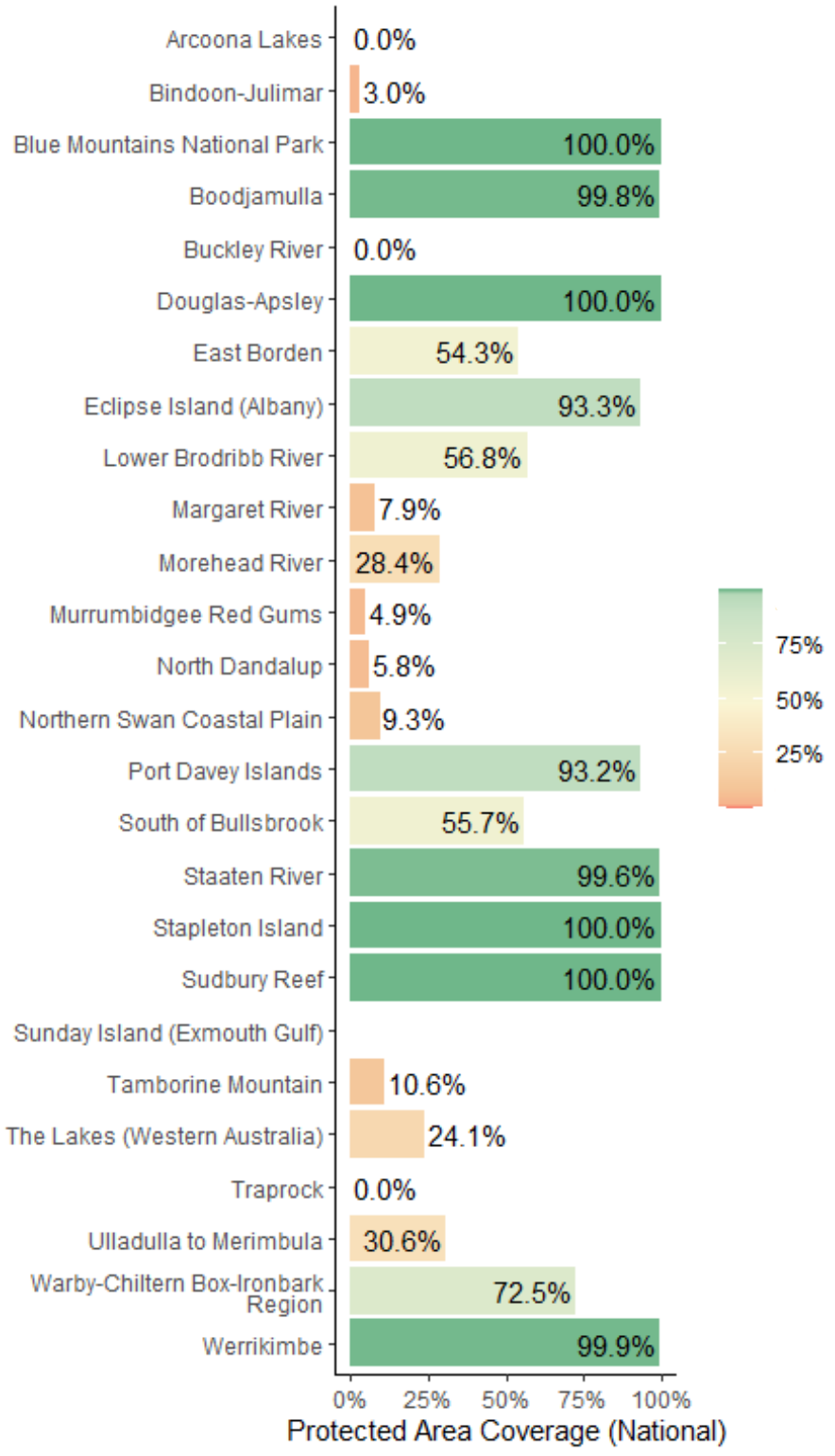

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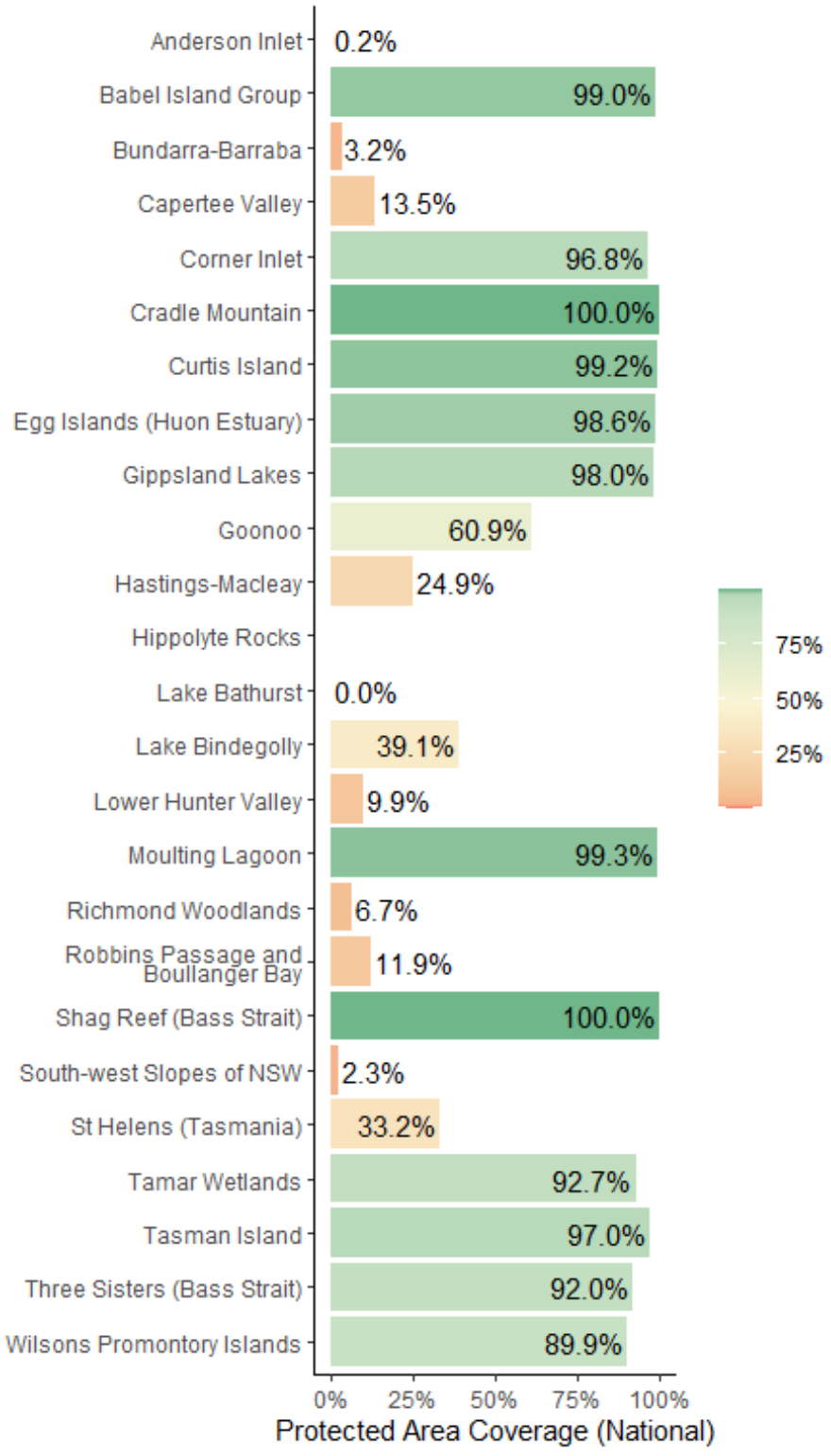

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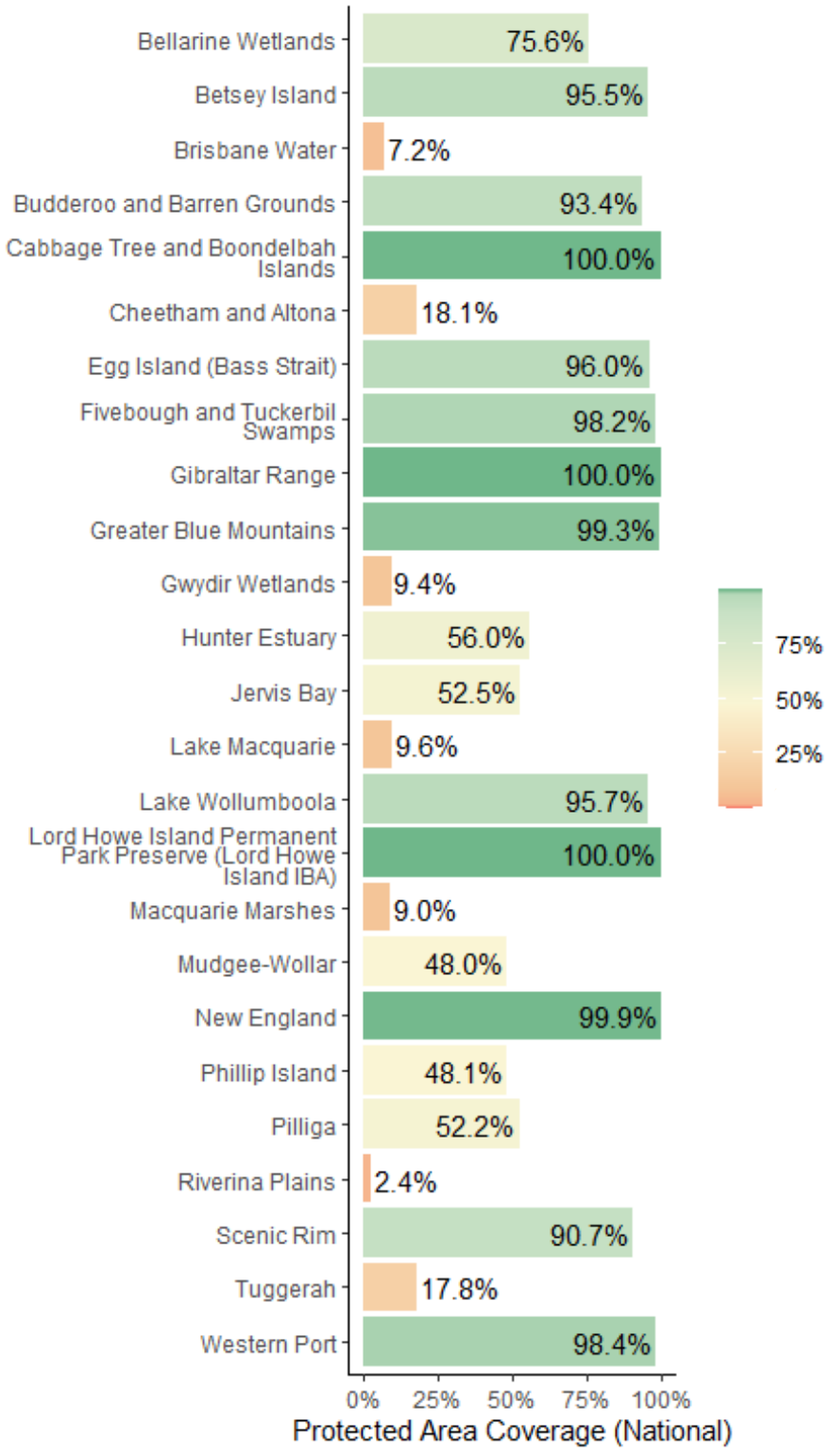

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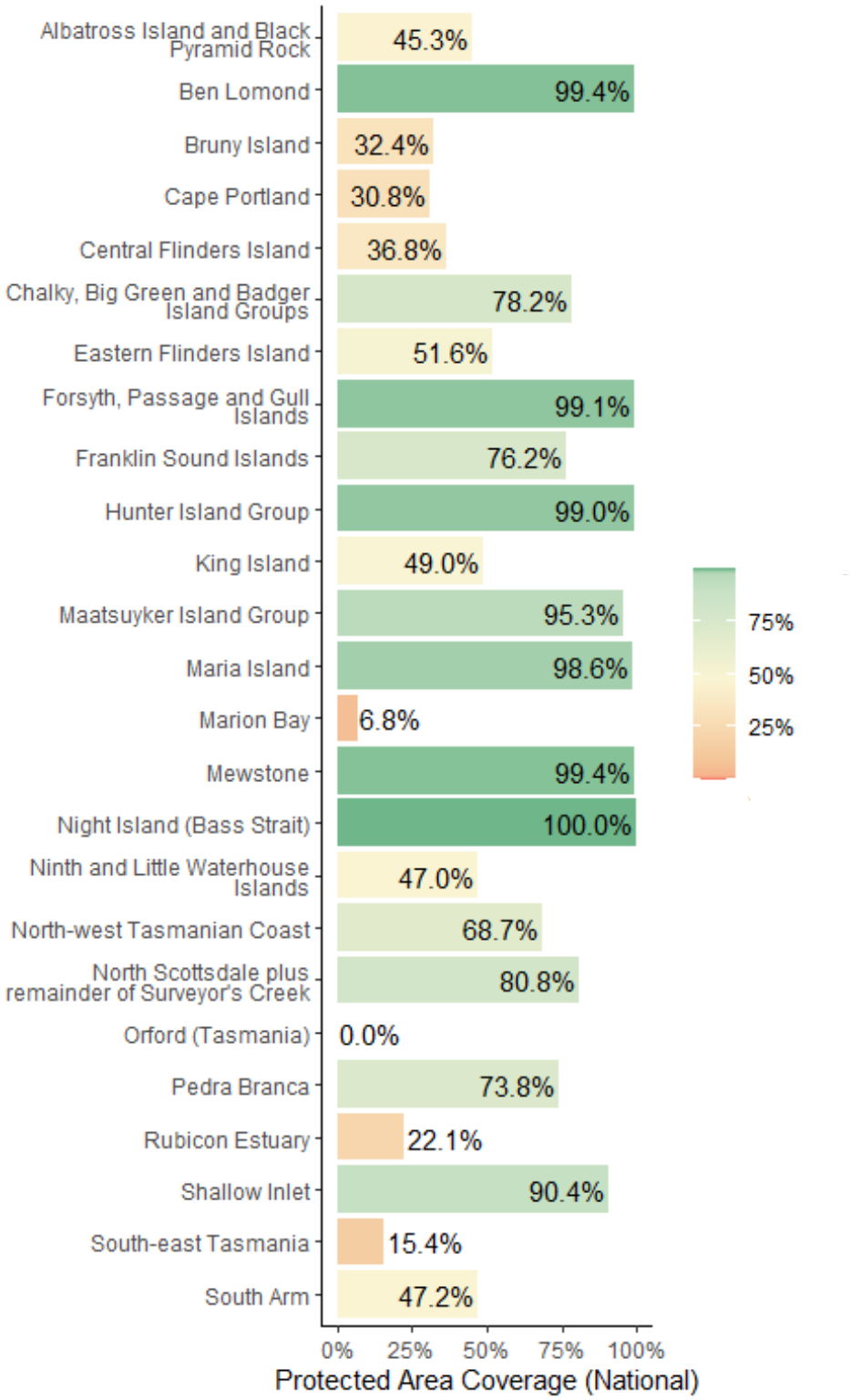

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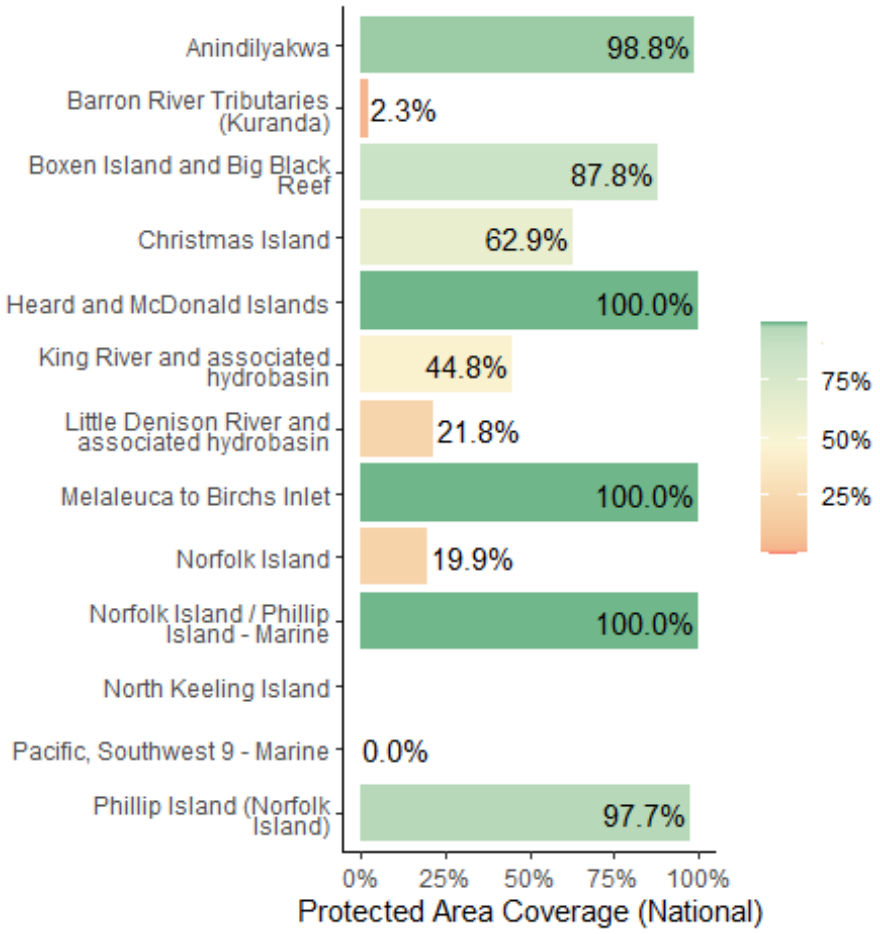

Key Biodiversity Area Coverage (KBA) in Australia

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