Convention on Biological Diversity

UNDP

Aichi Biodiversity Target 11 Country Dossier: NIGERIA

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GLOSSARY

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

Disclaimer

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

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

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

EXECUTIVE SUMMARY

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

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

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

Coverage - Terrestrial & Marine

- **Status:** as of May 2021, terrestrial coverage in Nigeria is 127,332 km^2 (13.9%) and marine coverage is 30.6 km^2 (0.0%).
- **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:** Nigeria contains 14 terrestrial ecoregions, 1 marine ecoregion, and 1 pelagic province: the mean protected coverage by reported PAs and OECMs is 15.6% (terrestrial), 0.1% (marine), and 0.0% (pelagic); 2 terrestrial ecoregions and 1 pelagic province have no coverage by reported PAs and OECMs.
- **Opportunities for action:** there is opportunity for Nigeria 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:** Nigeria has 25 Key Biodiversity Areas (KBAs): the mean protected coverage of KBAs by reported PAs and OECMs is 80.4%, while 3 KBAs have no coverage by reported PAs and OECMs.

- **Opportunities for action:** there is opportunity for Nigeria 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 Nigeria, 19.3% of aboveground biomass carbon, 20.3% of belowground biomass carbon, 15.4% of soil organic carbon, 0.1% of carbon stored in marine sediments is covered by PAs and OECMs.

- **Opportunities for action:** for carbon, there is opportunity for Nigeria 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 2.4%.

- **Opportunities for action:** there is 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 Nigeria is: 99.7% under Government (97.6% sub-national ministry or agency; 2% Federal or national ministry or agency; 0.1% Government-delegated management).

- **Opportunities for action:** explore opportunities for governance types that have lower representation, for Nigeria this could relate to governance by Indigenous Peoples and/or local communities (IPLC), shared governance, etc.

- There is also opportunity for Nigeria 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:** 11.4% of terrestrial PAs and 0.0% of marine PAs have completed Protected Area Management Effectiveness (PAME) assessments reported. At present, IMET training for selected professionals is ongoing, but management effectiveness is not a regular exercise across PAs.

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

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

INTRODUCTION

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

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

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

This dossier provides an overview of area-based conservation in Nigeria. Section I of the dossier presents data on the current status of Nigeria'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 Nigeria, in relation to each Target 11 element. The analyses present options for improving Nigeria's area-based conservation network to achieve enhanced protection and benefits for livelihoods and climate change. Section II presents details on Nigeria's existing PA and OECM commitments as a summary of existing efforts towards achieving Target 11. This gives focus not only to national policy and actions but also voluntary commitments to the UN. Furthermore, where

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

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

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

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

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

SECTION I: CURRENT STATUS

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

COVERAGE - TERRESTRIAL & MARINE

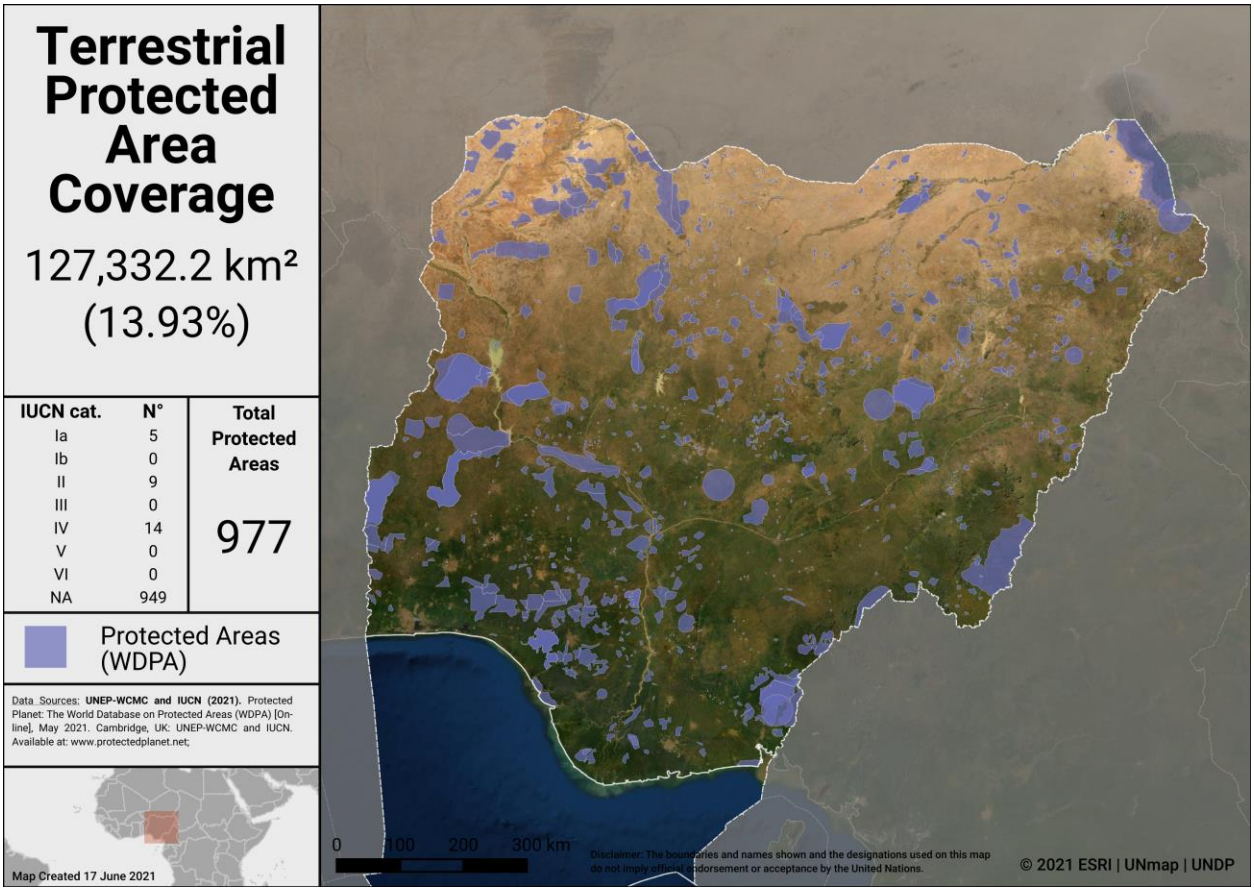
As of May 2021, Nigeria has **1,001** protected areas reported in the World Database on Protected Areas (WDPA). 16 proposed PAs, another 8 PAs have no spatial boundary and no area listed in the WDPA, and a further 1 UNESCO-MAB Biosphere Reserve, are not included in the following statistics (see details on UNWP-WCMC's methods for calculating PA and OECM coverage **here**).

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

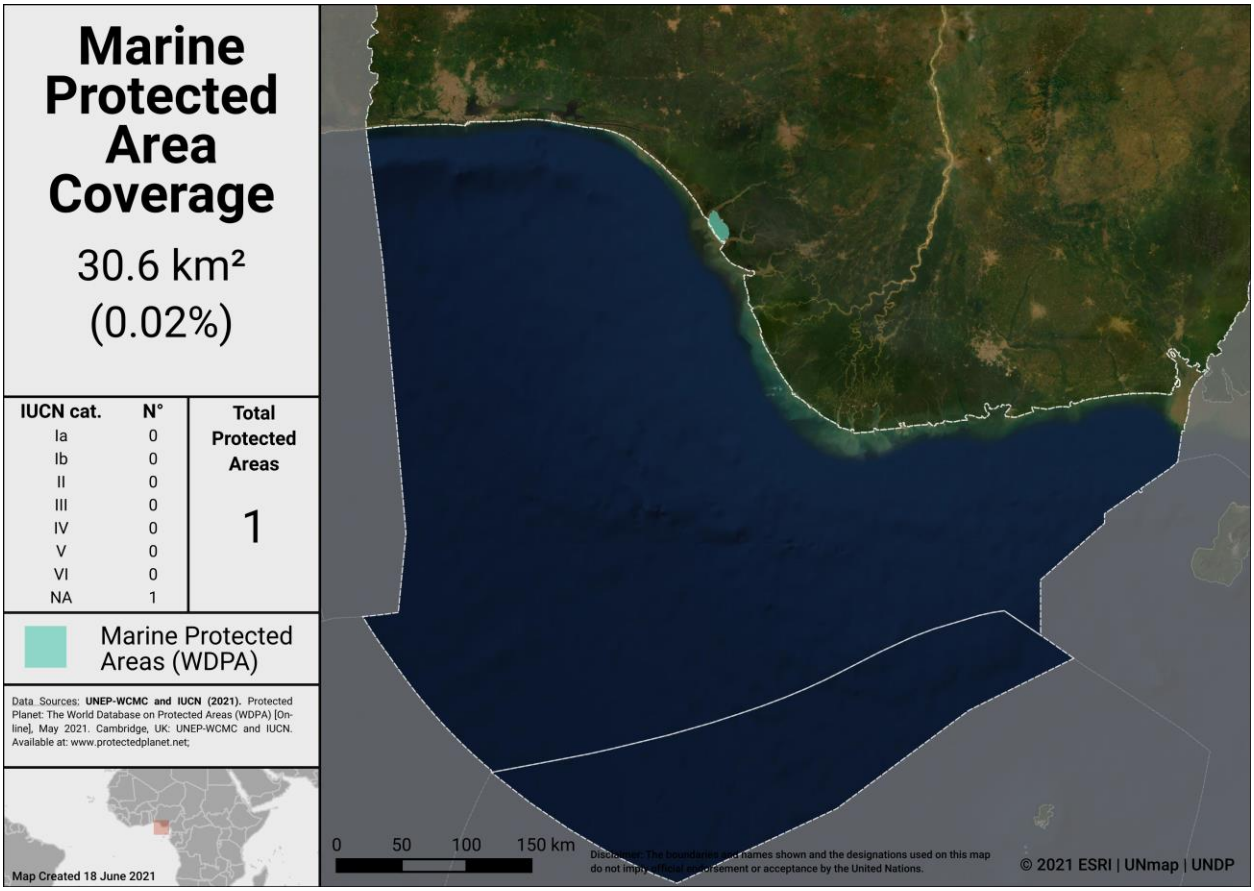
Current coverage for Nigeria:

- 13.9% terrestrial (977 protected areas, 127,332 km^2)
- 0.0% marine (1 protected area, 30.6 km^2)

Coverage in Nigeria is in the process of being updates. The governance of the forest reserves is decentralized, and it makes it challenging to update.



Terrestrial Protected Areas in Nigeria



Marine Protected Areas in Nigeria

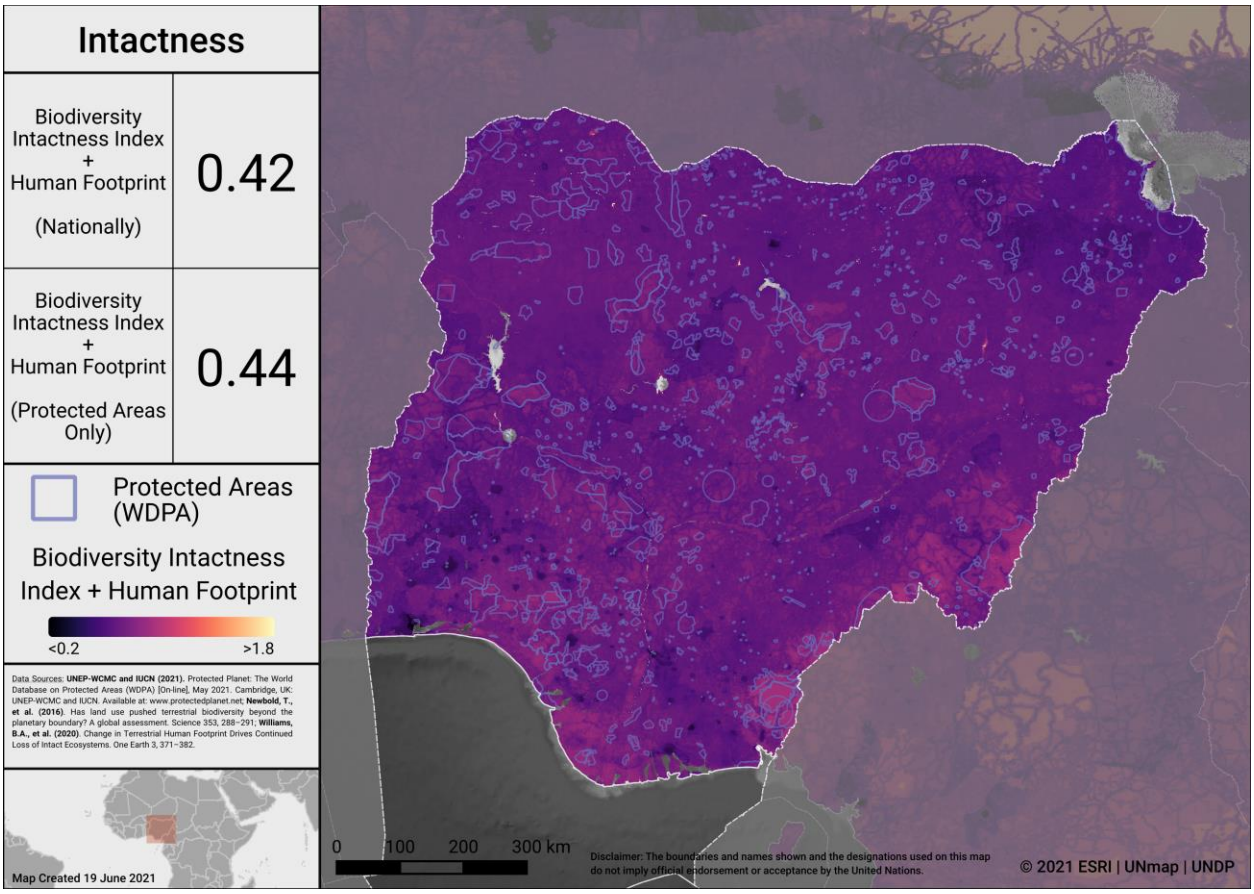
Potential OECMs

Potential OECMs in Nigeria include:

- Lekki Conservation Centre
  - It has an area of 0.78 km², managed by Nigerian Conservation Foundation. Primary focus includes conservation, environmental education, policy advocacy and ecotourism. It is an urban forest park that clears promote forest regeneration and ecotourism potential of properly managed Protected Area
- Lekki Urban Forestry and Animal Shelter Initiative (LUFASI)
  - It has an area of 0.2 km², Lekki Urban Forestry and Animal Shelter Initiative is also a privately owned Protected Area located in Lagos
- Osun-Osogbo Sacred Grove
  - This is a UNESCO World Heritage Site. Located just outside the city of Osogbo, Osun State. It has an area of 0.75 km² with a buffer of 0.47 km².

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 (which could include potential OECMs like Lekki Conservation Centre, Lekki Urban Forestry and Animal Shelter Initiative (LUFASI), Osun-Osogbo Sacred Grove). In the future, as Nigeria considers where to add new PAs and OECMs, the map below identifies areas in Nigeria 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 Nigeria

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).

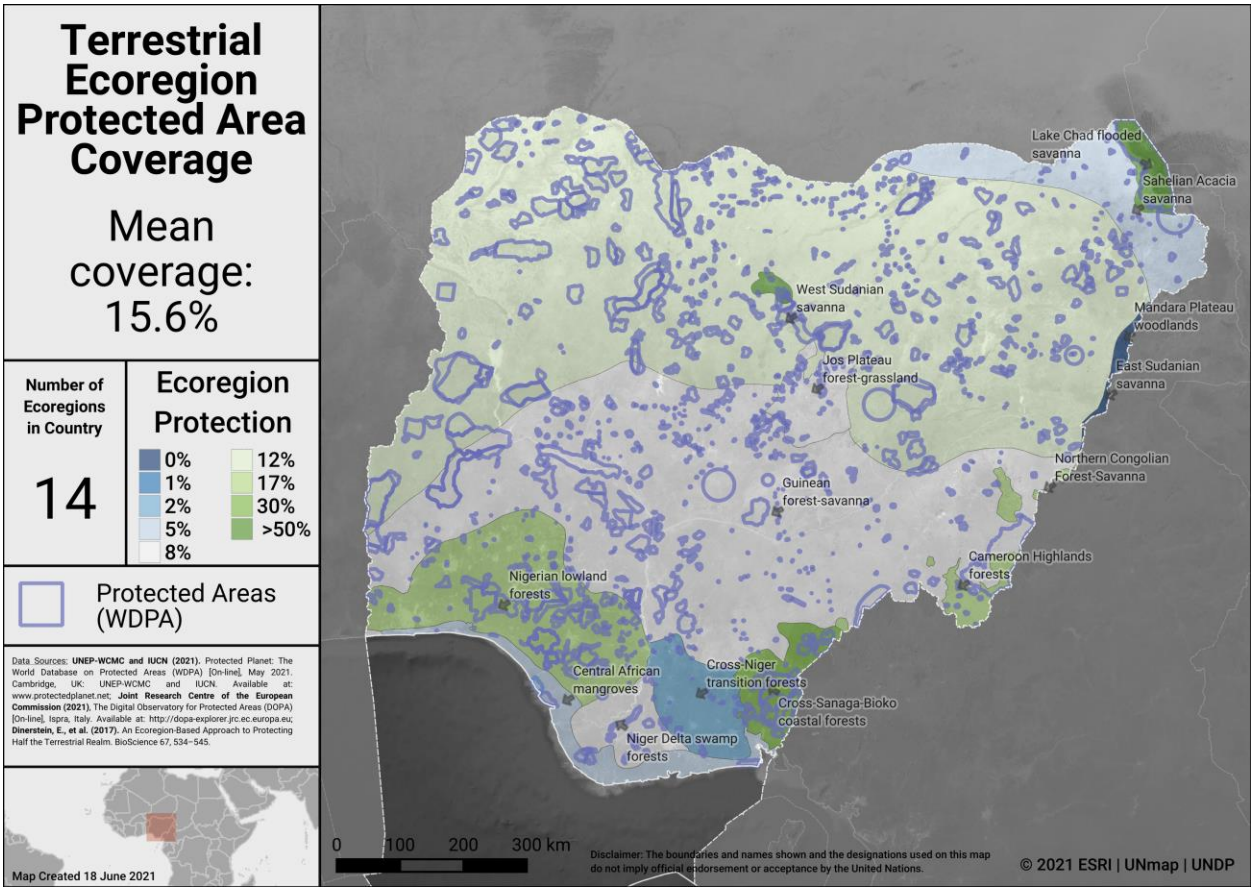
Nigeria has 14 **terrestrial** ecoregions. Out of these:

- 12 ecoregions have at least some coverage from PAs and OECMs.
- 4 ecoregions have at least 17% protected within the country.
- The average terrestrial coverage of ecoregions is 15.6%.

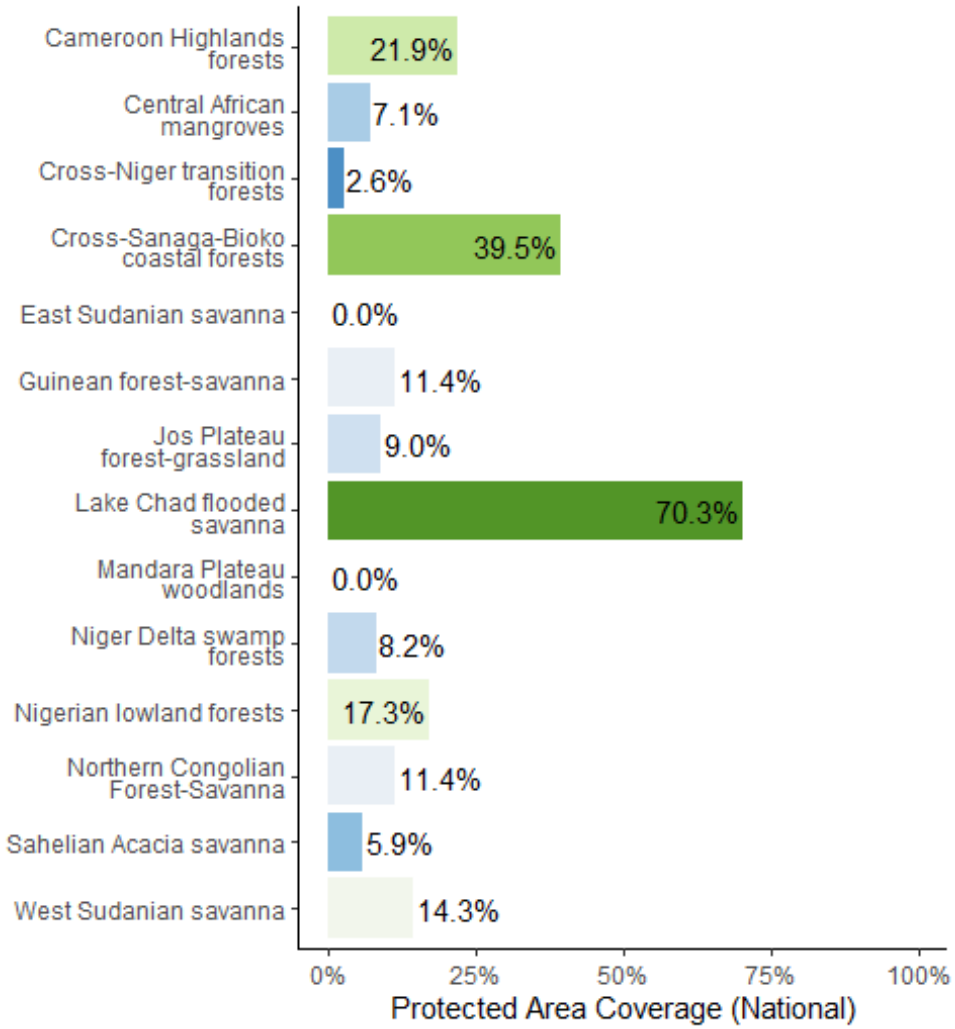
Nigeria has 1 **marine** ecoregion and 1 **pelagic province**. Out of these:

- 1 marine ecoregion and 0 pelagic provinces have at least some coverage from reported PAs and OECMs.
- The protected area coverage of the marine ecoregion is 0.1% and protected area coverage of the pelagic province is 0.0%.

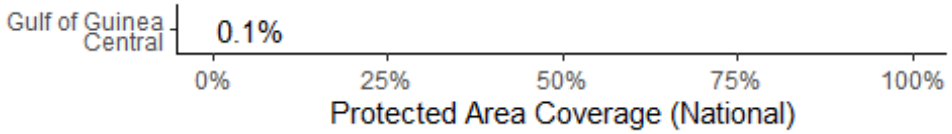
A full list of terrestrial ecoregions in Nigeria is available in Annex I.



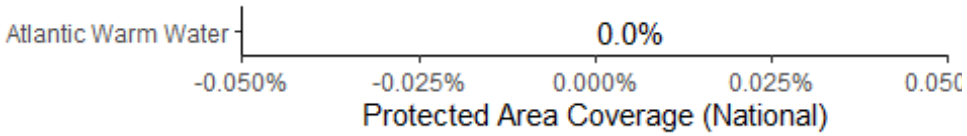
Terrestrial ecoregions in Nigeria



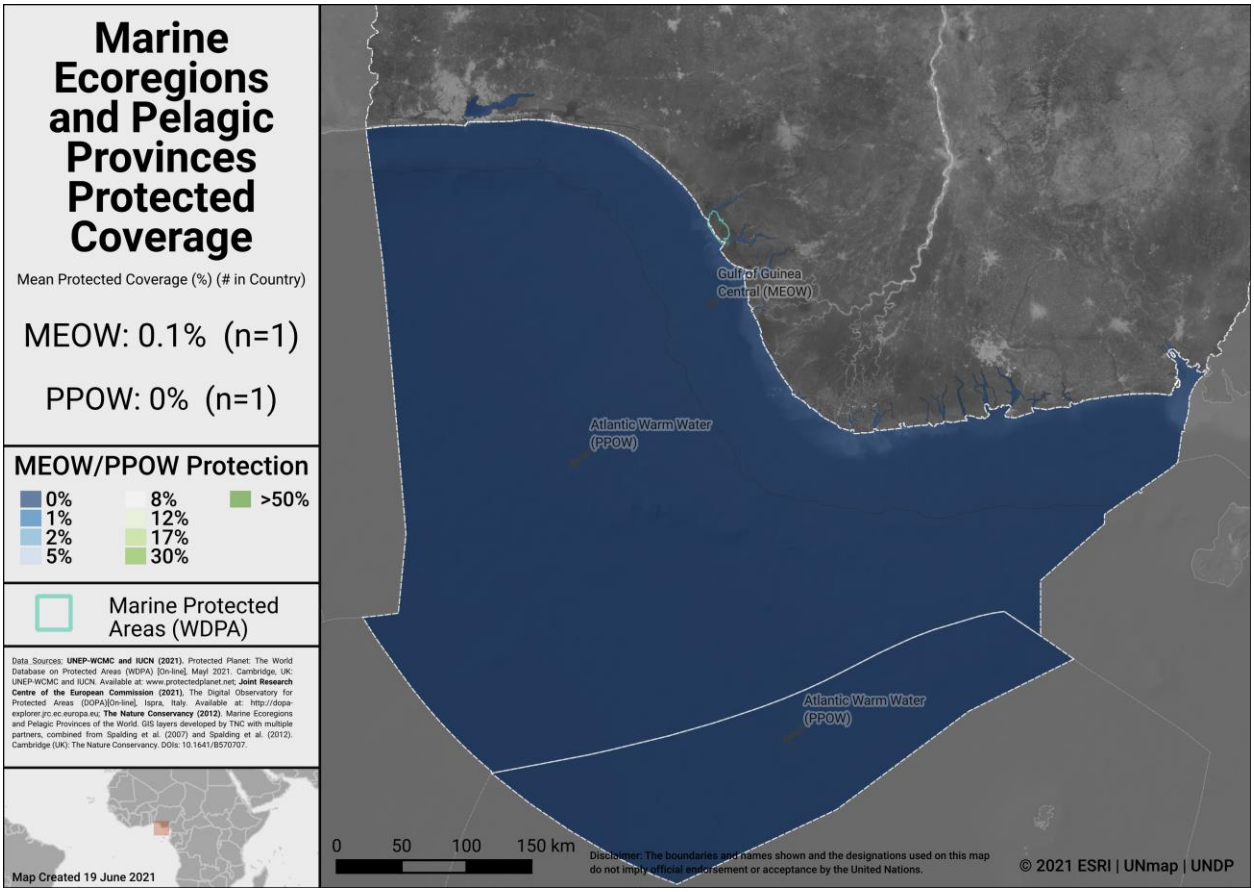
Terrestrial ecoregions of the World (TEOW) in Nigeria



Marine Ecoregions of the World (MEOW) in Nigeria



Pelagic Provinces of the World (PPOW) in Nigeria



Marine ecoregions and pelagic provinces

Opportunities for action

There is opportunity for Nigeria 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)

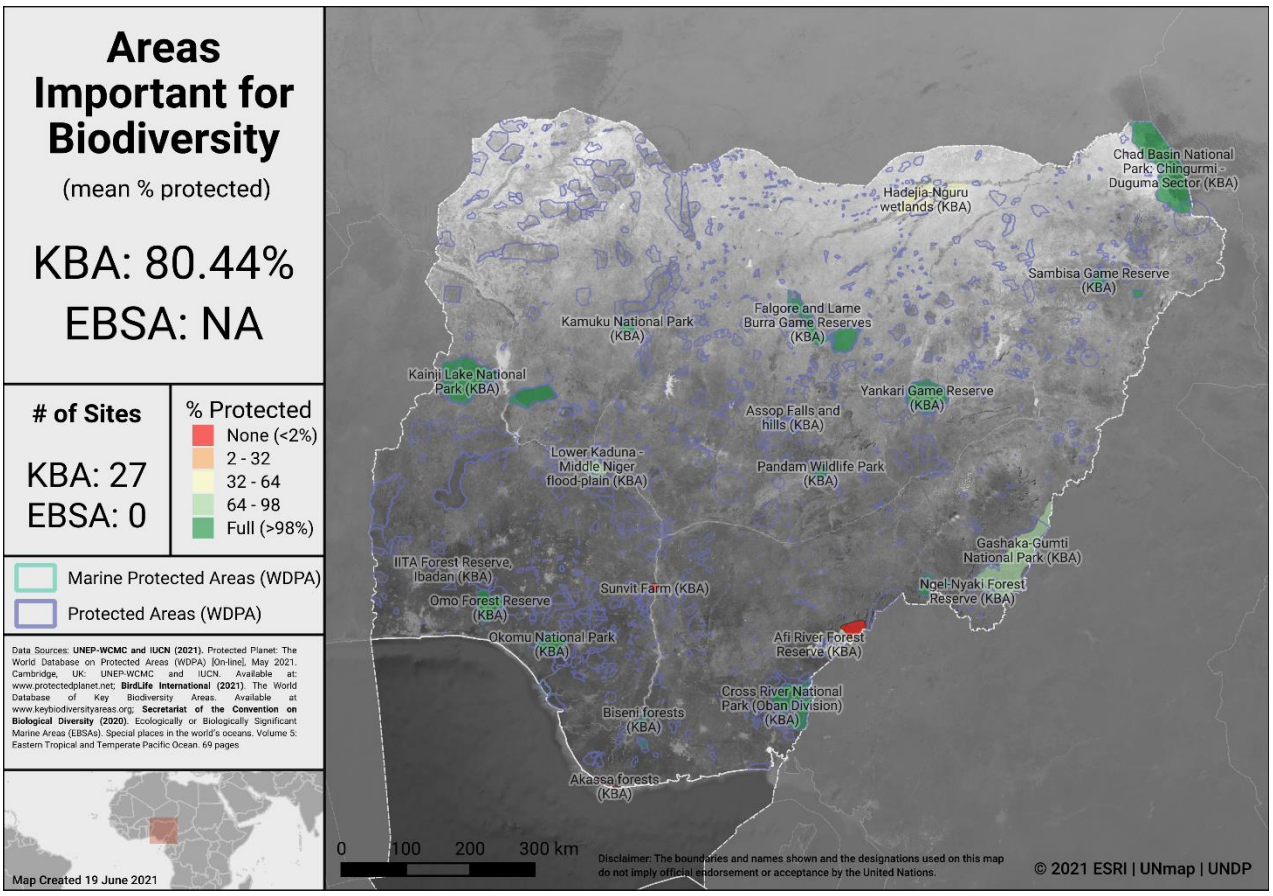
Protected area and OECM coverage of Key Biodiversity Areas (KBAs) provide one proxy for assessing the conservation of areas important for biodiversity at national, regional and global scales. KBAs are sites that make significant contributions to the global persistence of biodiversity (IUCN, 2016). The 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.

Nigeria has 27 Key Biodiversity Areas (KBAs) [**25** KBAs included in analysis]

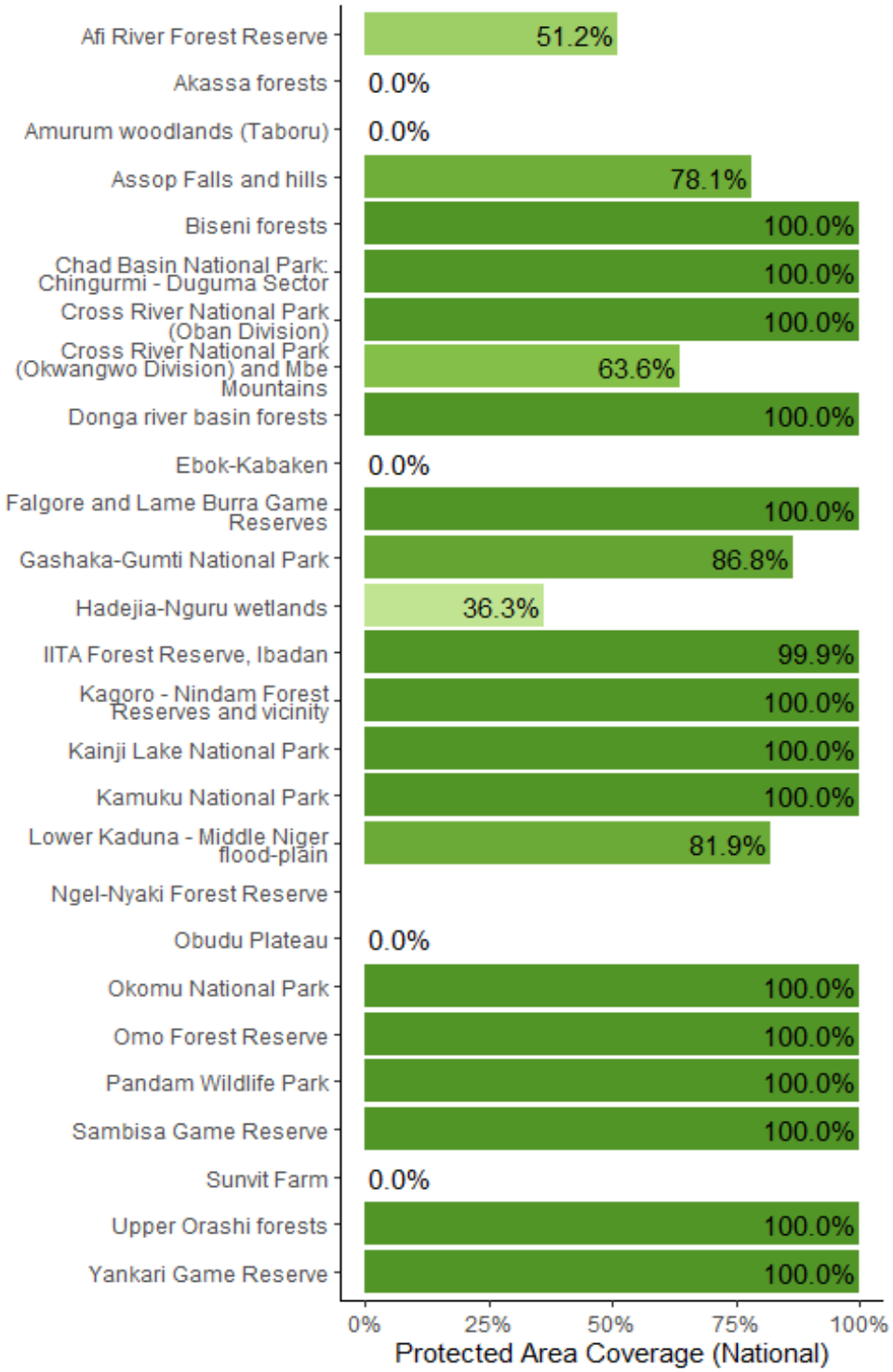
- Mean percent coverage of all KBAs by OECMs in Nigeria is **80.4%**.
- **17** KBAs have full (>98%) coverage by PAs and OECMs.
- **5** KBAs have partial coverage by PAs and OECMs.
- **3** KBAs have no (<2%) coverage by PAs and OECMs.
- *2 KBAs lack spatial data to allow PA/OECM coverage to be determined*

There are some conservation actions ongoing in some of the KBAs and IBAs.

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



Areas Important for Biodiversity in Nigeria



Key Biodiversity Area Coverage (KBA) in Nigeria

Opportunities for action

There is opportunity for Nigeria 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.

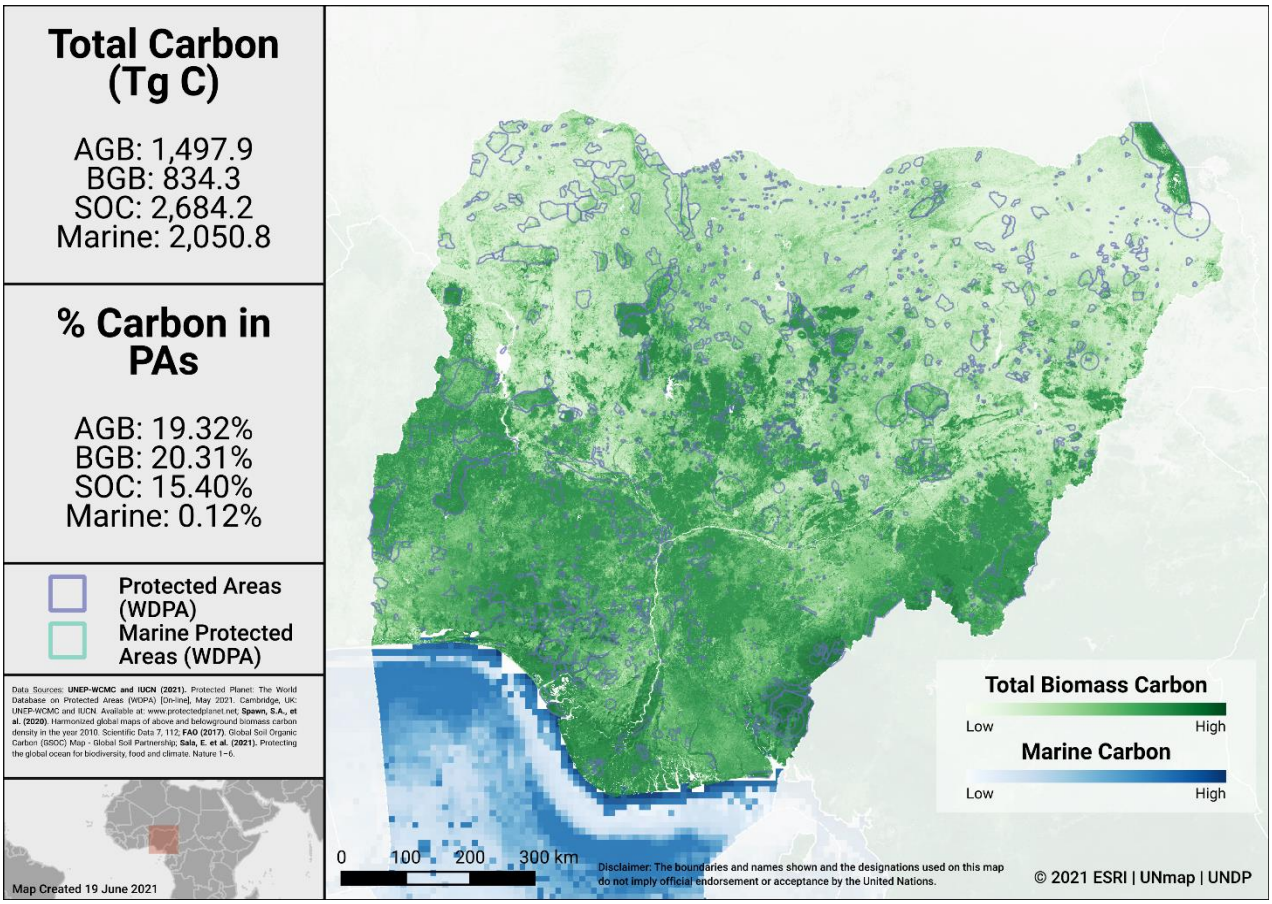
AREAS IMPORTANT FOR ECOSYSTEM SERVICES

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 Nigeria and the percent of carbon in protected areas. The total carbon stocks is 1,497.9 Tg C from aboveground biomass (AGB), with 19.3% in protected areas; 834.3 Tg C from below ground biomass (BGB), with 20.3% in protected areas; 2,684.2 Tg C from soil organic carbon (SOC), with 15.4% in protected areas; and 2,050.8 Tg C from marine sediment carbon, with 0.1% in protected areas.



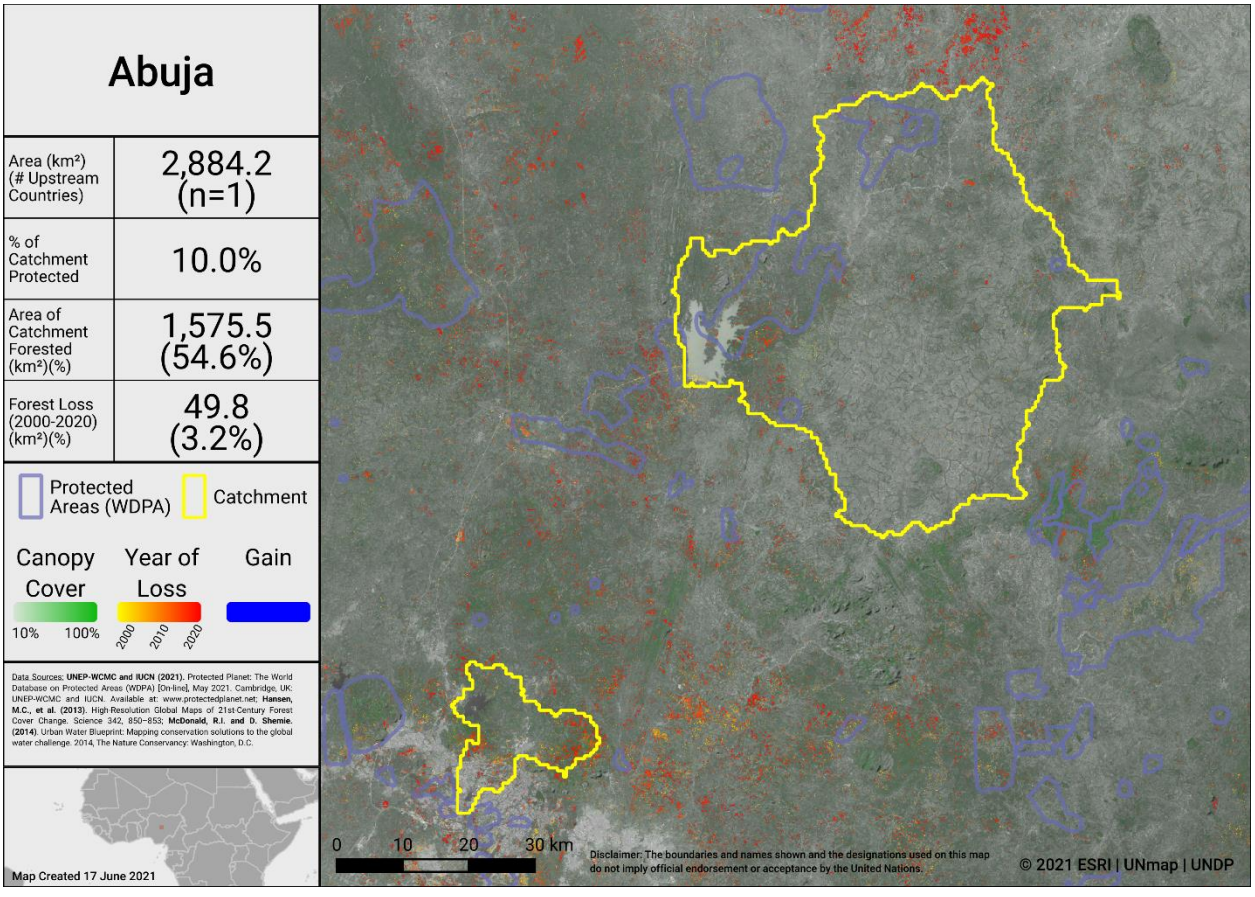
Carbon Stocks in Nigeria

Water

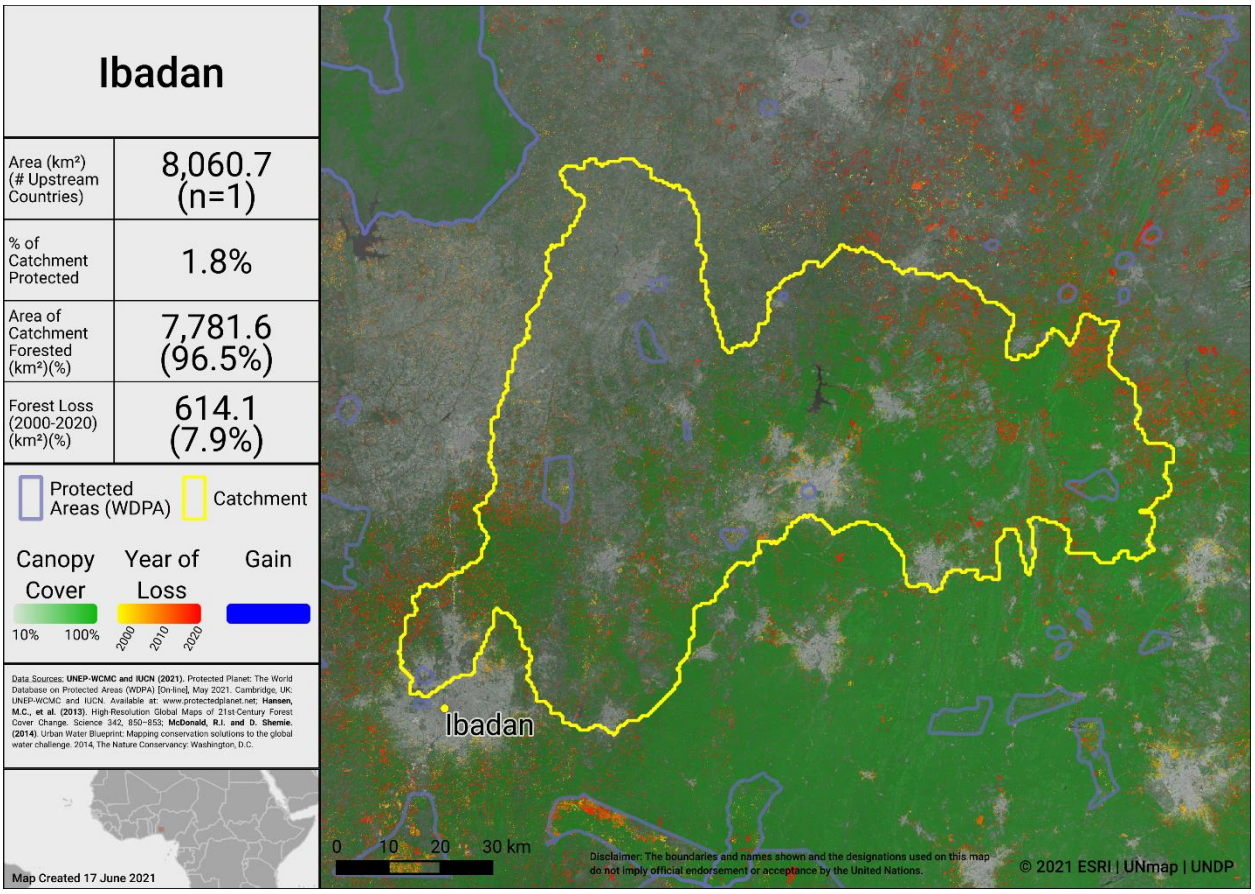
Information on the water sources for 534 cities is available via the City Water Map (CWM) and provides details on the catchment area of the watershed that supplies these cities (see McDonald et al., 2014 for details on methodology).

Forests and intact ecosystems 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).

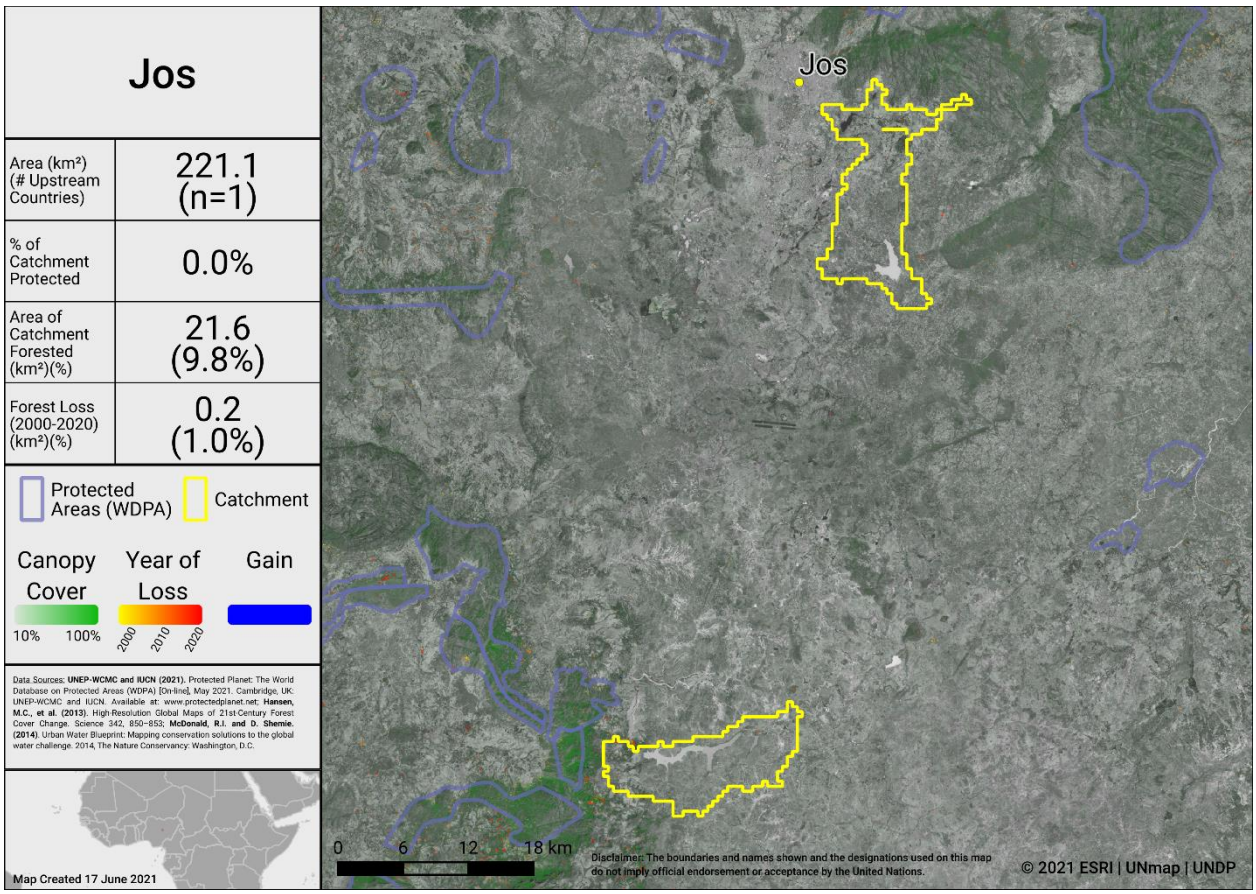
Drinking water supplies for cities in Nigeria may similarly depend on protected forest areas within and around water catchments. The maps below show the percentage forest cover and the forest loss from 2000-2020 in the most heavily populated water catchments of Nigeria. Intact catchments can support more consistent water supply and improved water quality.



Water catchment in Abuja



Water catchment in Ibadan



Water catchment in Jos

Opportunities for action

For carbon, there is opportunity for Nigeria 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).

In Nigeria, the connectively between most Protected Areas is poor. Although they were accommodated in the initial establishment of the PAs. Recent development shows that the corridors have been degraded and encroached.

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 Nigeria was 2.4%.

PARC-Connectedness Index

In 2019, as assessed using the PARC-Connectedness Index (values ranging from 0-1, indicating low to high connectivity), connectivity in Nigeria is 0.32. This represents no significant change since 2010.

Corridor case studies

There are currently no corridor case studies available for Nigeria (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. 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 Nigeria reported in the WDPA have the following governance types:

- 99.7% are governed by **governments**
  - 2.0% by federal or national ministry or agency
  - 97.6% by sub-national ministry or agency
  - 0.1% by government-delegated management
- 0.1% are under **shared** governance
  - 0.0 % by collaborative governance
  - 0.0% by joint governance
  - 0.1% by transboundary governance
- 0.0% are under **private** governance
- 0.1% are under **IPLC** governance
  - 0.0% by Indigenous Peoples
  - 0.1% by local communities
- 0.1% **do not** report a governance type

OECMs

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

Privately Protected Areas (PPAs)

There are few managed Protected Areas managed via private governance in Nigeria; examples include Lekki Conservation Center and LUFASI park (both managed privately).

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

There is currently no data available on ICCAs for Nigeria (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 726,321.0 km^2, of which 628,388.0 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 6,499.0 km^2 (for details on analysis see Garnett et al., 2018).

For Nigeria, evidence for the presence of Indigenous Peoples comes from: International Labour Organization & African Commission on Human & Peoples' Rights. Country Report of the research project by the International Labour Organization and the African Commission

on Human and Peoples' Rights on the constitutional and legislative protection of the rights of Indigenous Peoples: Nigeria (International Labour Office, 2009).

Boundaries of the lands Indigenous Peoples manage or have tenure rights over come from:

Pastoralists: Harrison, A. Fulfulde Language Family Report (SIL International, 2003)

Eleme, Gokana, Khana, Tai: Global Administrative Areas (GADM) v2.8, http://gadm.org/version2 (2015); United Nations Environment Programme. Environmental Assessment of Ogoniland Report (UNEP, 2011).

Opportunities for action

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

There is also opportunity for Nigeria 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. Nigeria has the following Equator Prize winners that showcase examples of local, sustainable community action:

Organization	Year	Project Description
Fédération des Unions de Producteurs de Maradi Gaskiya (FUMA Gaskiya, Gaskiya Federation of Maradi Farmers Unions)	2014	Equator Prize for Sustainable Land Management in Sub-Saharan Africa Fédération des Unions de Producteurs de Maradi Gaskiya (FUMA Gaskiya, Gaskiya Federation of Maradi Farmers Unions) is a research-driven initiative that is bringing agro-ecological options to smallholder farmers. Composed of 17 unions, 325 self-help groups, and 12,742 members, the work includes promotion of high-yield crops, participatory planning, marketing of produce and organic certified seeds, and the diversification of agricultural production systems. Farmer incomes have improved significantly, with a percentage of union revenues invested into a revolving fund for community projects. Fast-growing and off-season crops are being introduced to provide food security and alternative sources of income for local women. Community radio has been used as a medium for information exchange, knowledge transfer and education.

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.

At present, IMET [Integrated Management Effectiveness Tool] training for selected professionals is ongoing in Nigeria. But management effectiveness is not a regular exercise across the Protected Areas.

Protected area management effectiveness (PAME) assessments

As of May 2021, Nigeria has 1,001 PAs reported in the WDPA; of these PAs, 13 (1.3%) have management effectiveness evaluations reported in the global database on protected area management effectiveness (GD-PAME).

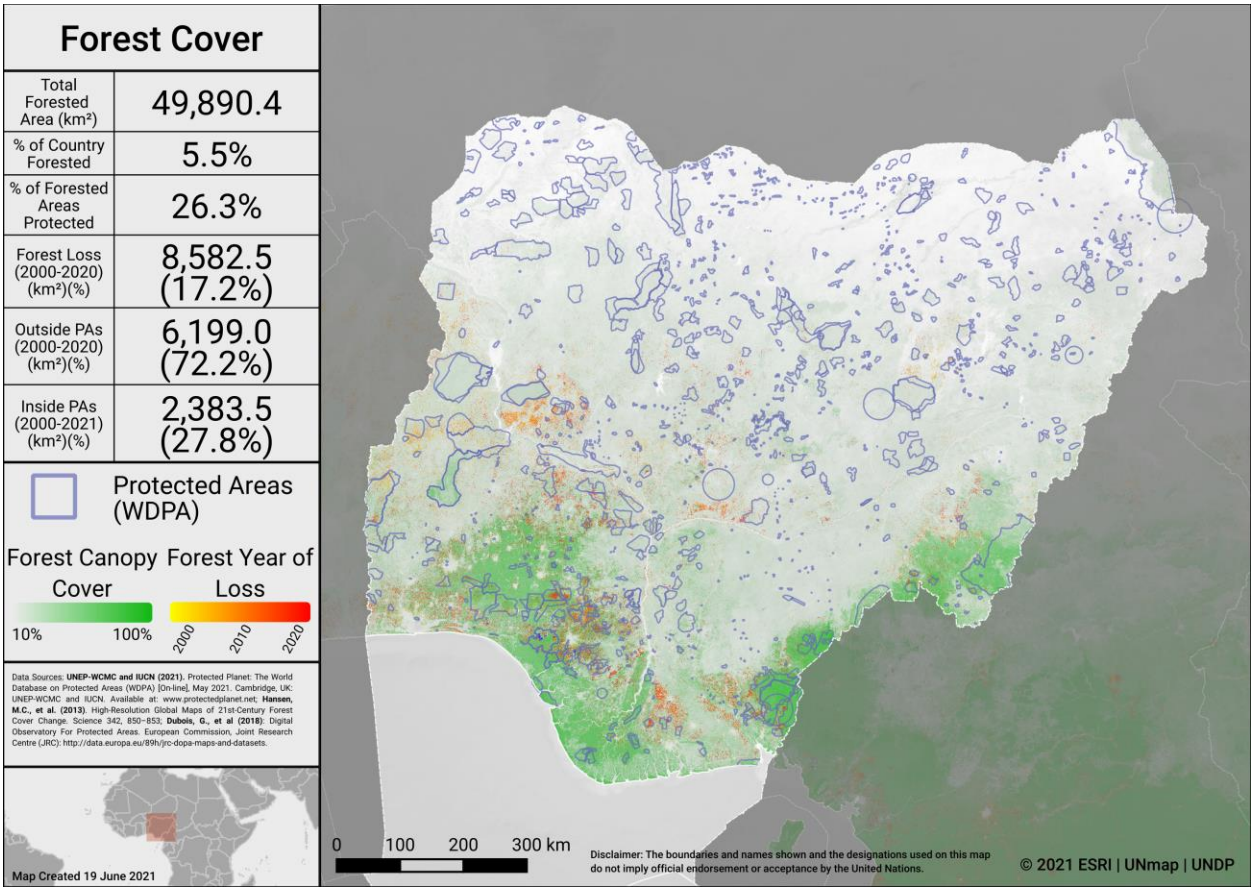
- 1.6% (14,547 km^2) of the terrestrial area of the country is covered by PAs with completed management effectiveness evaluations.
  - 11.4% of the area of terrestrial PAs have completed evaluations.
- 0.0% (0.0 km^2) of the marine area of the country is covered by PAs with completed management effectiveness evaluations.
  - 0.0% 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 Nigeria 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 Nigeria cover approximately 5.5% of the country, an area of 49,890.4 km^2. Approximately 26.3% (13,125.2 km^2) of this is within the protected area estate of Nigeria. Over the period 2000-2020 loss of forest cover amounted to over 8,582.5 km^2, or 0.9% of the country (17.2% of forest area), of which 2,383.5 km^2 (27.8% of forest loss) occurred within protected areas. The map below shows how forest cover has changed in Nigeria 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 Nigeria

Opportunities for action

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

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

SECTION II: EXISTING PROTECTED AREA AND OECM COMMITMENTS

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 **374km^2.** Bringing with them benefits for the other qualifying elements of Aichi Biodiversity Target 11.

The following actions were identified during the workshops:

Terrestrial and marine coverage: List of proposed PAs from Workshop Questionnaire (8/10 already listed in WDPA; area of remaining two PAs is **374 km^2**).

Ecological representation: Conduct forest resource assessment for 3 ecological regions in order to develop forest management plans that will improve their ecological status.

Areas Important for biodiversity and ecosystem services: Update IBAs (given as 24 in the 2015 country dossier, when there are actually 30 IBAs in Nigeria).

Connectivity: Conduct an assessment for all protected areas to identify key corridor areas that can enhance connectivity between protected areas.

Management effectiveness:

1) Implement management effectiveness assessment for 4 protected areas (Ramsar sites)

2) To formulate at least 5 new management plans for 5 major protected areas.

Governance and Equity: Review the 3 governance system to include collaborative and Indigenous governance systems.

Integration: To identify a block of protected areas managed by different sectors to be placed under a wider landscape management approach.

OECMs: Document and map the Indigenous and local community conservation areas.

NATIONAL BIODIVERSITY STRATEGY AND ACTION PLANS (NBSAPs)

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

This NBSAP **did** include a quantitative target for **terrestrial** and **marine** PAs or OECMs.

Target 6: By 2020, at least 10% of Nigeria's national territory is sustainably managed in conservation areas at varied levels of authority, with representation of all ecosystem types (6.2 Upgrade the status of ten forest reserves/game reserves and sanctuaries to National Park status, including marine ecosystems.)

As of May 2021 (based on the WDPA/WD-OECM):

- has the target been met for *terrestrial* areas: **YES**
- has the target been met for *marine* areas: **NO**
  - If this target is met, marine coverage would increase by **18,256 km²**.

See updates on progress below.

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

NBSAP Action	Action (original language from NBSAP)
6.1	Identify sites for new or expanded conservation areas from the relevant surveys and strategies under Targets 3, 4 and 5 [e.g., identify habitats of high biodiversity and ecosystem services value]
6.2	Upgrade the status of ten forest reserves/game reserves and sanctuaries to National Park status, including marine ecosystems.
6.4	Assess the status of biodiversity resources in the designated new National Parks.
6.5	Prepare and implement management plans for the Designated New National Parks.
6.6	Document and map the Indigenous and local communities' conservation areas and strengthen their management plans
6.7	Implement the full plan for the paramilitary status of the Nigerian National Parks to enhance the level of biodiversity protection in protected areas.
11.3	Designate appropriate structures of protected areas for sustainable harvesting of non-timber products by local people, to ensure benefits to them and guarantee protection of resources

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 (km^2)	Qualitative elements potentially benefitting (based on keyword search of PIFs)
4907	No	N/A	Ecosystem services; Effectively managed; Equitably managed; Integration
9161	No	N/A	All except Ecologically representative and Areas important for biodiversity

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

UN OCEAN CONFERENCE VOLUNTARY COMMITMENTS

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

Other Ocean Actions

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

#OceanAction15147: Implementing Ecosystem Based Adaptation approaches to both mangrove and the Atlantic Ocean coastline in Cross River State, Nigeria with a focus on institutional and capacity strengthening, combating coastal degradation and sustainable livelihoods, by Nigeria (Forestry Commission, Calabar, Cross River State, Nigeria) (Government).

- Types of actions involved: strengthen institutional capacity; restoration;.
- Target 11 element addressed: Effectively managed; Equitably managed.
- Progress report: No progress report submitted (as of May 2021).
- Further details available at: https://oceanconference.un.org/commitments/?id=15147

OTHER ACTIONS/COMMITMENTS

Leaders' Pledge for Nature

Nigeria **has** signed onto the Leaders' Pledge for Nature.

Political leaders participating in the United Nations Summit on Biodiversity in September 2020, representing 84 countries from all regions and the European Union, have committed to reversing biodiversity loss by 2030. By doing so, these leaders are sending a united signal to step up global ambition and encourage others to match their collective ambition for nature, climate, and people with the scale of the crisis at hand.

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

1. The government is equally incorporating biodiversity into the tourism sector, through a national program targeted at combating illegal wildlife trade and trafficking in two pilot Protected Area sites. 2. We have identified two viable sites for the establishment of Marine Protected Areas to help in the protection conservation and management of both marine and coastal biodiversity resources.

High Ambition Coalition for Nature and People

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

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

Global Ocean Alliance

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

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

Commitments for PAs and OECMs from Other National Policies

Policy document	Ecosystem	Policy text
Nationally Determined Contribution	Forest ecosystems	Avoided forest conversion: 7.78 Mt CO2e/yr
Nationally Determined Contribution	Forest ecosystems	Avoided woodfuel harvest: 3.02 Mt CO2e/yr
Nationally Determined Contribution	Wetland ecosystems	Avoided peat impacts: 0.64 Mt CO2e/yr
Nationally Determined Contribution	Coastal ecosystems	Avoided mangrove impacts: 0.22 Mt CO2e/yr
National Wetlands Policy	Wetland ecosystems	Preserve quality of surface and ground water while promoting the protection of the environment and associated aquatic ecosystems
National Development Plan	Coastal ecosystems	Preserve and improve quality and extent of coastal ecosystem to create opportunities for conservation and sustainable utilization of coastal resources
National Biodiversity Strategy Action Plan	Forest ecosystems	Upgrade the status of 10 forest reserves, game reserves and sanctuaries to national park status
Reducing emissions from deforestation and forest degradation	Forest ecosystems	Reduce forest loss by addressing drivers of deforestation; increase forest reserves and conservation areas and protect forest tenure and resource rights
Reducing emissions from deforestation and forest degradation	Forest ecosystems	Enhance investment into the forest sector
National Forest Programme	Forest ecosystems	Help private owners and communities reserve forests
Protected Area Plan	Forest ecosystems	Increase terrestrial protected area coverage by 374 km2
National Biodiversity Strategy Action Plan	Grasslands & Agricultural systems	Establish grazing reserves and pastoral routes

UPDATES ON PROGRESS TOWARDS COMMITMENTS

National Target 6: By 2020, at least 10% of Nigeria's National Territory is sustainably managed in conservation areas at varied levels of authority, with representation of all ecosystem types.

Action	Progress
1.1 Identification of sites for new conservation areas	COMPLETED
1.2 Upgrading the status of 10 forest reserves to National Park status including marine ecosystems	COMPLETED
1.3 Implementation of the conservation strategy for Biodiversity in the Niger Delta	ON-GOING
1.4 Assessment of the status of biodiversity resources in the designated new National Parks	IN-VIEW
1.5 Preparation and implementation of management plans for the designated new National Parks	IN-VIEW
1.6 Implement the full plan for the paramilitary status of the Nigerian National Parks to enhance the level of biodiversity protection in protected areas are	COMPLETED

National Target 12: By 2020, community participation in project design and management of key ecosystems is enhanced in one (1) each of the six (6) ecological zones

Action	Progress
2.1 Strengthen the capacity of local communities to participate in natural regeneration of wetlands, arid zone vegetation, forests and mangroves	ON-GOING
2.2 Carry out survey of flora and fauna outside protected areas, including sacred groves, community lands, abandoned farmlands and homesteads, and assist local communities in the sustainable management of these sites	IN-VIEW
2.3 Strengthen the implementation of guidelines for community based sustainable forest management including conservation and sustainable use of biodiversity	ON-GOING
2.4 Development of a National framework and mechanism for community participation in ecotourism planning and development	NOT YET DONE

ANNEX I

FULL LIST OF TERRESTRIAL ECOREGIONS

Ecoregion Name	Area (km^2)	% of Global Ecoregion in Country	% of Country in Ecoregion	Area Protected (km^2)	% Protected in Country
Cameroon Highlands forests	9,128.3	24.1	1.0	1,999.1	21.9
Central African mangroves	18,148.3	58.9	2.0	1,285.8	7.1
Cross-Niger transition forests	20,628.6	100.0	2.3	533.9	2.6
Cross-Sanaga-Bioko coastal forests	16,019.2	30.9	1.8	6,331.2	39.5
East Sudanian savanna	813.8	0.1	0.1	0.0	0.0
Guinean forest-savanna	266,164.1	39.7	29.2	30,383.4	11.4
Jos Plateau forest-grassland	13,281.3	100.0	1.5	1,199.1	9.0
Lake Chad flooded savanna	9,246.9	28.9	1.0	6,500.5	70.3
Mandara Plateau woodlands	1,886.6	25.2	0.2	0.0	0.0
Niger Delta swamp forests	14,343.2	100.0	1.6	1,172.8	8.2
Nigerian lowland forests	66,243.5	98.8	7.3	11,432.1	17.3
Northern Congolian Forest-Savanna	64.0	0.0	0.0	7.3	11.4
Sahelian Acacia savanna	36,305.6	1.0	4.0	2,129.9	5.9
West Sudanian savanna	438,106.2	26.8	48.1	62,880.5	14.4

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