



With generous support from:



















TABLE OF CONTENTS

| GLOSSARY | 3 |
|--|----|
| EXECUTIVE SUMMARY | 5 |
| Aichi Biodiversity Target 11 Elements: Current status and opportunities for action | 5 |
| INTRODUCTION | 8 |
| SECTION I: CURRENT STATUS | 10 |
| COVERAGE - TERRESTRIAL & MARINE | 11 |
| ECOLOGICAL REPRESENTATIVENESS - TERRESTRIAL & MARINE | 14 |
| AREAS IMPORTANT FOR BIODIVERSITY | 19 |
| AREAS IMPORTANT FOR ECOSYSTEM SERVICES | 23 |
| CONNECTIVITY & INTEGRATION | 26 |
| GOVERNANCE DIVERSITY | 27 |
| PROTECTED AREA MANAGEMENT EFFECTIVENESS | 31 |
| SECTION II: EXISTING PROTECTED AREA AND OECM COMMITMENTS | 33 |
| PRIORITY ACTIONS FROM 2015-2016 REGIONAL WORKSHOPS | 33 |
| NATIONAL BIODIVERSITY STRATEGY AND ACTION PLANS (NBSAPs) | 35 |
| APPROVED GEF-5, GEF-6, & GCF PROTECTED AREA PROJECTS | 36 |
| UPDATES ON NATIONAL PROGRESS TOWARDS COMMITMENTS | 37 |
| ANNEX I | 39 |
| ADDITIONAL DETAILS ON POTENTIAL OECMs | 39 |
| ANNEX II | 40 |
| FULL LIST OF TERRESTRIAL ECOREGIONS | 40 |
| REFERENCES | 41 |

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.

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. 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, terrestrial coverage in Cameroon is 51,538.0 km² (11.0%) and marine coverage is 1,601.6 km² (10.9%).
- Opportunities for action: opportunities for the near-term include updating the WDPA with any unreported PAs, and the 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:** Cameroon contains 13 terrestrial ecoregions, 1 marine ecoregion, and 1 pelagic province: the mean coverage by reported PAs and OECMs is 22.9% (terrestrial), 8.7% (marine), and 0.0% (pelagic); 1 terrestrial ecoregion and 1 pelagic province have no coverage by reported PAs and OECMs.
- **Opportunities for action:** there is opportunity for Cameroon 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

- **Status:** Cameroon has 37 Key Biodiversity Areas (KBAs): the mean protected coverage of KBAs by reported PAs and OECMs is 36.2%, while 20 KBAs have no coverage by reported PAs and OECMs.
- **Opportunities for action:** there is opportunity for Cameroon 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 Cameroon, 14.5% of aboveground biomass carbon, 13.2% of belowground biomass carbon, 10.5% of soil organic carbon, 15.3% of carbon stored in marine sediments is covered by PAs and OECMs.
- **Opportunities for action:** for carbon, there is opportunity for Cameroon to increase PA and OECM coverage in both 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 3.4%.
- **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 reported PAs in Cameroon is: 77.6% under Government (Federal or national ministry or agency).
- **Opportunities for action:** explore opportunities for governance types that have lower representation, for Cameroon this relates to governance by Indigenous Peoples and/or local communities (IPLC), shared governance, etc.

• There is also opportunity for Cameroon 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:** 74.1% of terrestrial PAs and 68.7% 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** been met for terrestrial PAs and **has** been met for marine PAs. Further increasing this percentage would be beneficial overall for understanding how well protected areas are being managed.
- 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 Cameroon. Section I of the dossier presents data on the current status of Cameroon'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 opportunities for action for Cameroon, in relation to each Target 11 element. The analyses present options for improving Cameroon's area-based conservation network to achieve enhanced protection and benefits for livelihoods and climate change. Section II presents details on Cameroon'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 areabased 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.

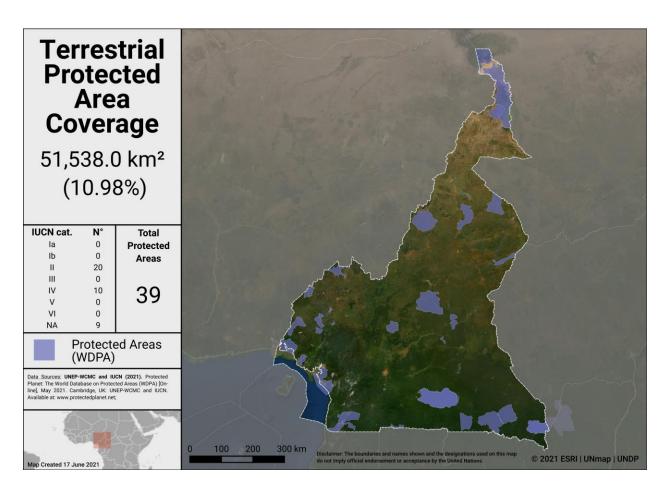
COVERAGE - TERRESTRIAL & MARINE

As of May 2021, Cameroon has **53** protected areas reported in the World Database on Protected Areas (WDPA). 11 proposed PAs and a further 3 UNESCO-MAB Biosphere Reserves are not included in the following statistics (see details on UNWP-WCMC's methods for calculating PA and OECM coverage here).

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

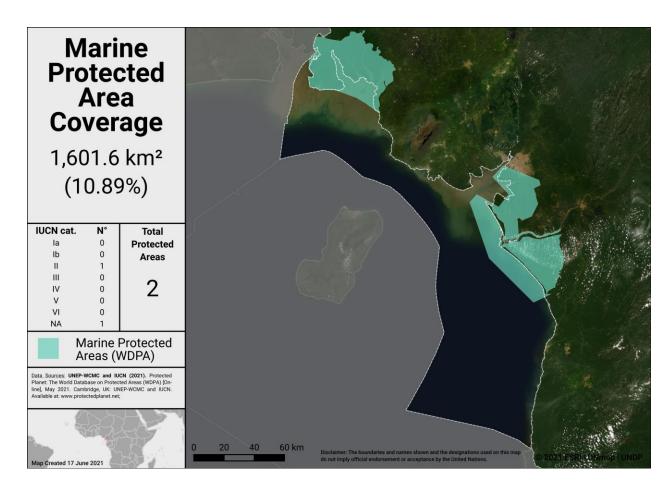
Current coverage for Cameroon:1

- 11.0% terrestrial (39 protected areas, 51,538.0 km²)
- 10.9% marine (2 protected areas, 1,601.6 km²)



Terrestrial Protected Areas in Cameroon

¹ Updated PA data was submitted by Cameroon to the WDPA in October 2021, these figures (and statistics in the following section) may increase in the near future.



Marine Protected Areas in Cameroon

Potential OECMs

No OECMs created so far in Cameroon, but examples of potential OECMs include:

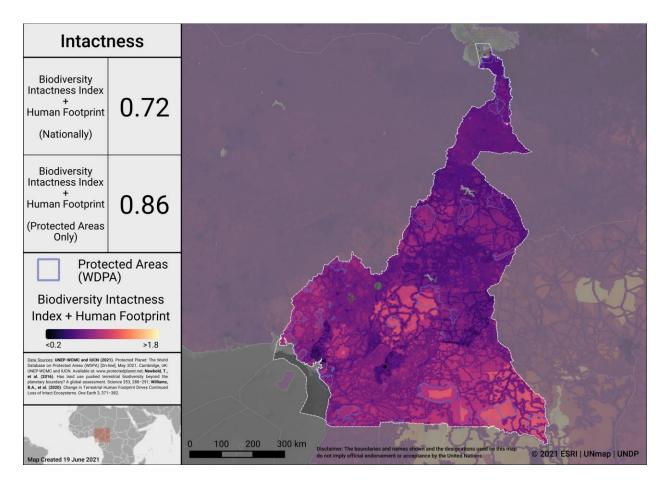
| Potential OECM example | Area covered |
|----------------------------------|---------------------------------------|
| Hunting Zones in North Cameroon. | 2,668,437ha (or ~5.6% of the country) |

For additional details see Annex I in this dossier and the collation of OECM case studies in (IUCN, 2017).

Opportunities for action

Opportunities for the near-term include updating the WDPA with any unreported PAs, and the recognizing and reporting OECMs to the WD-OECM. In the future, as Cameroon considers where to add new PAs and OECMs, the map below identifies areas in Cameroon 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 Cameroon

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).

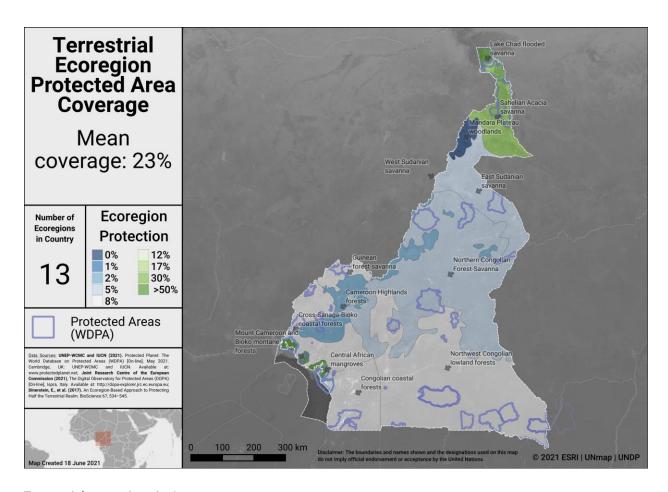
Cameroon has 13 **terrestrial** ecoregions. Out of these:

- 12 ecoregions have at least some coverage from PAs and OECMs.
 - The 1 remaining ecoregion covers <0.1% of the country
- 4 ecoregions have at least 17% protected within the country.
- The average terrestrial coverage of ecoregions is 22.9%.

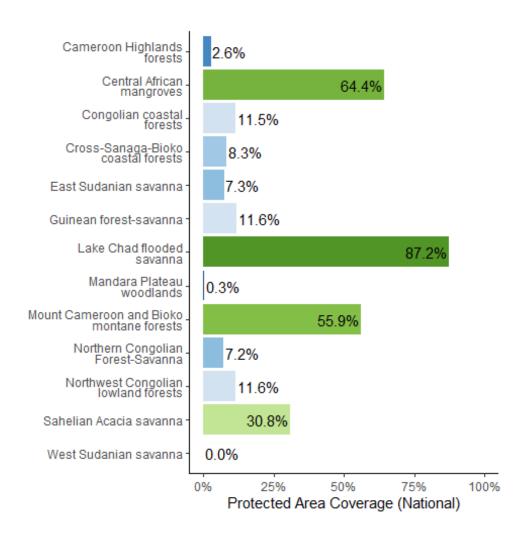
Cameroon has 1 **marine** ecoregion and 1 **pelagic province**. Out of these:

- 1 marine ecoregion and 0 pelagic provinces have at least some coverage from reported PAs and OECMs.
- 0 marine ecoregions and 0 pelagic provinces have at least 10% protected within Cameroon's exclusive economic zone (EEZ).
- The average protected area coverage of marine ecoregions is 8.7% and the average protected area coverage of Pelagic Provinces is 0.0%.

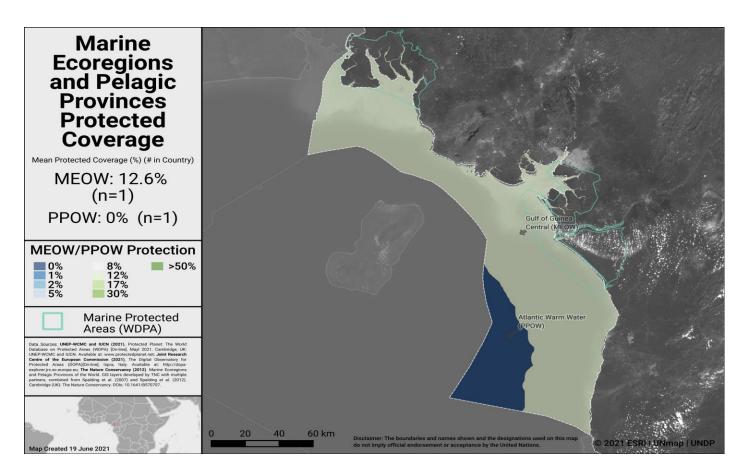
A full list of terrestrial ecoregions in Cameroon is available in Annex II.



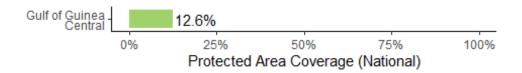
Terrestrial ecoregions in Cameroon



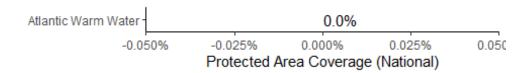
Terrestrial ecoregions of the World (TEOW) in Cameroon



Marine ecoregions and pelagic provinces



Marine Ecoregions of the World (MEOW) in Cameroon



Pelagic Provinces of the World (PPOW) in Cameroon

Opportunities for action

There is opportunity for Cameroon to increase protection in terrestrial 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.

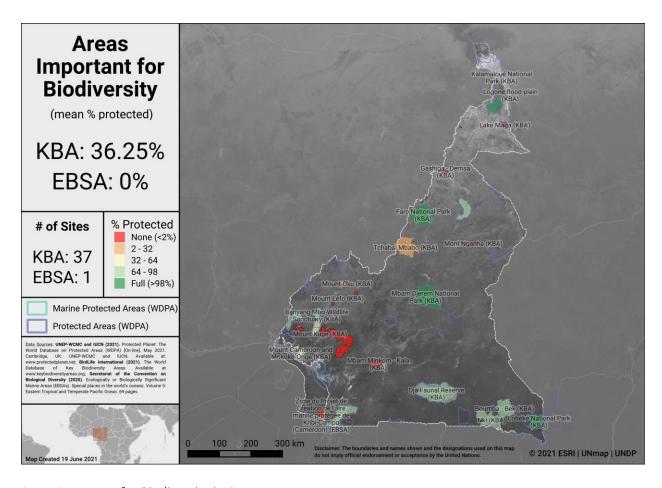
Cameroon has 37 Key Biodiversity Areas (KBAs).

- Mean percent coverage of all KBAs by PAs and OECMs in Cameroon is **36.2%**.
- **4** KBAs have full (>98%) coverage by PAs and OECMs.
- **13** KBAs have partial coverage by PAs and OECMs.
- **20** KBAs have no (<2%) coverage by PAs and OECMs.

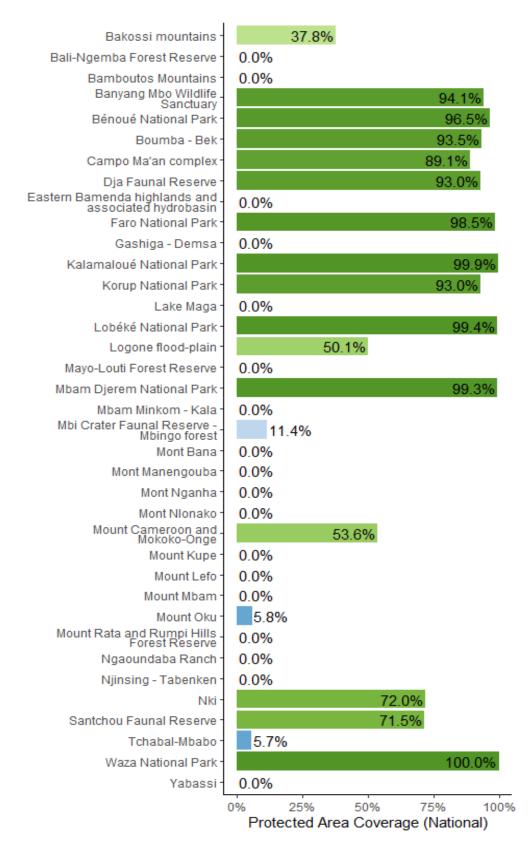
Ecologically or Biologically Significant Marine Areas (EBSAs)

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.

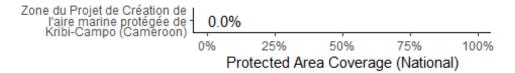
There is 1 EBSA with some portion of its extent within Cameroon's EEZ; this 1 EBSA has no coverage from reported PAs or OECMs.



Areas Important for Biodiversity in Cameroon



Key Biodiversity Area Coverage (KBA) in Cameroon



Ecologically or Biologically Significant Marine Areas (EBSAs) in Cameroon

Opportunities for action

There is opportunity for Cameroon 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

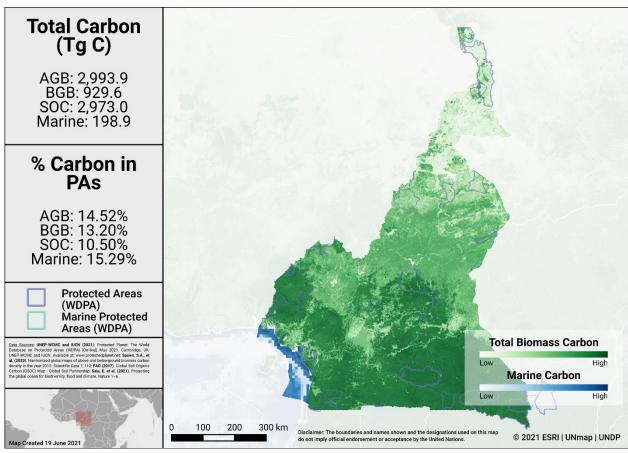
AREAS IMPORTANT FOR ECOSYSTEM SERVICES

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

Data for biomass carbon comes from temporally consistent and harmonized global maps of aboveground biomass and belowground biomass carbon density (at a 300-m spatial resolution); the maps integrate land-cover specific, remotely sensed data, and land-cover specific empirical models (see Spawn et al., 2020 for details on methodology). The Global Soil Organic Carbon Map present an estimation of SOC stock from 0 to 30 cm (see FAO, 2017). Data is also presented from global maps of marine sedimentary carbon stocks, standardized to a 1-meter depth (see Sala et al., 2021, and Atwood et al., 2020).

The map below presents the total carbon stocks in Cameroon and the percent of carbon in protected areas. The total carbon stocks is 2,993.9 Tg C from aboveground biomass (AGB), with 14.5% in protected areas; 929.6 Tg C from below ground biomass (BGB), with 13.2% in protected areas; 2,973.0 Tg C from soil organic carbon (SOC), with 10.5% in protected areas; and 2,973.0 Tg C from marine sediment carbon, with 15.3% in protected areas.



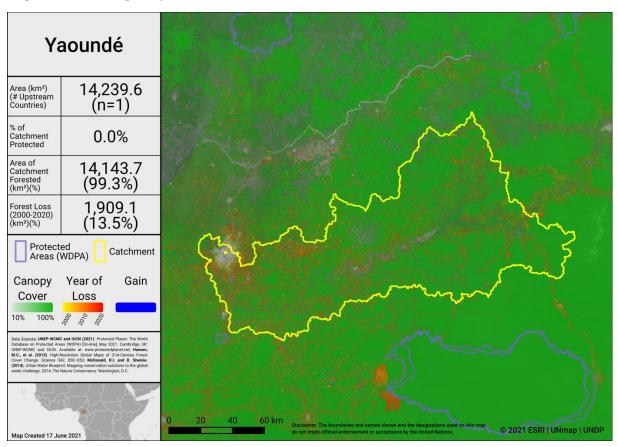
Carbon Stocks in Cameroon

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 Cameroon may similarly depend on protected forest areas within and around water catchments. The map below shows the percentage forest and PA cover and the forest loss from 2000-2020 in the most heavily populated water catchment of Cameroon. Intact catchments can support more consistent water supply and improved water quality.



Water catchment in Yaoundé

Opportunities for action

For carbon, there is opportunity for Cameroon to increase PA and OECM coverage in both marine and terrestrial areas with high carbon stocks, as identified in the map above.

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

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 Cameroon was 3.5%.

PARC-Connectedness Index

In 2019, as assessed using the PARC-Connectedness Index (values ranging from 0-1, indicating low to high connectivity), connectivity in Cameroon is 0.40. This represents an increase from 0.39 in 2010.

Corridor case studies

There are currently (as of August 2021) no corridor case studies available for Cameroon (but see general details on conserving connectivity through ecological networks and corridors 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, including management of transboundary PAs and OECMs. 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 Cameroon reported in the WDPA have the following governance types:

- 77.6% are governed by **governments**
 - 77.6% by federal or national ministry or agency
 - 0.0% by sub-national ministry or agency
 - 0.0% by government-delegated management
- 0.0% are under **shared** governance
- 0.0% are under **private** governance
- 0.0% are under **IPLC** governance
 - 0.0% by Indigenous Peoples
 - 0.0% by local communities
- 22.4% **do not** report a governance type
 - (All of which are international designations)

OECMs

As of May 2021, there are **0** OECMs in Cameroon reported in the WD-OECM, therefore there is no data available on OECM governance types.

Privately Protected Areas (PPAs)

There is currently no data available on PPAs for Cameroon (see Gloss et al., 2019, and Stolton et al., 2014 for details).

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

There is currently no data available on ICCAs for Cameroon (see Kothari et al., 2012 and the ICCA Registry for further details).

Other Indigenous lands

Lands managed and/or controlled by Indigenous Peoples cover an area of 228,084.0 km 2 , of which 210,071.0 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 82,250.0 km 2 (for details on analysis see Garnett et al., 2018).

For Cameroon, 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: Wodaabe, Jafun, Galegi/Aku, Kirdi: [Harrison, A. Fulfulde Language Family Report (SIL International, 2003)] Baka, Bakola, Bagyeli, Bedzang: [Olivero, J. et al. Distribution and Numbers of Pygmies in Central African Forests. PloS One 11, e0144499 (2016)].

Opportunities for action

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

There is also opportunity for Cameroon 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).

Equator Prize Projects

The Equator Initiative brings together the United Nations, governments, civil society, businesses and grassroots organizations to recognize and advance local sustainable development solutions for people, nature and resilient communities.

The Equator Prize projects provide examples of unique and locally based governance of natural resources. Cameroon has the following Equator Prize winners that showcase examples of local, sustainable community action:

| Organization | Year | Project Description |
|--|------|---|
| Cameroon Gender and Environment Watch | 2019 | Created in 2007, Cameron Gender and Environment Watch (CAMGEW) brings together women's empowerment, community livelihoods, and ecology to address environmental challenges in northwestern Cameroon. Recognizing that local livelihoods are deeply integrated with the health of local ecosystems, the group has planted 75,000 bee-loving African cherry trees (Prunus Africana) in degraded areas of Kilum-Ijim Forest to serve as a carbon sink and protect key watersheds. At the same time, they have trained over 1,000 bee farmers in honey production for market, while a complementary programme has trained 772 farmers on agroforestry to bolster soil health and provide alternative firewood sources. To empower women farmers, CAMGEW offers both business training and microloans through a programme that has, to date, trained 1,580 women and provided 1,325 loans. In a time of ongoing conflict in Cameroon, the organization has made a powerful impact on the health of local ecosystems and the well-being of local communities. |

| Organization | Year | Project Description |
|--|------|--|
| Centre de Ressources en Agroforesterie de Riba (Riba Agroforestry Resource Centre) | 2010 | Centre de Ressources en Agroforesterie de Riba (Riba Agroforestry Resource Centre) is a community-based organization working in mountainous northwest Cameroon, close to Kilum-Ijim Mountain Forest. The Centre promotes sustainable tree-based farming to rehabilitate watersheds and degraded land and generate income for the local community. A rural resource centre provides training in agroforestry and nursery management, watershed protection, beekeeping, microfinance, and marketing of tree seedlings and farm produce. The initiative's tree-based farming system has successfully stemmed deforestation and improved soil fertility, while sales from tree and honey nurseries are supporting sustainable livelihoods. The initiative is guided by a self-help ethos, which has served to empower members of the community, promote gender equity, and instill a belief in the community's collective capacity to achieve positive change and a sustainable future. |
| Groupe d'Initiative Commune des éleveurs de la Communauté Itoh (Itoh Community Graziers Common Initiative Group) | 2004 | Through participatory planning and mapping exercises, the agropastoralist Itoh community conserves land around the Kilum mountain forest for grazing and agriculture. This forest fragment had previously been under threat from encroachment for timber harvesting and clearing for agriculture; it is the largest remnant of montane forest in the Bamenda Highlands of Cameroon's Northwest Province. These forests support a high diversity of unique flora and fauna, including two endemic bird species, and provide a range of ecosystem services for the mountain's local population. Activities have focused on an area reserved for grazing, around which the community's two ethnic groups have collectively planted 30,000 trees to demarcate boundaries, protect local water sources, and provide fodder for livestock. Some of these multipurpose tree species have had medicinal and ethno-veterinary uses, reviving traditional approaches to treating human and animal ailments. |



Photo from the Equator Prize Winner

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 May 2021, Cameroon has 53 PAs reported in the WDPA; of these PAs, 30 (61.2%) have management effectiveness evaluations reported in the global database on protected area management effectiveness (GD-PAME).

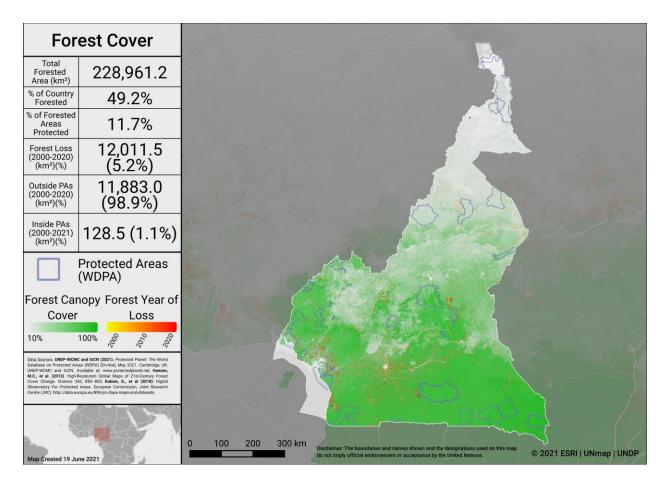
- 8.1% (38,177 km²) of the terrestrial area of the country is covered by PAs with completed management effectiveness evaluations.
 - 74.1% of the area of terrestrial PAs have completed evaluations.
- 7.5% (1,100 km²) of the marine area of the country is covered by PAs with completed management effectiveness evaluations.
 - 68.7% of the area of marine PAs have completed evaluations.

The 60% target for completed management effectiveness assessments (per COP Decision X/31) **has** been met for terrestrial PAs and **has** been met for marine PAs.

As of May 2021, there are 0 OECMs in Cameroon 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

Forested areas in Cameroon cover approximately 49.2% of the country, an area of 228,961.2 km². Approximately 11.7% (26,759.5 km²) of this is within the protected area estate of Cameroon. Over the period 2000-2020 loss of forest cover amounted to over 12,011.4 km², or 2.6% of the country (5.2% of forest area), of which 128.5 km² (1.1% of forest loss) occurred within protected areas. The map below shows how forest cover has changed in Cameroon from 2000-2020 both inside and outside of PAs. This can indicate how effective PAs are in reducing forest cover loss.



Forest Cover and Forest Loss in Cameroon

Opportunities for action

The 60% target for completed management effectiveness assessments (per COP Decision X/31) **has** been met for terrestrial PAs and **has** been met for marine PAs. Therefore, the 60% target for protected area management effectiveness has been met. Further increasing this percentage would be beneficial overall for understanding how well protected areas are being managed.

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

PRIORITY ACTIONS FROM 2015-2016 REGIONAL WORKSHOPS

National priority actions for Aichi Biodiversity Target 11 were provided by Parties following a series of regional workshops in 2015 and 2016. The Capacity-building workshop for Africa on achieving Aichi Biodiversity Targets 11 and 12 took place 21 - 24 March 2016 in Entebbe, Uganda. Progress towards the quantitative targets for marine and terrestrial coverage has been assessed based on data reported in the WDPA and WD-OECM as of 2021. For more information, see the workshop report at: https://www.cbd.int/meetings/

Summary from the workshop:

Priority actions and identified opportunities, if completed as proposed, will increase coverage of terrestrial areas by **13,691km**² and increase coverage of marine areas by **3,976km**². Bringing with them benefits for the other qualifying elements of Aichi Biodiversity Target 11.

The following actions were identified during the workshops:

Terrestrial coverage:

- 1) Finalize classification of current projects on a total area of 10,326.19 km² for 13 protected areas including an extension of the Douala Edea Wildlife Reserve (and 2 MPAs) [Douala-Edea completed 2018 (adding 1,635 km² terrestrial cover)]
- 2) Supporting communities to create community-managed hunting zones (ZICGC) and community hunting areas in all regions with potential: an average of 1000 km² per year or 5000 km² additional classified for 2020
- 3) Identify and promote the classification of cultural sites reserved to customary or traditional practices.

Marine coverage: Finalize classification of current projects for 2 national marine parks off Campo and Bakassi representing 5,160.53 km² [Parc National de Douala-Edéa added in 2018 (1,184 km² marine)].

Ecological representation:

- 1) Strengthen the capacity of knowledge and inventory methods for the marine and coastal environment resources;
- 2) Develop inventory programs in marine and coastal ecosystems
- 3) Creating new protected areas in the marine, coastal and fragile ecoregions;

4) Promote the legal classification of wetlands of international importance (RAMSAR).

Areas Important for biodiversity and ecosystem services:

- 1) Develop programs for complete identification of biodiversity hotspots in the country
- 2) Creating new protected areas in the ecosystems harboring biodiversity hotspots including mountains and crater lakes.

Connectivity:

- 1) Develop access infrastructure and equipment for protected areas
- 2) Develop ecological monitoring programs for elephants and great apes for the implementation of appropriate migration corridors
- 3) Develop Maintenance programs and monitoring of corridors and access routes to protected areas..

Management effectiveness: Implement PA security tools and develop and validate anti-poaching methods (Emergency Action Plan for security and validate anti-poaching – PAULAP).

Governance and Equity:

- 1) Develop planning tools and participatory management of protected areas
- 2) Implement participatory anti-poaching strategies and regulate sharing costs and profits from the management of PAs
- 3) Develop public-private partnership programs involving local people and neighboring municipalities in the management of protected areas Co-management ("MOU or Protocols for multi-stakeholder collaboration")
- 4) Develop education and outreach programs of activities generating income and local development around the PA
- 5) Supporting communities to create the ZICGC and community hunting areas, particularly around protected conservation areas
- 6) Develop a marketing plan for the conservation of PAs for eco-tourism.

Integration: No actions were identified for this element of Target 11.

OECMs:

1) Promote participatory development of master plans for planning and urban development, particularly in the northern regions and the Southwest; classification of PAs must be based on these patterns to avoid conflict with other land uses. For example, 44% of the Northern Region currently consists of PAs and this is a source of permanent conflicts in this area conducive to transhumance.:

2) Supporting communities to create the community-managed hunting zones (ZICGC) and community hunting areas, particularly around protected conservation areas; Identify and promote the classification of cultural sites reserved to customary or traditional practices

NATIONAL BIODIVERSITY STRATEGY AND ACTION PLANS (NBSAPs)

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

National Biodiversity Target 11: By 2020, at least 30% of the national territory, taking into consideration "ecosystem representativeness" is under effectively and equitably managed

National records show this **target is Achieved**.

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

| NBSAP Action number | Action (original language from NBSAP) |
|---------------------|--|
| 6.2 | Develop and implement management plans for natural habitats under protection. |
| 11.1 | Establish and implement programmes for the restoration of degraded PAs and valorise PA biodiversity. |
| 11.2 | Establish PA's in fragile ecosystems and biodiversity hotspots in marine and semi-arid ecosystems |
| 11.3 | Propose more PAs to be nominated as UNESCO Biosphere Reserves (BRs) |
| ET4.3 | Develop and effectively implement management plans for designated Protected Areas and promote a National PA System that includes non-formal protected areas. |

APPROVED GEF-5, GEF-6, & GCF 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 (km²) | Type of new protected area | Qualitative elements potentially benefitting (based on keyword search of PIFs) |
|--------|--------------|------------------------|----------------------------|--|
| 4739 | No | N/A | N/A | Ecosystem services; Effectively managed; Equitably managed; Integration |
| 4800 | Yes | 400 | Terrestrial | Effectively managed; Equitably managed |
| 5210 | Yes | 120 | Terrestrial | All except Ecosystem services |
| 9155 | No | N/A | N/A | All except Ecologically representative |
| 9604 | No | N/A | N/A | All except Ecologically representative and Connectivity |

Approved Green Climate Fund (GCF) Protected Area-related biodiversity projects

The Green Climate Fund's investments listed as approved projects as of May 2021 were considered. The GCF supports paradigm shifts in both climate change mitigation and adaptation that may impact quality of PAs or contribute to better integration within the wider land- and seascapes around PAs. Only projects with result areas for either or both Forest and Land Use and Ecosystems and Ecosystem Services result areas were included.

| GCF ID | Project theme | Result area | Target 11 element |
|--------|-------------------|---------------------|----------------------------------|
| FP092 | Cross- cutting | Forest and land use | Effectively managed; Integration |

UPDATES ON NATIONAL PROGRESS TOWARDS COMMITMENTS

Increase number of programs for restoration of degraded PAs:

- Several restoration initiatives have been put in place by the government even before the adoption of the NBSAP-II in 2012, though not found in PAs.
 - The SAHEL VERT programme for restoration in the northern regions with an average of 32,700ha already
 - o The Bamboo Pilot Project with 4.7ha restored through the planting of about 15.000 bamboo plants. The restoration of 12.64ha of Mangroves in the coastal ecosystem areas.
- The Restoration Initiative (TRI) project has equally been active in the restoration process and have restored 150ha with plans to engage in restoration in some Protected Areas.

% increase in number/surface of PAs per category

- The total protected area assessed is 53,139.6Km² (51,538 km² terrestrial and 1,601.6Km² marine)
- This represents a percentage increase since 2011.

% of PAs under effective management plans:

- There are a total of 39 terrestrial and 1 marine Protected Areas, with 30 (75%) having completed management effectiveness evaluations.
- There are currently no OECMs.

Number of biodiversity species valorized:

• This is still very highly underestimated due principally to legal restrictions. The new law on ABS is probably going to promote co-management and increase research on possible avenues of Biodiversity species valorization.

Number & proportion of PAs in Marine and Semi-arid ecosystems:

- The creation of the new marine protected area Douala- Edea greatly increased the surface area of marine protected areas in Cameroon.
- There is also the move by MINFOF towards the creation of yet another Marine Protected Area at Elombo for which we are monitoring its progress for subsequent reporting.

Increase number & proportion of PAs as biosphere reserves:

• Three Biosphere Reserves existing and a forth is in progress i.e. The Korup-Obang biodiversity trans-boundary reserve which is at a high level of negotiation.

Increase development of ABS scheme for PAs / Increase number of Capacity Building workshops/Nature and amount of benefit from PAs revenue shared with local/riparian communities:

- Many actions were undertaken amongst them:
 - The preparation & adoption of a National Strategy for Protected areas in 2012
 - Production and adoption of a National Strategy for the fight against poaching in 2020.
 - The organisation of several capacity building workshops on PA management
 - The organisation of several awareness creation forums with legislative staff of the National Assembly (Parliamentarians & Senators)
 - The enforcement of ABS schemes by the payment of royalties in various forms including hunting royalties for the management of ZIG/ZIGC in terms of access to no-financial benefits in form of food & medicines.
 - Financial benefits from Protected Area revenue shared with local riparian communities ranging from:
 - 13.013.970 XAF in 2014
 - 11.947.224 XAF in 2016
 - ② in 2018
 - ② In 2020

ANNEX I

ADDITIONAL DETAILS ON POTENTIAL OECMs

Hunting Zones in North Cameroon:

- **Overview:** Hunting zones in North Region Cameroon Note that in South-East Cameroon, hunting zones overlap with production forests, reason we do not include them here.
- **Boundaries & Geographical Space:** 26 Hunting zones (2,384,714 ha) 7 Community hunting zones (283,723 ha); totaling 5.6% of the national territory.
- **Governance Type:** Government has leased the area to private enterprises (hunting zones) or to communities (represented by local government) (community hunting zones), many of which have been leased to private enterprise.
- **Permanence:** Yes, hunting zones are pa In Cameron both national parks and hunting zones are parts of the 'permanent forest estate', highlighting the permanent land use character of wildlife. Whereas national parks are relatively clearly defined, hunting zones are not unequivocally defined with respect to land use such as pastoralism and permanent settlements. One may assume, however that land uses are limited to the ones that do jeopardize the permanent character of the 'wildlife estate'.
- Management Objectives: Hunting is regulated. Formally it is, as there should (every 5 years) a wildlife inventory, that is however conducted in only a number of hunting zones.
- **Conservation Effectiveness:** Most hunting zones (under active management) are (see publications below) A wildlife inventory is mandatory every 5 years. Due to governance and management, although the remoteness of most hunting zones also contributes to their effectiveness.

See full details in Collation of OECM case studies (IUCN, 2017).

ANNEX II

FULL LIST OF TERRESTRIAL ECOREGIONS

| Ecoregion Name | Area (km²) | % of Global Ecoregion in Country | % of Country in Ecoregion | Area Protected (km²) | % Protected in Country |
|---|------------|--|---------------------------------|----------------------------|------------------------------|
| Cameroon Highlands forests | 28,751.4 | 75.9 | 6.2 | 755.8 | 2.6 |
| Central African mangroves | 2,759.1 | 9.0 | 0.6 | 1,777.5 | 64.4 |
| Congolian coastal forests | 33,224.4 | 17.6 | 7.1 | 3,817.2 | 11.5 |
| Cross-Sanaga- Bioko coastal forests | 34,005.2 | 65.6 | 7.3 | 2,836.1 | 8.3 |
| East Sudanian savanna | 37,193.5 | 3.5 | 8.0 | 2,723.4 | 7.3 |
| Guinean forest- savanna | 7,967.2 | 1.2 | 1.7 | 924.1 | 11.6 |
| Lake Chad flooded savanna | 4,401.9 | 13.8 | 0.9 | 3,837.1 | 87.2 |
| Mandara Plateau woodlands | 5,592.0 | 74.8 | 1.2 | 16.2 | 0.3 |
| Mount Cameroon and Bioko montane forests | 1,016.3 | 89.1 | 0.2 | 568.4 | 55.9 |
| Northern Congolian Forest-Savanna | 142,643.5 | 20.3 | 30.7 | 10,269.5 | 7.2 |
| Northwest Congolian lowland forests | 145,794.9 | 33.7 | 31.3 | 16,842.3 | 11.6 |
| Sahelian Acacia savanna | 21,928.0 | 0.6 | 4.7 | 6,759.6 | 30.8 |
| West Sudanian savanna | 7.3 | 0.0 | 0.0 | 0.0 | 0.0 |

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-parcconnectedness

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 4.0.5. For any questions please contact support@unbiodiveristylab.org.