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GLOSSARY

AZEs Alliance for Zero Extinction sites
CEPF Critical Ecosystem Partnership Fund

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

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

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

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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.

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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

- **Status:** as of May 2021 (per the WDPA), terrestrial coverage in Chad is 267,716 km² (21.0%); according to a recent national analysis in Chad, there are 35 PAs in the country, covering a total of 306,772.96 km² (23.89%).
- **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

- **Status:** Chad contains 7 terrestrial ecoregions: the mean coverage by reported PAs and OECMs is 21.2%, while 2 terrestrial ecoregions have no coverage.
- **Opportunities for action:** there is opportunity for Chad to increase protection in terrestrial ecoregions 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:** Chad has 8 Key Biodiversity Areas (KBAs): the mean coverage of KBAs by reported PAs and OECMs is 70.6%, while 1 KBA has no coverage by reported PAs and OECMs.
- **Opportunities for action:** there is opportunity for Chad 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 Chad, 32.6% of aboveground biomass carbon, 43.2% of belowground biomass carbon and 21.9% of soil organic carbon is covered by PAs and OECMs.
- **Opportunities for action:** for carbon, there is opportunity for Chad to increase PA and OECM coverage in 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 10.6%. There is currently a feasibility study underway for the creation of corridors, including three at the national level in Chad and three transboundary corridors.
- **Opportunities for action:** there is opportunity for a targeted increase in connecting PAs or OECMs, to focus on PA and OECM management for enhancing and maintaining connectivity, and to continue implementation of the cross-border corridor project. 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 for PAs in Chad, is under governance by the State (50% of PAs); however, governance type is not currently reported for any of the sites in Chad currently listed in the WDPA.
- **Opportunities for action:** increase efforts to identify the governance types for the 100.0% of sites that do not have their governance type reported. If applicable, explore opportunities for governance types that have lower representation

• There is also opportunity for Chad 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:** 55.9% of terrestrial PAs have completed Protected Area Management Effectiveness (PAME) assessments reported.
- **Opportunities for action:** the 60% target for completed management effectiveness assessments (per COP Decision X/31) **has not** been met for terrestrial PAs, therefore, there is opportunity to increase protected area management effectiveness (PAME) evaluations 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 Chad. Section I of the dossier presents data on the current status of Chad'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 Chad, in relation to each Target 11 element. The analyses present options for improving Chad's area-based conservation network to achieve enhanced protection and benefits for livelihoods and climate change. Section II presents details on Chad'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

As of May 2021, Chad has **23** protected areas reported in the World Database on Protected Areas (WDPA). 3 proposed PAs are not included in the following statistics (see details on UNWP-WCMC's methods for calculating PA and OECM coverage **here**).

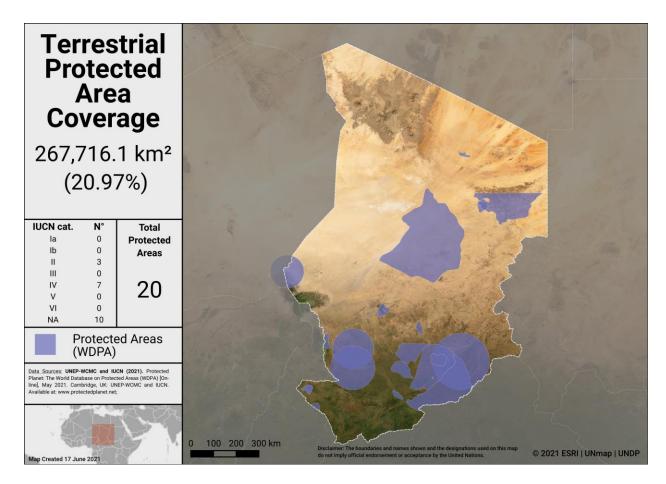
As of May 2021, Chad has **0** OECMs reported in the world database on OECMs (WD-OECM). Current coverage for Chad:

• 21.0% terrestrial (20 protected areas, 267,716.1 km²)

According to a recent national analysis in Chad, there are 35 PAs in the country, covering a total of 306,772.96 km² (23.89%). The areas identified in this analysis are: National parks, wildlife reserves, natural and cultural reserves, lakes and flood plains, hunting grounds and classified forests.

The three further protected areas (Beinamar Wildlife Reserve, Larmanaye Wildlife Reserve and Goz-beida National Park) are under consideration.

The addition of these other PAs (not currently reported in the WDPA) will have impacts for the elements in the following sections.



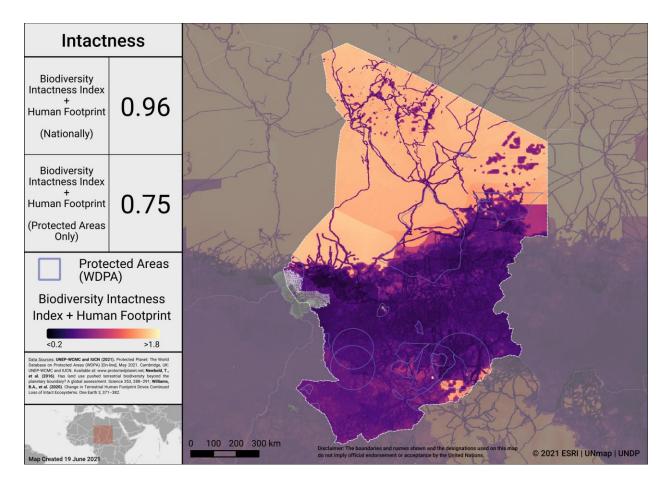
Terrestrial Protected Areas in Chad

Potential OECMs

Currently, Chad does not have officially classified or designated OECMs. But the country is seeking funding to designate its OECMs in order to comply with international standards recommended by the Convention on Biological Diversity.

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 Chad considers where to add new PAs and OECMs, the map below identifies areas in Chad where intact 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 Chad

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

ECOLOGICAL REPRESENTATIVENESS

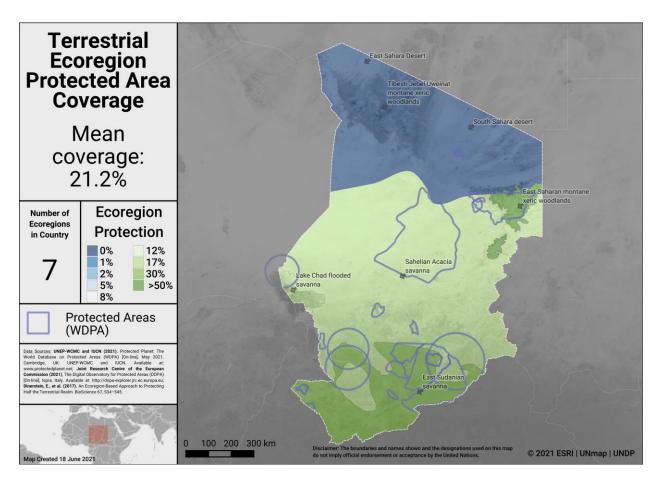
Ecological representativeness is assessed based on the PAs and OECMs coverage of broadscale biogeographic units. Globally, ecoregions have been described for terrestrial areas (Dinerstein et al, 2017), marine coastal and shelf ecosystems (to a depth of 200m; Spalding et al 2007) and surface pelagic waters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

Chad has 7 **terrestrial** ecoregions. Out of these:

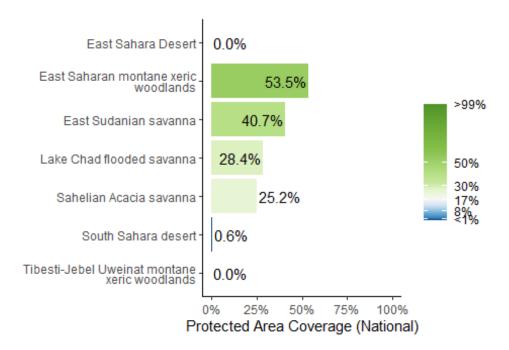
- 5 ecoregions have at least some coverage from PAs and OECMs.
- 4 ecoregions have at least 17% protected within the country.
- The average coverage of terrestrial ecoregions is 21.2%.

Coverage of ecoregions will increase when new terrestrial PAs (not currently reported in the WDPA) are included.

A full list of ecoregions in Chad is available in Annex I.



Terrestrial ecoregions in Chad



Terrestrial ecoregions of the World (TEOW) in Chad

Opportunities for action

There is opportunity for Chad to increase protection in terrestrial ecoregions 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.

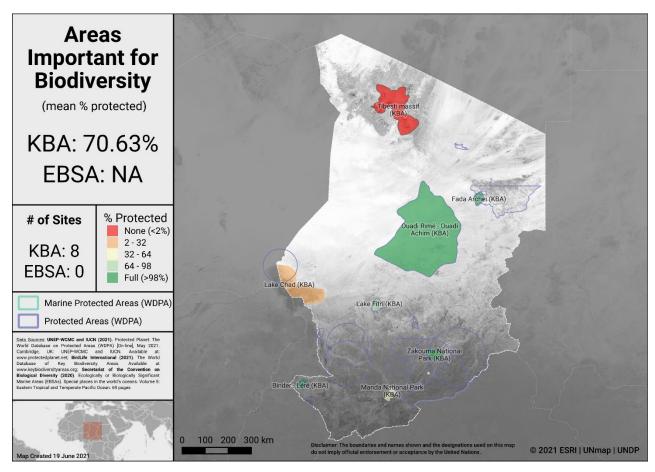
AREAS IMPORTANT FOR BIODIVERSITY

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.

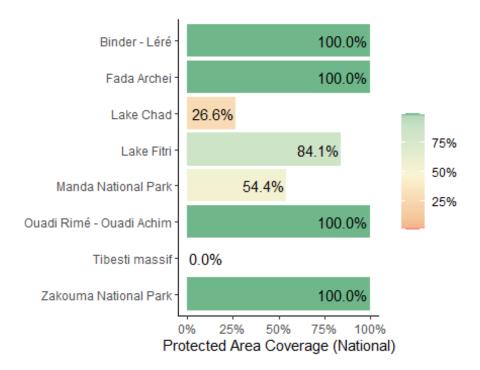
Chad has 8 Key Biodiversity Areas (KBAs).

- Mean percent coverage of all KBAs by PAs and OECMs in Chad is **70.6%**.
- **4** KBAs have full (>98%) coverage by PAs and OECMs.
- **3** KBAs have partial coverage by PAs and OECMs.
- **1** KBA has no (<2%) coverage by PAs and OECMs.



Areas Important for Biodiversity in Chad

Coverage of KBAs may increase when new terrestrial PAs (not currently reported in the WDPA) are included.



Key Biodiversity Area Coverage (KBA) in Chad

Coverage of KBAs may increase when new terrestrial PAs (not currently reported in the WDPA) are included.

Opportunities for action

There is opportunity for Chad 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.

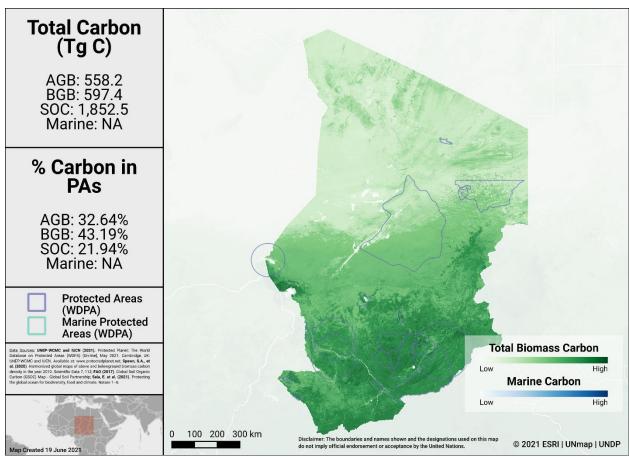
AREAS IMPORTANT FOR ECOSYSTEM SERVICES

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 Chad and the percent of carbon in protected areas. The total carbon stocks is 558.2 Tg C from aboveground biomass (AGB), with 32.6% in protected areas; 597.4 Tg C from below ground biomass (BGB), with 43.2% in protected areas and 1,852.5 Tg C from soil organic carbon (SOC), with 21.9% in protected areas.



Carbon Stocks in Chad

Water

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 Chad may similarly depend on protected forest areas within and around water catchments. Intact catchments can support more consistent water supply and improved water quality.

Opportunities for action

For carbon, there is opportunity for Chad to increase PA and OECM coverage in 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).

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 Chad was 10.6%.

Connectivity will likely increase when new terrestrial PAs (not currently reported in the WDPA) are included.

PARC-Connectedness Index

In 2019, as assessed using the PARC-Connectedness Index (values ranging from 0-1, indicating low to high connectivity), connectivity in Chad is 0.57. This represents no significant change since 2010.

Connectivity will likely increase when new terrestrial PAs (not currently reported in the WDPA) are included.

Corridor case studies

There is a feasibility study underway for the creation of a cross-border corridor (sena ourabouba ndjidda) for the safe migration of elephants in the PA complex in the northern zone of Central Africa. In this study, it is clear that Chad has six (6) corridors, three (3) at the national level and three (3) transboundary (cross-border).

1- Djiporderia Corridor (Chad)

- This Djipordéria corridor allows elephants to migrate from Sena Oura from the townships of Dari, Lamé and Lagon to reach the Binder-Léré wildlife reserve in Chad.
- 2- Black River Corridor (Cross-border Corridor: Cameroon-Chad)
 - This natural corridor allows elephants to move on either side of the Black River and then back and forth between the Sena Oura and Bouba Ndjidda cross-border parks.
- 3- Sodjé-Goumadji Corridor (Cross-border Corridor: Cameroon-Chad)
 - This crescent-shaped corridor allows elephants to migrate to the interior of Chad on the one hand, ranging from the regions of Tandjilé-Est, Logone West to Mayo-kebbi West through the townships of Gagal and Goumadji.

- 4- Corridor: Tassabarkedje-Poromi (Cross-border: Cameroon-Chad)
 - The elephants start from Bouba Ndjidda National Park, along the western edge of the park to the level of the confluence between Mayo Wakla and Mayo Vaïmba to enter Sena Oura.
- 5- Corridor: Zakouma-Telfane (Chad)
 - The elephants leave Zakouma, cross Tamaram, Kamour, Assafa, Maragab to join the Abu Telfane Wildlife Reserve.
- 6- Corridor: Siniaka-Salamat (Chad)
 - The elephants leave Zakouma from the west side to join the Siniaka Minia Wildlife Reserve.

Opportunities for action

There is opportunity for a targeted designation of PAs or OECMs in strategic locations for connectivity, to focus on PA and OECM management for enhancing and maintaining connectivity, and to continue implementation of the cross-border corridor project. 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 Chad reported in the WPDA have the following governance types:

- 0.0% are governed by governments
- 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
- 100.0% **do not** report a governance type

This information from the WDPA may need to be updated

All of Chad's PAs have a well-defined management system. These include PAs governed or managed by the State, those in public-private partnerships, those under co-management, those in with private concessions, and those with technical assistance.

- 3 PAs (8.8%) are under in public-private partnerships (**shared** governance)
- 1 PA (2.9%) is under co-management (shared governance
- 17 PAs (50%) are governed by **governments**
- 5 PAs (14.7%) are in Technical Assistance mode
- 8 PAs are under private concessions (or management with agreement)

OECMs

As of May 2021, there are **0** OECMs in Chad 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 Chad (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 Chad (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 1,233,164.0 km², of which 1,006,079.0 km² falls outside of formal protected areas. Indigenous lands with a human footprint less than 4 (considered as 'natural landscapes') cover an area of 704,646.0 km² (for details on analysis see Garnett et al., 2018).

For Chad, evidence for the presence of Indigenous Peoples comes from: Indigenous Work Group on Indigenous Affairs. Indigenous World 2011 (Indigenous Working Group on Indigenous Affairs, 2011).

Boundaries of the lands Indigenous Peoples manage or have tenure rights over come from: Lewis, J. The Batwa pygmies of the great lakes region. Vol. 209 (Minority Rights Group International, 2000); and Reounodji, F., Tchaouna, W. & Banzhaf, M. Vers la sécurisation des systèmes pastoraux au Tchad: Enjeux et éléments de réponse (IRAM, 2005).

Opportunities for action

Increase efforts to identify the governance types for the 100.0% of sites that do not have their governance type reported. If applicable, explore opportunities for governance types that have lower representation.

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

Organization	Year	Project Description
Association Tchadienne des Volontaires pour la Protection de l'Environnement (ATVPE, Chadian Volunteers' Association for the Protection of the Environment)	2014	Association Tchadienne des Volontaires pour la Protection de l'Environnement was developed to address land and resource rights for women, in response to drought, desertification, and land degradation, and focuses on training in ecosystem restoration, drought preparedness, and agroforestry. Land rights are negotiated with local chiefs so that women assume management of degraded plots, which are then restored to become more productive. Training in agroforestry and the manufacture of solar cooking stoves provides women with alternative livelihood options. Youth are trained and serve as ambassadors in the wider community – public, political and religious realms – to sensitize people to the importance of environmental conservation and land rights for women. Farm production has tripled, which has served to reduce outmigration, particularly of youth.



Photo from Equator Prize Project: Association Tchadienne des Volontaires pour la Protection de l'Environnement (ATVPE, Chadian Volunteers' Association for the Protection of the Environment)

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.

In Chad, it is noted that partners do intervene in the protected areas, but few of the PAs are currently effectively managed.

The protected areas that are effectively better managed are: Zakouma Park (managed by APN), Binder Léré Wildlife Reserve (managed by NGO NOé), Ouadi-Rime Ouadi-Achim Wildlife Reserve (managed by SCF), Fauna Siniaka Minia (managed by APN), Parc de Sena oura (managed by WCS and GIZ), Domaine de Chasse de Aouk (managed by APN), Hunting area of Melfi (Roukoum) (private concession), and the Hunting area of Kloudia (private concession).

Protected area management effectiveness (PAME) assessments

As of May 2021, Chad has 23 PAs reported in the WDPA; of these PAs, 12 (52.2%) have management effectiveness evaluations reported in the global database on protected area management effectiveness (GD-PAME).

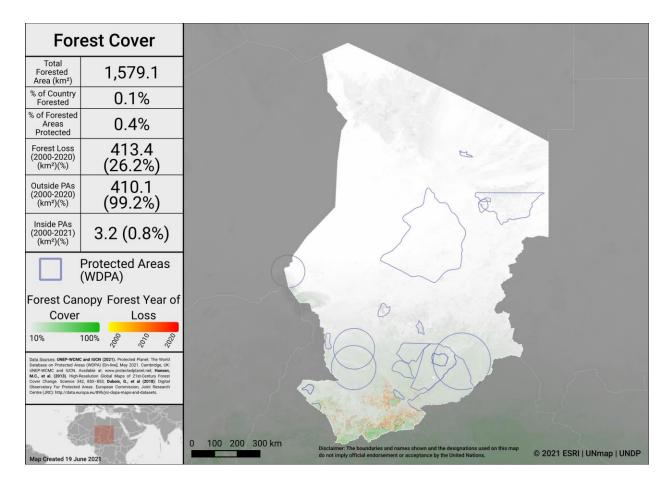
- 11.7% (149,554 km²) of the terrestrial area of the country is covered by PAs with completed management effectiveness evaluations.
 - 55.9% of the area of terrestrial PAs have completed evaluations.

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

As of May 2021, there are 0 OECMs in Chad 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 Chad cover approximately 0.1% of the country, an area of 1,579.1 km². Approximately 0.4% (6.8 km^2) of this is within the protected area estate of Chad. Over the period 2000-2020 loss of forest cover amounted to over 413.4 km^2 , or 0.03% of the country (26.2% of forest area), of which 3.2 km^2 (0.8% of forest loss) occurred within protected areas. The map below shows how forest cover has changed in Chad 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 Chad

Opportunities for action

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

The following actions were identified during the workshops:

Connectivity: Identify an animal migration corridor between PNM and the PNZ.

Management effectiveness: Appoint National Park conservators, in accordance with Act 14: governing forests, wildlife and fishery resources.

Additional actions include:

- revise the laws relating to wildlife and protected areas
- strengthen the management efficiency of protected areas
- revise the national biodiversity strategy and action plan
- increase the surface areas of protected areas
- define and classify OECMs

NATIONAL BIODIVERSITY STRATEGY AND ACTION PLANS (NBSAPs)

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

Specific Objective 1 (OS1): Enhance the conservation of ecosystems and threatened and/or significant species

Actions include, inter alia:

- Sustainable management of natural forests
- Project "Support for the participatory and sustainable management of the resources of the Séna Oura National Park and its peripheral areas"
- Rational and sustainable management of national parks and wildlife reserves
- Ecological Monitoring of National Parks
- Development of development and management plans for the DjoliKéra classified forest
- Classification of important natural sites representative of all ecosystems (Ndam, Beinamar, Larmanaye, Goz Beida)
- Country wetland monitoring and management project
- Integrated Management of Shared Ecosystems Program between Chad and Cameroon (Séna Oura National Park)
- Project on Climate change resilient Protected Areas
- Support project for the sustainable management of biological diversity of socioeconomic importance in Chad's protected areas

There have been strategy development and implementation difficulties regarding the NBSAP

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). Where spatial data for the proposed PAs was available, further details (based on an analysis by UNDP) regarding their impacts for ecological representation, coverage of KBAs, and coverage of areas important for carbon storage is included.

GEF ID	PA increase?		Qualitative elements potentially benefitting (based on keyword search of PIFs)
9476	No	N/A	Ecosystem services; Effectively managed; Equitably managed; Integration

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

OTHER ACTIONS/COMMITMENTS

High Ambition Coalition for Nature and People

Chad **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.

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

- 1. Given the network of protected areas we have which covers 10% of our territories, we have biodiversity which is particularly rich and varied
- 2. Ladies and gentlemen, as we implement our strategy, and our national action plan on biodiversity, and in line with target 11 under Aichi, new protected areas have appeared, we now have 11 of them, they now cover about 11% of our territory and efforts are underway in order to attain the goal we had set ourselves, which is 17% of our territory. In order to safeguard our protected areas we have hosted two major international conferences on cross-border crime against wildlife and poaching, one in 2017 and one in 2019.

Other commitments addressing improved coverage of PAs or OECMs (no info on progress):

- National networking of protected areas
- Oryx introduction project in the Ouaddi Rimé Ouaddi Achim wildlife reserve
- Development of development and management plans for hunting concessions
- Implementation of park development plans National (PNM, PNZ and PNSO)
- Rational and sustainable management of the park and wildlife reserves

UPDATES ON PROGRESS TOWARDS ACTIONS AND COMMITMENTS

Increase in the area of protected areas through the creation of other protected areas and other effective conservation measures by area.

• **Progress**: Creation of the Ennedi Natural and Cultural Reserve (RNCE)

Increased assessments of the management effectiveness of terrestrial protected areas to achieve the 60% target in accordance with decision X/3.

 Progress: Signature of the Public Private Partnership agreement between Chad and the NGO Noé on July 26, 2021, for the management delegation of the Biner-Léré Reserve and increase in its area

Implementation of the results of completed PAME assessments to improve the quality of management of existing PAs, increase the number of sites reporting "good management" and increase reporting on biodiversity.

• **Progress**: Creation of migration corridors for elephants and other species in the South and North of the country and (Example: creation of the Large Functional Ecosystem of Zakouma which extends from Zakouma National Park to the reserve of Abou telfan and from Zakouma to the reserve of Siniaka Minia).

Classification of important natural sites representative of all ecosystems (Ed, Beinamar, Larmanaye, Goz Beida).

In progress

ANNEX I

FULL LIST OF ECOREGIONS

Ecoregion Name	Area (km²)	% of Global Ecoregion in Country	% of Country in Ecoregion	Area Protected (km²)	% Protected in Country
East Sahara Desert	34,218.5	2.2	2.7	0.0	0.0
East Saharan montane xeric woodlands	25,719.2	92.6	2.0	13,758.2	53.5
East Sudanian savanna	171,646.8	16.3	13.5	69,818.9	40.7
Lake Chad flooded savanna	14,291.9	44.7	1.1	4,055.5	28.4
Sahelian Acacia savanna	664,259.0	18.1	52.3	167,602.9	25.2
South Sahara desert	285,917.3	9.8	22.5	1,735.0	0.6
Tibesti-Jebel Uweinat montane xeric woodlands	73,401.5	89.5	5.8	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

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