



Convention on
Biological Diversity



Aichi Biodiversity Target 11 Country Dossier: MALAYSIA

With generous support from:



DEUTSCHE ZUSAMMENARBEIT

giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH



UK Government



WCMC



Global Partnership on
AICHI TARGET 11



TABLE OF CONTENTS

GLOSSARY	3
EXECUTIVE SUMMARY	5
<i>Aichi Biodiversity Target 11 Elements: Current status and opportunities for action</i>	5
INTRODUCTION	8
SECTION I: CURRENT STATUS	10
<i>COVERAGE - TERRESTRIAL & MARINE</i>	11
<i>ECOLOGICAL REPRESENTATIVENESS – TERRESTRIAL & MARINE</i>	14
<i>AREAS IMPORTANT FOR BIODIVERSITY</i>	19
<i>CONNECTIVITY & INTEGRATION</i>	24
<i>GOVERNANCE DIVERSITY</i>	26
<i>PROTECTED AREA MANAGEMENT EFFECTIVENESS</i>	28
SECTION II: EXISTING PROTECTED AREA AND OECM COMMITMENTS	30
<i>NATIONAL BIODIVERSITY STRATEGY AND ACTION PLANS (NBSAPs)</i>	30
<i>APPROVED GEF-5 & GEF-6 PROTECTED AREA PROJECTS</i>	31
<i>UN OCEAN CONFERENCE VOLUNTARY COMMITMENTS</i>	32
<i>OTHER ACTIONS/COMMITMENTS</i>	33
ANNEX I	35
<i>LIST OF TERRESTRIAL ECOREGIONS</i>	35
REFERENCES	36



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
OECD	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-OECD	World Database on Other Effective Area-Based Conservation Measures

4 | Aichi Biodiversity Target 11 Country Dossier: MALAYSIA

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.

This publication may be reproduced for educational or non-commercial purposes without special permission from the copyright holders, provided acknowledgement of the source is made. The SCBD and UNDP would appreciate receiving a copy of any publications that use this document as a source.



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 June 2016, terrestrial coverage in Malaysia is 44,204.7 km² (13.3%); as of June 2021, marine coverage is 5.3%.
- **Opportunities for action:** Malaysia is currently conducting a nationwide exercise to update Protected Area coverage through to 2021. Once this and the OECM study (*Recognising and Reporting OECMs in Malaysia*) is completed, the WDPA and WD-OECM will be updated to reflect Malaysia's achievements. 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:** Malaysia contains 10 terrestrial ecoregions (covering at least 0.1% of the country), 5 marine ecoregions, and 1 pelagic province: the mean coverage by reported PAs and OECMs is 18.2% (terrestrial), 3.9% (marine), and 0.1% (pelagic); 2 marine ecoregions have no coverage by reported PAs and OECMs.
- **Opportunities for action:** there is opportunity for Malaysia to increase protection in terrestrial and marine ecoregions and pelagic provinces that have lower levels of coverage by PAs or OECMs. Ecoregions which currently have no coverage by PAs or OECMs are key areas for action.



6 | Aichi Biodiversity Target 11 Country Dossier: MALAYSIA

Areas Important for Biodiversity

- **Status:** Malaysia has 61 Key Biodiversity Areas (KBAs): the mean protected coverage of KBAs by reported PAs and OECMs is 37.5%, while 17 KBAs have no coverage by reported PAs and OECMs.
- **Opportunities for action:** there is opportunity for Malaysia 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.

Connectivity and Integration

- **Status:** coverage of protected-connected lands is 8.1%. Malaysia has several corridors connecting Protected Areas/Forests identified by the Central Forest Spine Masterplan, as well as the Heart of Borneo Initiative, and the Coral Triangle Initiative (in the marine realm).
- **Opportunities for action:** there is opportunity for a targeted increase in connecting PAs or OECMs 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

- **Status:** the most common governance type(s) for PAs in Malaysia is: 99.8% under Government (82.8% by sub-national ministry or agency; 16.3% by federal or national ministry or agency; and 0.8% by government-delegated management)
- **Opportunities for action:** explore opportunities for governance types that have lower representation, for Malaysia this could relate to governance by Indigenous Peoples and/or local communities (IPLC), shared governance, etc.
- There is also opportunity for Malaysia 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:** 16.4% of terrestrial PAs and 8.9% of marine PAs have completed Protected Area Management Effectiveness (PAME) assessments reported.
- **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



7 | Aichi Biodiversity Target 11 Country Dossier: MALAYSIA

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 Malaysia. Section I of the dossier presents data on the current status of Malaysia’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 Malaysia, in relation to each Target 11 element. The analyses present options for improving Malaysia’s area-based conservation network to achieve enhanced protection and benefits for livelihoods and climate change. Section II presents details on Malaysia’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.



9 | Aichi Biodiversity Target 11 Country Dossier: MALAYSIA

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).

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

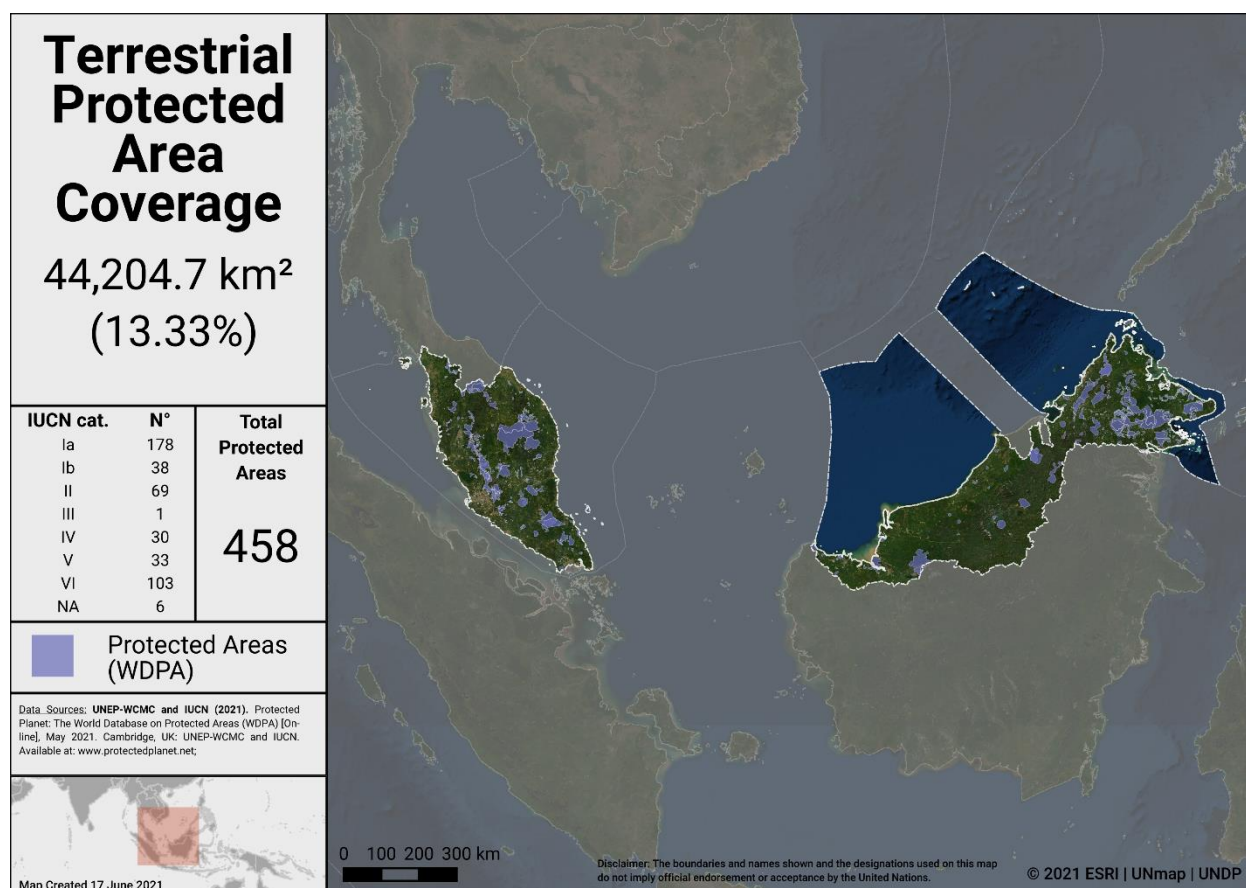
Malaysia has **528** protected areas (including Luconia Shoals National Park¹).

As of May 2021, Malaysia has **0** OECMs reported in the world database on OECMs (WD-OECM).

Current coverage for Malaysia:

- 13.3% terrestrial (458 protected areas, 44,204.7 km²) as of June 2016
- 5.3% marine (90 PAs, with the inclusion of Luconia Shoals NP)² as of June 2021

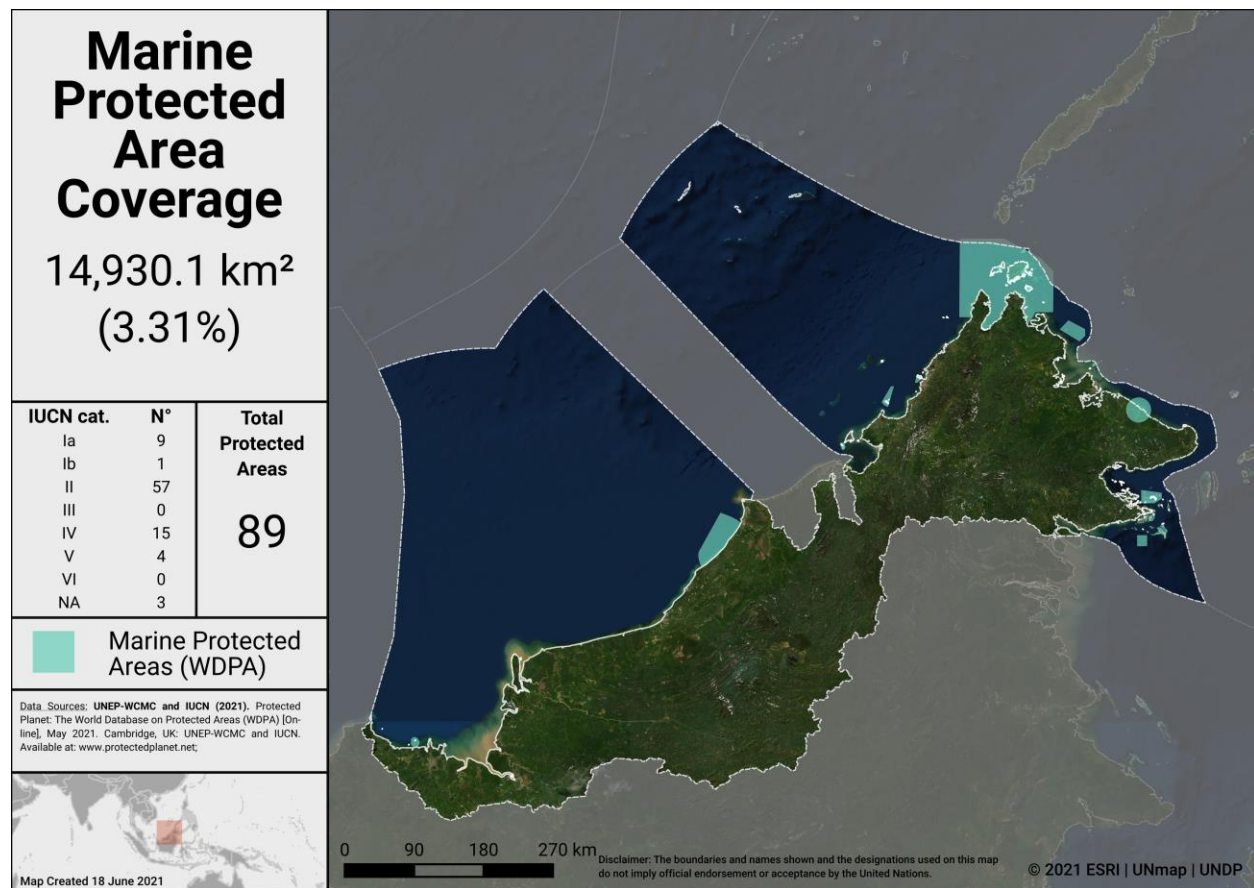
Current coverage is based on Malaysia's Protected Area MasterList; a study is currently under way to update protected area figures in Malaysia.



Terrestrial Protected Areas in Malaysia

¹ At time of creating this dossier (summer 2021), this site was not yet reported in WDPA (total PAs were 527)

² Coverage was 3.3% (89 protected areas, 14,930.1 km²) before addition of Luconia Shoals National Park (which has now been sent for inclusion in the WDPA).



Marine Protected Areas in Malaysia (Luconia Shoals not included in map; as of June 2021 coverage is now 5.3%)

Potential OECMs

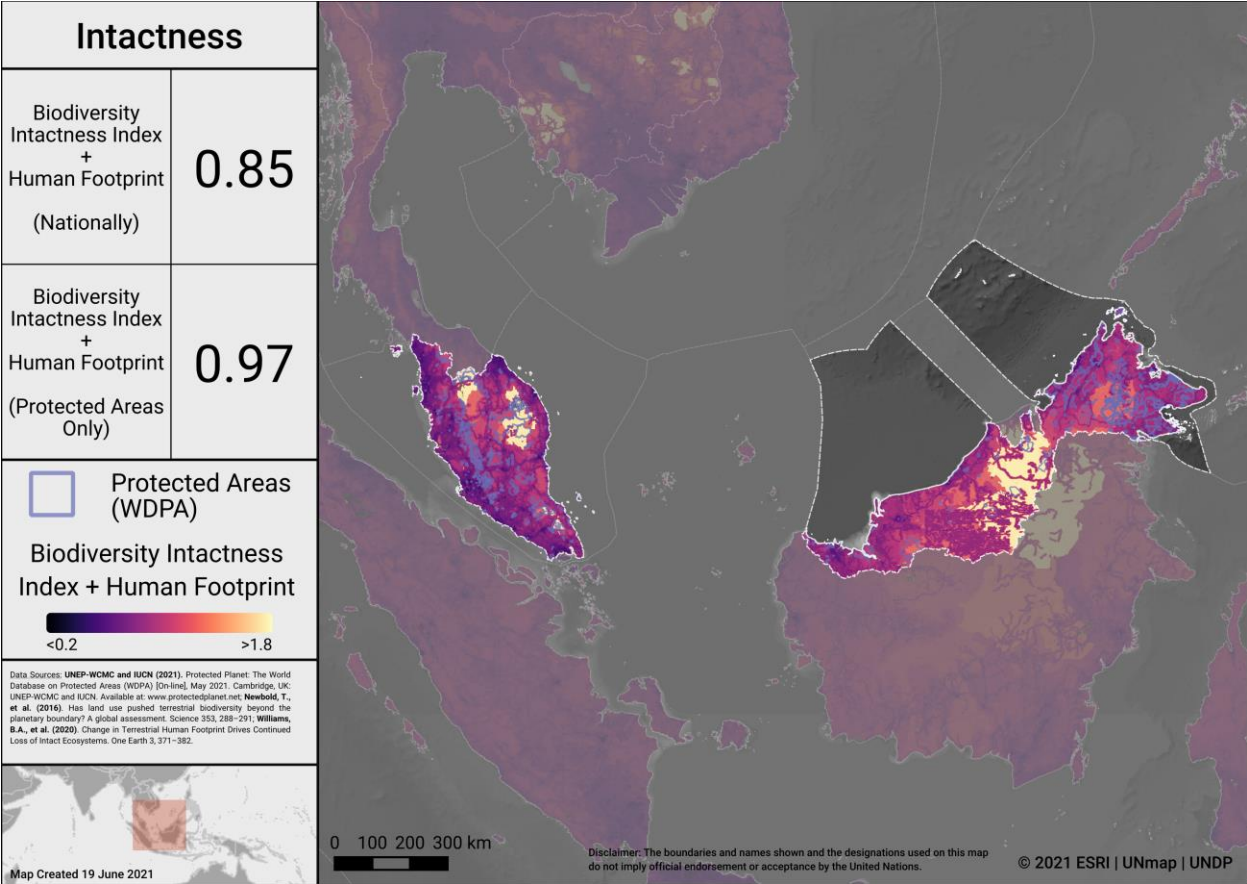
At present, there is an ongoing GEF Small Grants project: “Recognising and Reporting OECMs in Malaysia” that will:

- Engage local policymakers, practitioners and stakeholders to introduce the OECM concept and explore the potential for an OECM approach in Malaysia
- Investigate potential OECMs in Malaysia and develop site-based case studies.
- Investigate and develop mechanisms for recognising and reporting OECMs
- Disseminate information on the Malaysian OECM process

The project is expected to be completed in late 2021

Opportunities for action

Malaysia is currently conducting a nationwide exercise to update Protected Area coverage through to 2021. Once this and the OECM study (*Recognising and Reporting OECMs in Malaysia*) is completed, the WDPA and WD-OECM will be updated to reflect Malaysia’s achievements. In the future, as Malaysia considers where to add new PAs and OECMs, the map below identifies areas in Malaysia where intact terrestrial areas are not currently protected. Focus on relatively intact areas, while addressing the elements in the following sections, could be considered when planning new PAs or OECMs.



Intactness in Malaysia

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

ECOLOGICAL REPRESENTATIVENESS – TERRESTRIAL & MARINE

Ecological representativeness is assessed 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).

Malaysia has 10 **terrestrial** ecoregions (covering at least 0.1% of the country):

- All 10 ecoregions have at least some coverage from PAs and OECMs.
- 2 ecoregions have at least 17% protected within the country.
- The average coverage of terrestrial ecoregions is 18.2%.

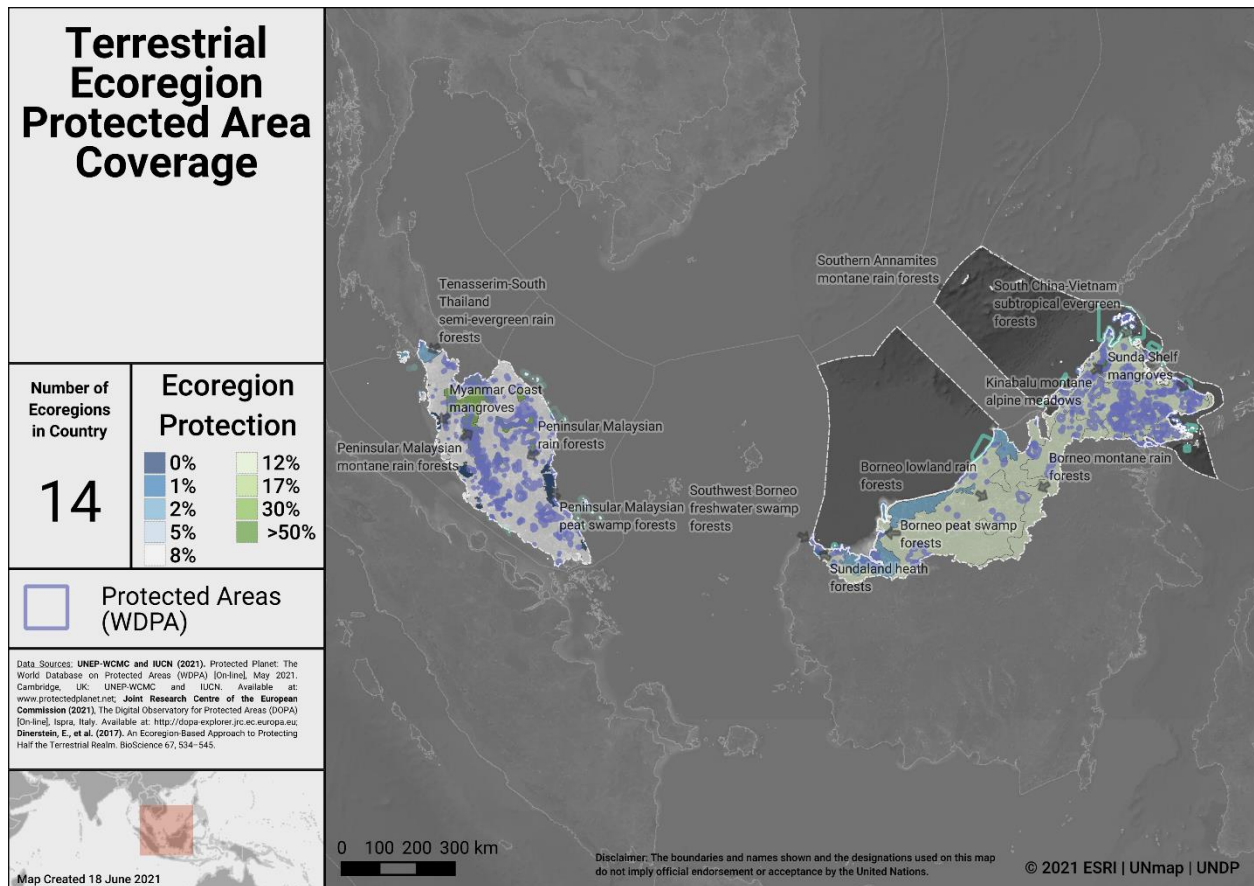
Malaysia has 5 **marine** ecoregions and 1 **pelagic province**. Out of these:

- 3 marine ecoregions and 1 pelagic province have at least some coverage from reported PAs and OECMs.
 - 1 additional ecoregion has some coverage from PAs with the addition of Luconia Shoals National Park**
- 1 marine ecoregion and 0 pelagic provinces have at least 10% protected within Malaysia's exclusive economic zone (EEZ).
- The average coverage of marine ecoregions is 3.9% and the coverage of the 1 pelagic province is 0.1%
 - Mean % coverage of marine ecoregions will increase with the inclusion of Luconia Shoals NP

**with the inclusion of Luconia Shoals National Park (currently submitted for inclusion in the WDPA) coverage has further increased for 3 marine ecoregions: Sunda Shelf/Java Sea, Palawan/North Borneo, and South China Sea Oceanic Islands

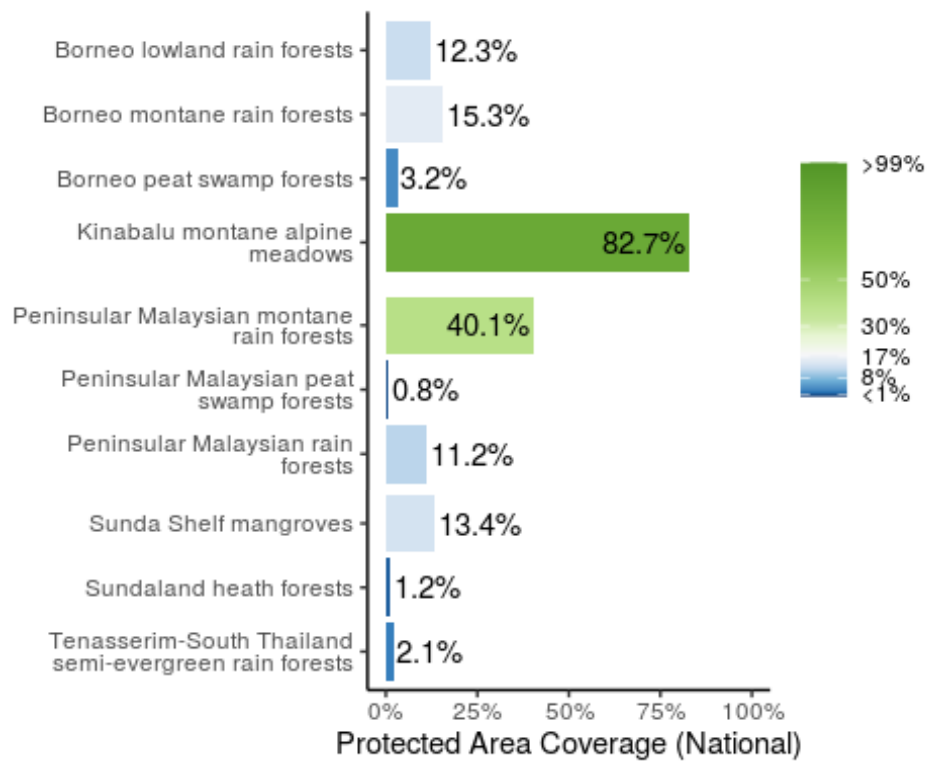
A full list of terrestrial ecoregions in Malaysia is available in Annex I.



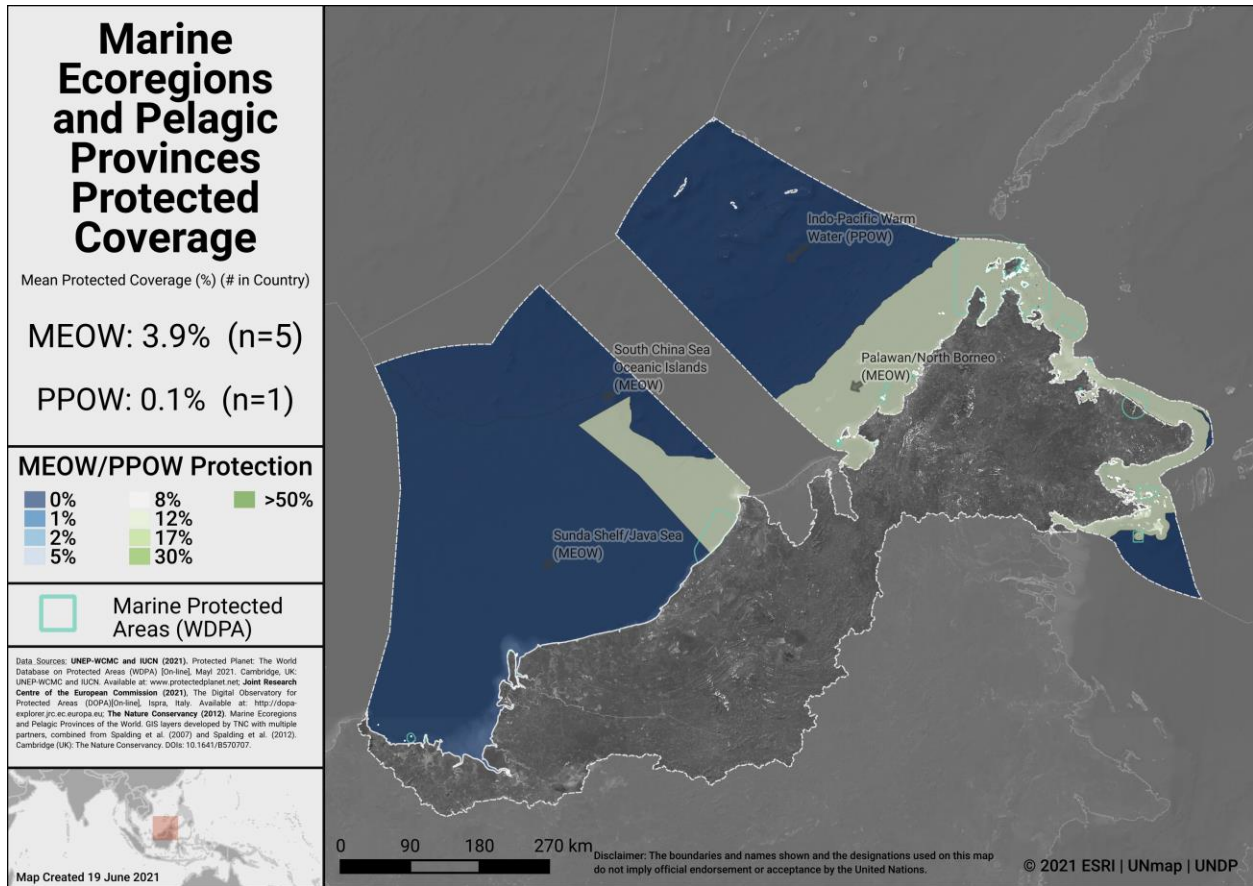


Terrestrial ecoregions in Malaysia (only 10 ecoregions covering >0.1% of the country included in analysis)

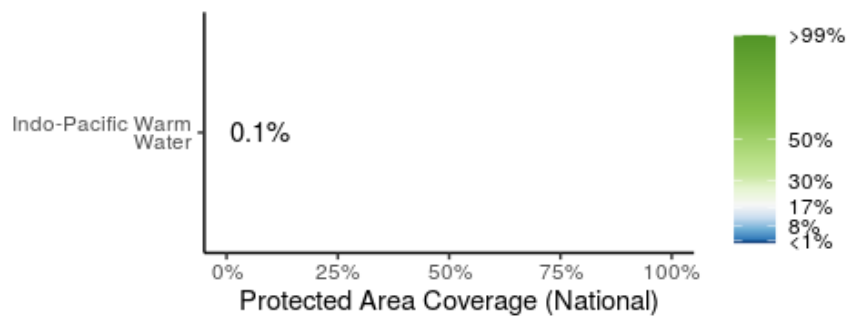
16 | Aichi Biodiversity Target 11 Country Dossier: MALAYSIA



Terrestrial ecoregions of the World (TEOW) in Malaysia

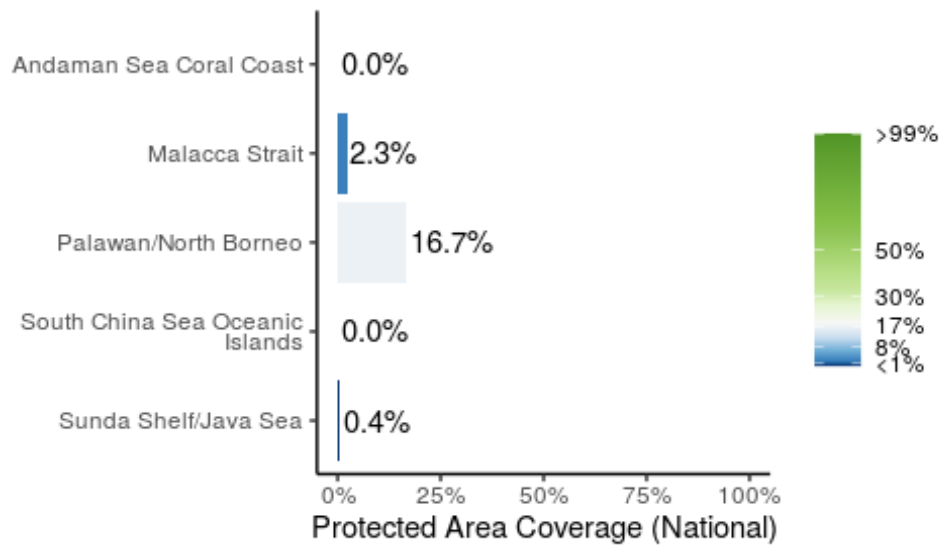


Marine ecoregions and pelagic provinces (does not yet include addition of Luconia Shoals NP)



Pelagic Provinces of the World (PPOW) in Malaysia





Marine Ecoregions of the World (MEOW) in Malaysia (does not yet include addition of Luconia Shoals NP; with its inclusion, coverage has further increased for 3 marine ecoregions: Sunda Shelf/Java Sea, Palawan/North Borneo, and South China Sea Oceanic Islands)

Opportunities for action

There is opportunity for Malaysia to increase protection in terrestrial and marine ecoregions and pelagic provinces that have lower levels of coverage by PAs or OECMs. Ecoregions which currently have no coverage by PAs or OECMs are key areas for action.

AREAS IMPORTANT FOR BIODIVERSITY

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 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.

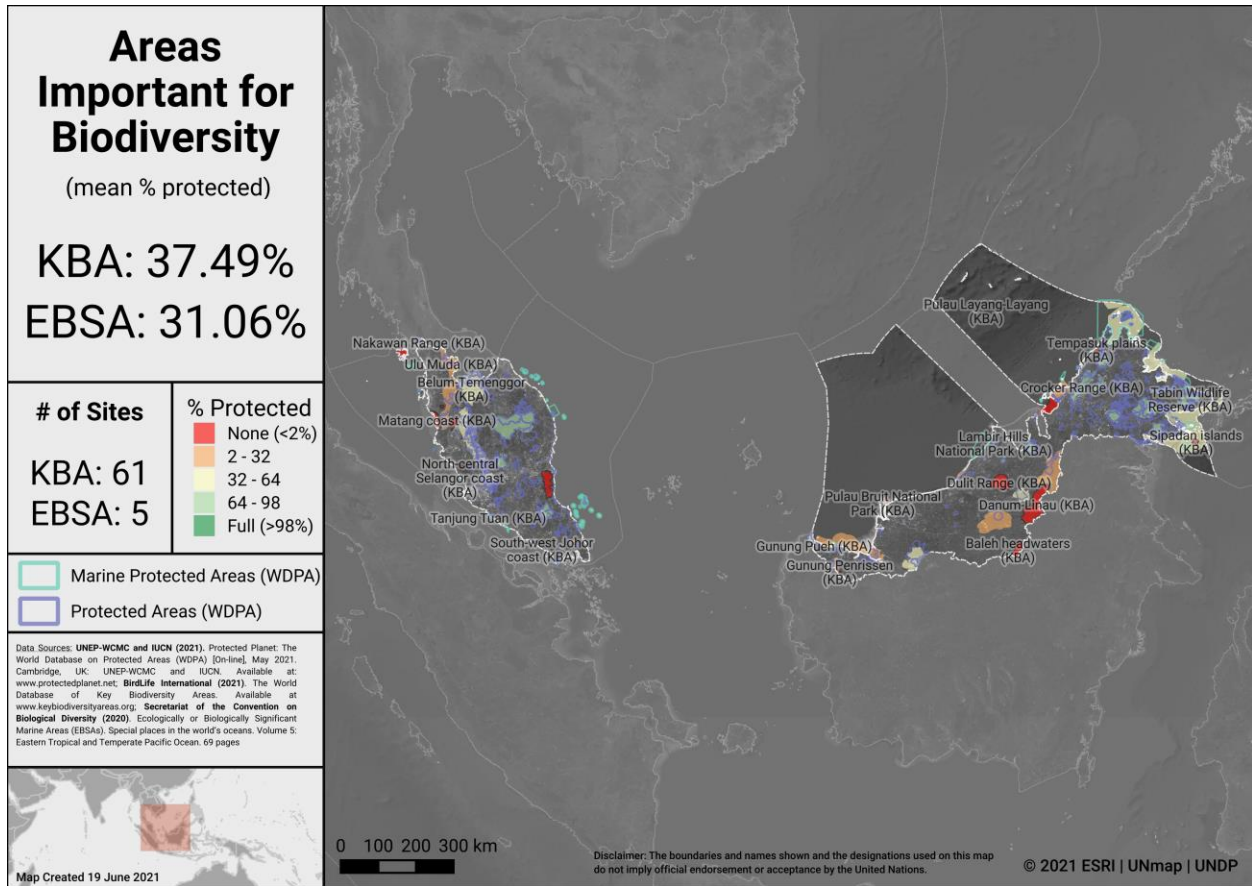
Malaysia has 61 Key Biodiversity Areas (KBAs) [**60 KBAs** included in analysis]

- These include 55 IBAs, 6 AZEs
- Mean percent coverage of all KBAs by PAs and OECMs in Malaysia is **37.5%**.
- **0** KBAs have full (>98%) coverage by PAs and OECMs.
- **43** KBAs have partial coverage by PAs and OECMs.
- **17** KBAs have no (<2%) coverage by PAs and OECMs.
- *1 KBA lacks spatial data to allow PA/OECM coverage to be determined*

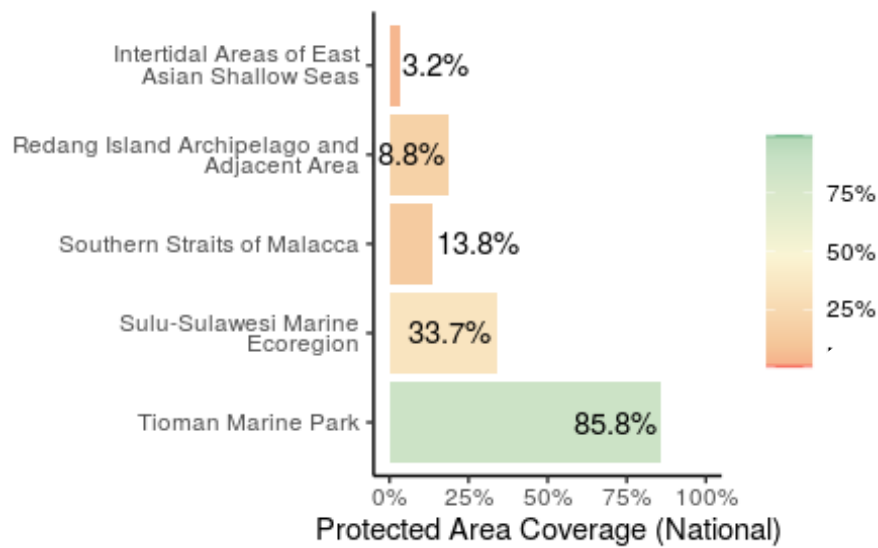
Ecologically or Biologically Significant Marine Areas (EBSAs)

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 5 EBSAs with some portion of their extent within Malaysia's EEZ, all of which have at least partial coverage from PAs and OECMs.



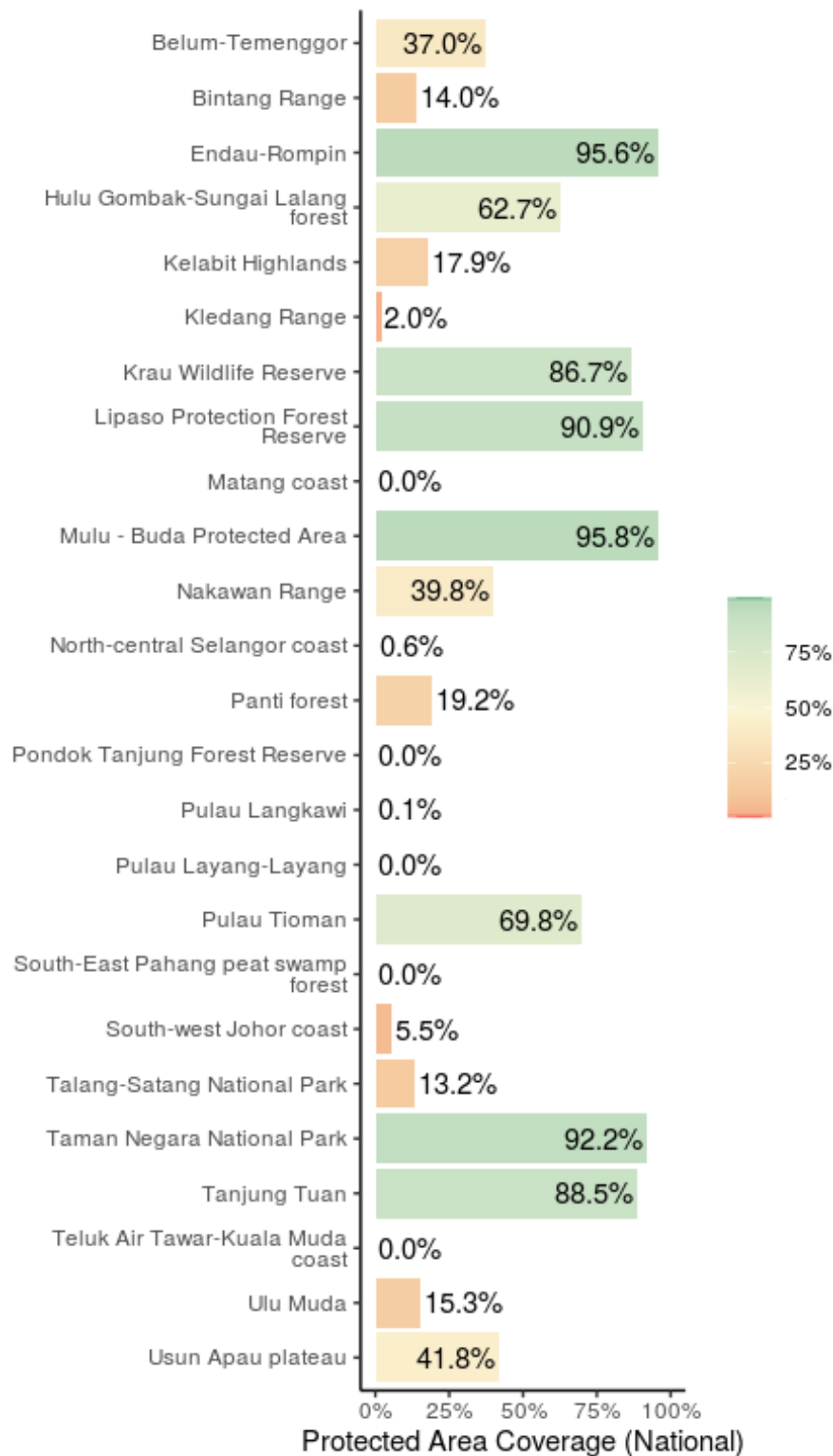
Areas Important for Biodiversity in Malaysia



Ecologically or Biologically Significant Marine Areas (EBSAs) in Malaysia



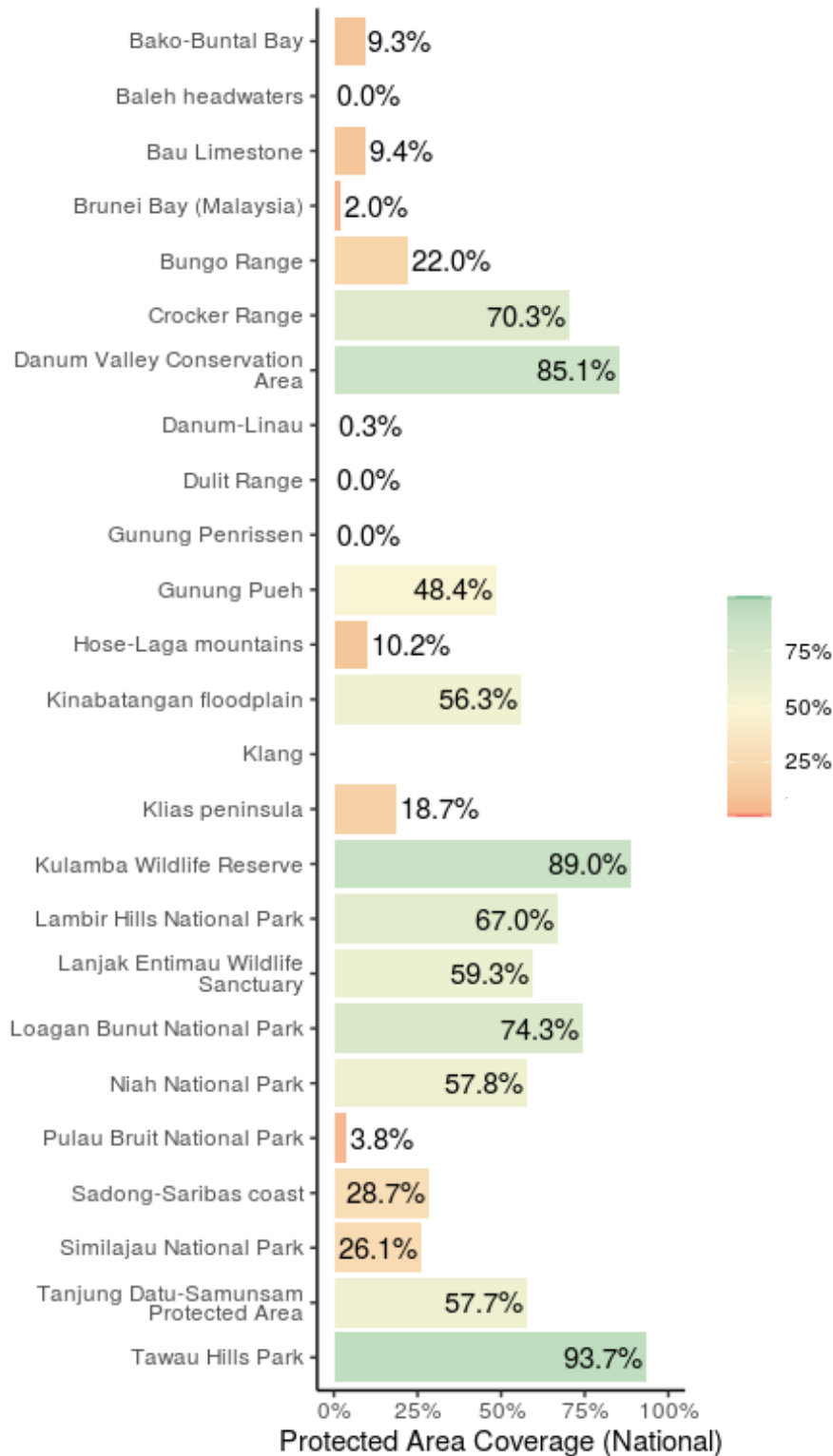
21 | Aichi Biodiversity Target 11 Country Dossier: MALAYSIA



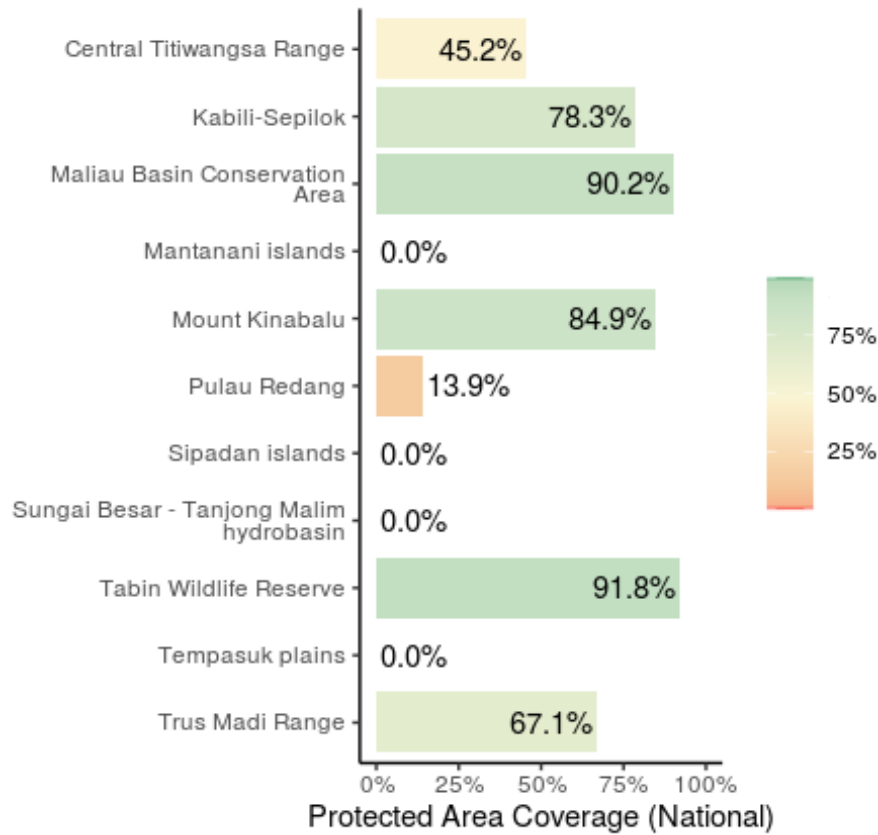
Key Biodiversity Area Coverage (KBA) in Malaysia



22 | Aichi Biodiversity Target 11 Country Dossier: MALAYSIA



Key Biodiversity Area Coverage (KBA) in Malaysia



Key Biodiversity Area Coverage (KBA) in Malaysia

Opportunities for action

There is opportunity for Malaysia 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.

CONNECTIVITY & INTEGRATION

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 Maldives was 8.1%.

PARC-Connectedness Index

In 2019, as assessed using the PARC-Connectedness Index (values ranging from 0-1, indicating low to high connectivity), connectivity in Malaysia is 0.39. This represents no significant change since 2010.

Corridor case studies

Malaysia has several corridors connecting Protected Areas/Forests identified by the Central Forest Spine Masterplan. These include Primary Linkages such as:

- Sg. Yu Wildlife Corridor
- Amanjaya Wildlife Corridor
- Kenyir Wildlife Corridor

The Central Forest Spine Masterplan is currently being reviewed by the relevant agency (see map for the Central Forest Spine on the following page).

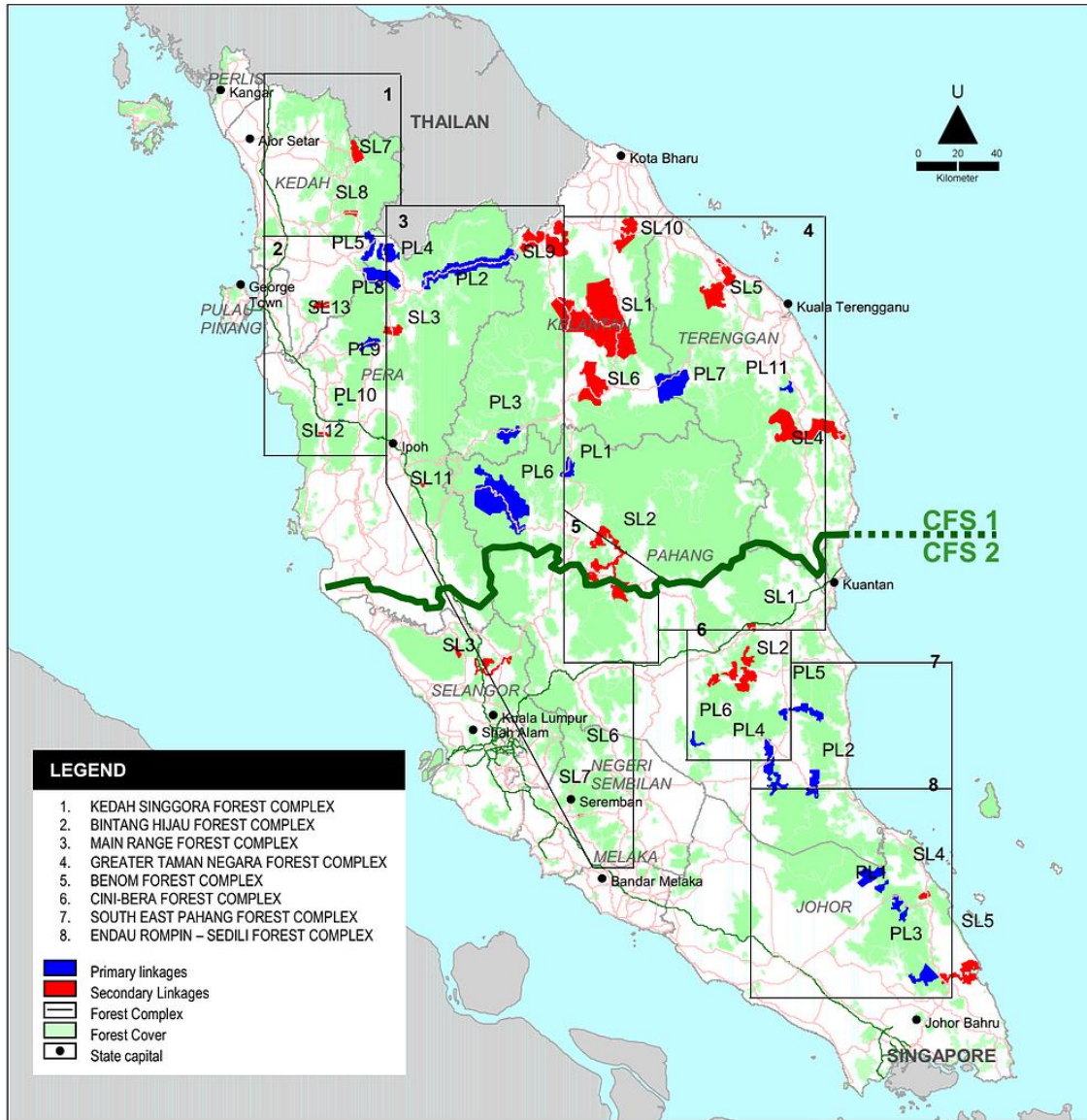
Another project for connectivity is the Heart of Borneo Initiative, aiming to connect major forest habitats in Sabah and Sarawak.

For the marine region, Malaysia is part of the Coral Triangle Initiative.

Opportunities for action

There is opportunity 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).





Central Forest Spine and corridors identified

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.

PAs in Malaysia reported have the following governance types³:

- 99.8% are governed by **governments**
 - 16.3% by federal or national ministry or agency
 - 82.8% by sub-national ministry or agency
 - 0.8% by government-delegated management
- 0.2% are under **shared** governance
 - 0.0% by collaborative governance
 - 0.2% by joint governance
 - 0.0% by transboundary governance
- 0.0% are under **private** governance
- 0.0% are under **IPLC** governance
 - 0.0% by Indigenous Peoples
 - 0.0% by local communities
- 0.0% **do not** report a governance type

Privately Protected Areas (PPAs)

While there were no PPAs noted in a recent country profile (see Gloss et. al., 2019), the Sugud Islands Marine Conservation Area (SIMCA) represents the first privately managed marine conservation area in Malaysia (under government-delegated management). Reef Guardian Pty. Ltd. has been appointed by the Sabah Wildlife Department to manage 46,317 hectares of marine area, which includes three islands (Lankayan, Billean and Tegapil), and the surrounding waters, shallow coastal reefs, seagrass beds and sandy bottom

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

The potential for the recognition of ICCAs is currently being studied under the “*Recognising and Reporting OECMs in Malaysia*” project.

Opportunities for action

Explore opportunities for governance types that have lower representation, for Malaysia this could relate to governance by Indigenous Peoples and/or local communities (IPLC), shared governance, etc.

³ At the time of creating the dossier, the WDPA showed: 8.0% by federal or national ministry or agency; 0.2% by collaborative governance; and 91.8% not reported. Data on governance types for all PAs have now been provided, and the WDPA should be updated soon.

There is also opportunity for Malaysia 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 information on the coverage of PAs and OECMs with completed protected area management effectiveness (PAME) assessments as reported in the global database (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 September 2021, Malaysia has 527 PAs reported in the WDPA (**528** with the inclusion of *Luconia Shoals National Park*); of these PAs, **22** (4%) have management effectiveness evaluations reported in the global database on protected area management effectiveness (GD-PAME).

- 2.2% (7,239 km²) of the terrestrial area of the country is covered by PAs with completed management effectiveness evaluations.
 - 16.4% of the area of terrestrial PAs have completed evaluations.
- 0.3% (1,325 km²) of the marine area of the country is covered by PAs with completed management effectiveness evaluations.
 - 8.9% 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.

As of May 2021, there are 0 OECMs in Malaysia 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

In 2016, forest cover in Malaysia had reached 18.24 million hectares, or 55.22% of the total land area. Of this forested area, approximately 11.18 million hectares had been designated as permanent reserve forest (PRF) or permanent forest estate (61% of forest area), 3.17 million hectares had been designated as Totally Protected Area (TPA; 17% of forest area), and 3.89 million hectares designated as Stateland Forest (21% of forest area).

Between 2009 to 2018, the change in forest areas has stabilized. The stabilization of the forest cover change is primarily attributable to improved Sustainable Forest Management (SFM). According to the World Resource Institute, Malaysia has seen four years in a row of declining primary forest loss and Malaysia has increases forest by 2.6% between 2005 and 2018, due to improved sustainable forest management.



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 OECD COMMITMENTS

NATIONAL BIODIVERSITY STRATEGY AND ACTION PLANS (NBSAPs)

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

Target 6: By 2025, at least 20% of terrestrial areas and inland waters, and 10% of coastal and marine areas, are conserved through a representative system of protected areas and other effective area-based conservation measures.

Malaysia is currently undertaking a study to update the PA Masterlist.

- As of June 2016, terrestrial coverage is 13.3% terrestrial
- As of June 2021, coastal and marine coverage is 5.3% marine and coastal (with the inclusion of Luconia Shoals NP)

Actions from the NBSAP will also address other elements of Aichi Biodiversity Target 11:

NBSAP Action number	Action (original language from NBSAP)
3.3	Protect environmentally sensitive areas in statutory land use plans
6.1	Expand the extent and representativeness of our terrestrial PA network
6.2	Expand the extent and representativeness of our marine PA network
6.3	Develop community conserved areas as an integral part of our PA network
6.4	Improve the effectiveness of PA management
7.1	Identify, map and protect all vulnerable ecosystems
15.5	Strengthen international and transboundary cooperation



APPROVED GEF-5 & GEF-6 PROTECTED AREA PROJECTS

Approved GEF-5 and GEF-6 PA-related biodiversity projects

This includes biodiversity projects from the fifth and sixth replenishment of the Global Environment Facility (GEF-5 and GEF-6) with a clear impact of the quantity or quality of PAs; also including some projects occurring within the wider landscapes/seascapes around PAs. Only those with a status of 'project approved' or 'concept approved' as of June 2019 were considered. The qualifying elements likely benefiting from each GEF project is assessed based on a keyword search of Project Identification Forms (PIF).

GEF ID	PA increase?	Area to be added (km ²)	Type of new protected area	Qualitative elements potentially benefitting (based on keyword search of PIFs)
4732	Yes	Not defined	Terrestrial	All except Ecologically representative and Ecosystem services
5593	No	N/A	N/A	Equitably managed; Integration
5692	No	N/A	N/A	All except Ecologically representative and Ecosystem services
9270	No	N/A	N/A	All except Connectivity

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).

Ocean Actions improving MPA or OECM coverage:

#OceanAction14967: Tun Mustapha Park - win-win for conservation and people, by WWF (Non-governmental organization (NGO)).

- Area to be added: 0 km² (**already complete**).
- Progress report: Yes (last update Nov 2017). Overall status: On track, No progress report submitted (as of March 2021).
- Further details available at:
<https://oceanconference.un.org/commitments/?id=14967>

#OceanAction16178: Protecting 1 million sq kms through the \$15 million WCS Marine Protected Area Fund, by Wildlife Conservation Society, (Non-governmental organization).

- Area to be added: **1,100 km²**.
- Notes on area added: PA off the coast of Kuching-Samarahan Division (see country profile for WCS MPA project: <https://mpafund.wcs.org/>)
- Progress report: Yes (2019), status=On Track.
- Further details available at:
<https://oceanconference.un.org/commitments/?id=16178>.



OTHER ACTIONS/COMMITMENTS

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

In 2019 ecological fiscal transfer for biodiversity conservation has been introduced to motivate state government to intensify efforts to protect and expand existing natural forest reserves and protected areas.

Commitments for PAs and OECMs from Other National Policies

Policy document	Ecosystem	Policy text
Nationally Determined Contribution	Forest ecosystems	Avoided forest conversion: 137.18 Mt CO ₂ e/yr
Nationally Determined Contribution	Forest ecosystems	Avoided woodfuel harvest: 0.27 Mt CO ₂ e/yr
Nationally Determined Contribution	Wetland ecosystems	Avoided peat impacts: 51.31 Mt CO ₂ e/yr
Nationally Determined Contribution	Coastal ecosystems	Avoided mangrove impacts: 16.15 Mt CO ₂ e/yr
National Urbanization Plan 2	Forest ecosystems	Increased urban tree protection efforts
Rural Development Policy	Forest ecosystems	Protect biodiversity and the environment from unsustainable activities in the village
Rural Development Policy	Forest ecosystems	Monitor the sustainability of gazetted areas as wildlife habitat and biodiversity protection
Eleventh Malaysia Plan	Forest ecosystems	Conserving terrestrial and marine areas
Eleventh Malaysia Plan	Forest ecosystems	Conserving endangered plant and wildlife species
National Adaptation Plan	Coastal ecosystems	Develop the fishing industry efficient and sustainable capture.
Reducing emissions from deforestation and forest degradation	Forest ecosystems	By 2025, knowledge and the science-based policy intervention, its values, functioning, status and trends and the consequences of forest loss are significantly improved and applied.
National Biodiversity Strategy Action Plan	Forest ecosystems	By 2025, biodiversity conservation has been mainstreamed into national development planning and sectoral policies and plans

Policy document	Ecosystem	Policy text
National Physical Plan 3	Forest ecosystems	Report on endangered habitats as protected areas
National Biodiversity Strategy Action Plan	Wetland ecosystems	By 2025, vulnerable ecosystems and habitats, particularly limestone hills, wetlands, coral reefs and seagrass beds, are adequately protected and restored.
National Action Plan for Peatlands	Wetland ecosystems	Conserve peatlands resources and reduce peatland degradation and fires
Reducing emissions from deforestation and forest degradation	Coastal ecosystems	By 2025, at least 20% of the terrestrial areas and inland waters are conserved through a representative system of protected areas and other effective area-based conservation measures.
National Biodiversity Strategy Action Plan	Coastal ecosystems	By 2025, at least 20% of terrestrial areas and inland waters, and 10% of coastal and marine areas, are conserved through a representative system of protected areas and other effective area-based conservation measures.
National Water Resources Policy	Coastal ecosystems	Protect condition and state of water resources, catchment and bodies
Reducing emissions from deforestation and forest degradation	Grasslands & Agricultural systems	By 2025, agriculture production is managed and harvested sustainably



ANNEX I

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
Borneo lowland rain forests	131,527.3	30.9	39.9	16,157.8	12.3
Borneo montane rain forests	37,743.5	31.8	11.4	5,785.6	15.3
Borneo peat swamp forests	18,968.3	28.2	5.8	615.5	3.2
Kinabalu montane alpine meadows	597.0	100.0	0.2	493.5	82.7
Peninsular Malaysian montane rain forests	16,374.2	95.8	5.0	6,571.0	40.1
Peninsular Malaysian peat swamp forests	3,609.6	100.0	1.1	28.1	0.8
Peninsular Malaysian rain forests	108,355.0	86.7	32.9	12,129.7	11.2
Sundaland heath forests	571.5	0.8	0.2	6.9	1.2
Sunda Shelf mangroves	8,058.5	21.6	2.4	1,082.4	13.4
Tenasserim-South Thailand semi-evergreen rain forests	2,351.4	2.4	0.7	50.0	2.1



REFERENCES

- Atwood, TB, Witt, A, Mayorga, J, Hammill, E, & Sala, E. (2020). Global patterns in marine sediment carbon stocks. *Frontiers in Marine Science*.
<https://doi.org/10.3389/fmars.2020.00165>
- BirdLife International (2021). World Database of Key Biodiversity Areas. Available at:
<http://www.keybiodiversityareas.org>
- CBD (2010). Decision adopted by the Conference of the Parties to the Convention on Biological Diversity at its tenth meeting. Decision X/2. Strategic plan for biodiversity 2011–2020. Retrieved from <https://www.cbd.int/doc/decisions/cop-10/cop-10-dec02-en.pdf>.
- CSIRO (2019). Protected area connectedness index (PARCconnectedness).
<https://www.bipindicators.net/indicators/protected-area-connectedness-index-parconnectedness>
- Dinerstein, E., et al. (2017). An ecoregion-based approach to protecting half the terrestrial realm. *BioScience* 67(6), 534-545.
- Donald et al., 2019, The prevalence, characteristics and effectiveness of Aichi Target 11's "other effective area-based conservation measures" (OECMs) in Key Biodiversity Areas. *Conservation Letters*, 12(5).
- EC-JRC (2021). DOPA Indicator factsheets: <http://dopa.jrc.ec.europa.eu/en/factsheets>
- FAO (2017). Global Soil Organic Carbon (GSOC) Map - Global Soil Partnership [WWW Document]. URL <http://www.fao.org/global-soil-partnership/pillars-action/4-information-and-data/global-soil-organic-carbon-gsoc-map/en/>.
- Franks, P and Booker, F (2018). Governance Assessment for Protected and Conserved Areas (GAPA): Early experience of a multi-stakeholder methodology for enhancing equity and effectiveness. IIED Working Paper, IIED, London. <https://pubs.iied.org/17632IIED>
- Franks, P. et al. (2018). Social Assessment for Protected and Conserved Areas (SAPA). Methodology manual for SAPA facilitators. Second edition. IIED, London.
<https://pubs.iied.org/14659iied>
- Garnett et al. (2018). A spatial overview of the global importance of Indigenous lands for conservation. *Nature Sustainability*, 1(7), 369.
- Global Environment Facility (GEF-5 and GEF-6); all projects can be found online at:
<https://www.thegef.org/projects>
- Gloss, L. et al. (2019). International Outlook for Privately Protected Areas: Summary Report. International Land Conservation Network (a project of the Lincoln Institute of Land Policy) and United Nations Development Programme. Summary report, and individual country profiles, available at: <https://nbsapforum.net/knowledge-base/resource/international-outlook-privately-protected-areas-summary-report>

Hansen, M.C., Potapov, P.V., Moore, R., Hancher, M., Turubanova, S.A., Tyukavina, A., Thau, D., Stehman, S.V., Goetz, S.J., Loveland, T.R., Kommareddy, A., Egorov, A., Chini, L., Justice, C.O., Townshend, J.R.G., (2013). High-Resolution Global Maps of 21st-Century Forest Cover Change. *Science* 342, 850–853. <https://doi.org/10.1126/science.1244693>

Hilty, J et al. (2020). Guidelines for conserving connectivity through ecological networks and corridors. Best Practice Protected Area Guidelines Series No. 30. Gland, Switzerland: IUCN. <https://portals.iucn.org/library/sites/library/files/documents/PAG-030-En.pdf>

IIED 2020. Site-level assessment of governance and equity (SAGE) <https://www.iied.org/site-level-assessment-governance-equity-sage>.

IUCN (2016). A Global Standard for the Identification of Key Biodiversity Areas, Version 1.0. First edition. Gland, Switzerland: IUCN. <https://portals.iucn.org/library/sites/library/files/documents/2016-048.pdf>

IUCN-WCPA (2017). IUCN-WCPA Task Force on OECMs collation of case studies submitted 2016-2017. <https://www.iucn.org/commissions/world-commission-protected-areas/our-work/oecms/oecm-reports>

Joint Research Centre of the European Commission (JRC) (2021), The Digital Observatory for Protected Areas (DOPA) Explorer 4.1 [On-line], [Apr/2021], Ispra, Italy. Available at: <http://dopa-explorer.jrc.ec.europa.eu>

Kothari, A., et al. (Eds) (2012). Recognising and Supporting Territories and Areas Conserved By Indigenous Peoples And Local Communities: Global Overview and National Case Studies. Secretariat of the CBD, ICCA Consortium, Kalpavriksh, and Natural Justice, Montreal, Canada. Technical Series no. 64.

Lausche, B., Laur, A., Collins, M. (2021). *Marine Connectivity Conservation 'Rules of Thumb' for MPA and MPA Network Design*. Version 1.0. IUCN WCPA Connectivity Conservation Specialist Group's Marine Connectivity Working Group.

McDonald, R.I., Weber, K., Padowski, J., Flörke, M., Schneider, C., Green, P.A., Gleeson, T., Eckman, S., Lehner, B., Balk, D., Boucher, T., Grill, G., Montgomery, M., (2014). Water on an urban planet: Urbanization and the reach of urban water infrastructure. *Global Environmental Change* 27, 96–105. <https://doi.org/10.1016/j.gloenvcha.2014.04.022>

National Biodiversity Strategy and Action Plan (NBSAPs); most recent NBSAP is available at: <https://www.cbd.int/nbsap/search/>

Newbold, T., Hudson, L.N., Arnell, A.P., Contu, S., Palma, A.D., Ferrier, S., Hill, S.L.L., Hoskins, A.J., Lysenko, I., Phillips, H.R.P., Burton, V.J., Chng, C.W.T., Emerson, S., Gao, D., Pask-Hale, G., Hutton, J., Jung, M., Sanchez-Ortiz, K., Simmons, B.I., Whitmee, S., Zhang, H., Scharlemann, J.P.W., Purvis, A., (2016). Has land use pushed terrestrial biodiversity beyond the planetary boundary? A global assessment. *Science* 353, 288–291. <https://doi.org/10.1126/science.aaf2201>

Sala, E. et al. (2021). Protecting the global ocean for biodiversity, food and climate. *Nature*, 592(7854), 397-402. <https://doi.org/10.1038/s41586-021-03496-1>

Saura, S. et al. (2018). Protected area connectivity: Shortfalls in global targets and country-level priorities. *Biological Conservation*, 219, 53-67.

Saura, S. et al (2017). Protected areas in the world's ecoregions: How well connected are they? *Ecological Indicators*, 76, 144-158.

Spalding, M.D., et al. (2012). Pelagic provinces of the world: a biogeographic classification of the world's surface pelagic waters. *Ocean & Coastal Management* 60, 19–30.

Spalding, M.D., et al. (2007). Marine ecoregions of the world: a bioregionalization of coastal and shelf areas. *BioScience* 57(7): 573–583.

Spawn, S.A., Sullivan, C.C., Lark, T.J., Gibbs, H.K., (2020). Harmonized global maps of above and belowground biomass carbon density in the year 2010. *Scientific Data* 7, 112. <https://doi.org/10.1038/s41597-020-0444-4>

Stolton, S. et al. (2014). *The Futures of Privately Protected Areas*. Gland, Switzerland: IUCN.

UNEP-WCMC and IUCN (2021) *Protected Planet Report 2020*. UNEP-WCMC and IUCN: Cambridge UK; Gland, Switzerland.

UNEP-WCMC and IUCN (2021), *Protected Planet: The Global Database on Protected Area Management Effectiveness (GD-PAME)* [On-line], [May/2021], Cambridge, UK: UNEP-WCMC and IUCN. Available at: www.protectedplanet.net.

UNEP-WCMC and IUCN (2021), *Protected Planet: The World Database on Protected Areas (WDPA)* [On-line], [May/2021], Cambridge, UK: UNEP-WCMC and IUCN. Available at: www.protectedplanet.net.

UNEP-WCMC and IUCN (2021), *Protected Planet: The World Database on Other Effective Area-based Conservation Measures (WD-OECM)* [On-line], [May/2021], Cambridge, UK: UNEP-WCMC and IUCN. Available at: www.protectedplanet.net.

UN Ocean Conference Voluntary Commitments, available at: <https://oceanconference.un.org/commitments/>

Williams, B.A., Venter, O., Allan, J.R., Atkinson, S.C., Rehbein, J.A., Ward, M., Marco, M.D., Grantham, H.S., Ervin, J., Goetz, S.J., Hansen, A.J., Jantz, P., Pillay, R., Rodríguez-Buriticá, S., Supples, C., Virnig, A.L.S., Watson, J.E.M., (2020). Change in Terrestrial Human Footprint Drives Continued Loss of Intact Ecosystems. *One Earth* 3, 371–382. <https://doi.org/10.1016/j.oneear.2020.08.009>

This document was created using the knitr package with R version 4.0.3.

For any questions please contact support@unbiodiveristylab.org.

