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# USAID GLOBAL ENVIRONMENTAL MANAGEMENT SUPPORT (GEMS)

## USAID/WEST AFRICA TROPICAL FORESTRY & BIODIVERSITY ASSESSMENT – PHASE I

JULY 2018

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Photo credit: By partnering with local companies in Senegal's rice value chain, USAID is working to increase food security and decrease poverty. USAID/Senegal.

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July 2018

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## **ACKNOWLEDGMENTS**

To be completed after the Phase II field work.



## ACRONYMS

ABN	Autorité du Bassin du Fleuve Niger
ADS	Automated Directives System
AEWR	Department of Agriculture, Environment and Water Resources
AGIR	Global Alliance for Resilience
AGRHYMET	Agrometeorology, Hydrology and Meteorology Regional Center
AU	African Union
BMUB	The German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety
CAADP	Comprehensive Africa Agriculture Development Program
CBD	Convention on Biological Diversity
CFA	Communauté Financière Africaine
CILSS	Permanent Inter-State Committee for Drought Control in the Sahel / Comité permanent Inter-Etats de Lutte contre la Sécheresse dans le Sahel
CITES	Convention on International Trade in Endangered Species
COP	Chief of Party
COP	Conference of the Contracting Parties
CORAF	Council for Agricultural Research and Development
CR	critically endangered
CR	Critical
DO	Development Objective
DRC	Democratic Republic of Congo
EAC	East African Community
EAS	Evaluation and Analytical Services
ECOSOCC	Economic, Social and Cultural Council
ECOWAS	Economic Community of West African States
ECREEE	ECOWAS Centre for Renewable Energy and Energy Efficiency
EN	Endangered
ENGRAIS	Enhancing Growth through Regional Agricultural Input Systems
EPCMD	Ending Preventable Child and Maternal Deaths
EW	Extinct in the Wild
FAA	Foreign Assistance Act
FCWC	Fisheries Committee for the West Central Gulf of Guinea
GBV	Gender-based violence
GDI	Gender Development Index
GHG	Greenhouse Gas
GII	Gender Inequality Index
GIS	Geographic Information System
HDI	Human Development Index

IKI	International Climate Initiative
INSAH	Institute of Sahel
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IR	Intermediate Results
IUCN	International Union for Conservation of Nature
IUU	illegal, unreported and unregulated
LCBC	Lake Chad Basin Commission
MCS	Monitoring, Control, and Surveillance
NASA	National Aeronautics and Space Administration
NBA	Niger Basin Authority
NP	National Park
NRP	national resilience priorities
nt	near threatened
PA	Protected Area
PAIRED	Partnership for Agricultural Research, Education and Development
PARCC	Protected Areas Resilient to Climate Change
PDEVII	Peace through Development II
PEDRO	Political Economy Dynamics of Regional Organisations
PRCM	Regional Partnership for Coastal and Marine Conservation
RAAF	Regional Agency for Agriculture and Food
RAP	Regional Action Programme
RDCS	Regional Development Cooperation Strategy
REA	Rural Economy and Agriculture
SADC	South African Development Community
SDAP	Sustainable Development Action Program
SRFC	Sub-Regional Fisheries Commission
STC	Specialized Technical Committees
TSCTP	Trans-Sahara Counter Terrorism Partnership
UEMOA	Union Economique et Monétaire Ouest Africaine - West African Economic and Monetary Union
UEMOA	West African Economic Monetary Union
UNCCD	United Nations Convention on Combating Desertification
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
USAID	United States Agency for International Development
USG	United States Government
VU	Vulnerable
WABES	West African Biodiversity and Ecosystem Services
WA-BiCC	West Africa Biodiversity and Climate Change Project



WACI	West Africa Coast Initiative
WAMER	West African Marine Ecoregion
WANEP	West Africa Network for Peacebuilding
WAP	W-Arly-Pendjari
WAPOK	W-Arly-Pendjari-Oti Mandouri-Kéran
WAPP	West Africa Power Pool
WASH	water, sanitation, and hygiene
WATF	West Africa Task Force
WWF	World Wildlife Fund



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## EXECUTIVE SUMMARY

This assessment complies with Sections 118 and 119 of the Foreign Assistance Act of 1961, as amended, and Agency guidance on country strategy development, under ADS 201.3.9.1, ADS 201.3.9.2, and ADS 204. This assessment revises and updates the 2013 118/119 Environmental Threats and Opportunities Assessment for West Africa. In doing so, this assessment specifically achieves the following, as required by FAA Sections 118 and 119:

- A) Identifies actions necessary to conserve tropical forests and biodiversity and the extent to which the Mission meets the “actions necessary”, and
- B) Develops recommendations that will guide the Mission in updating the “extent to which” section in the new regional strategy.

Specifically, the Assessment analyzes **direct environmental** threats and their **drivers** (i.e., root causes) as the means to identifying **actions necessary** for biodiversity and tropical forestry conservation. These necessary actions are discussed in terms of **opportunities for USAID programming** as USAID/West Africa prepares its next generation Regional Development Cooperation Strategy (RDCS).

The assessment describes the legal and institutional framework in the region related to biodiversity and forests (Section 2); the background and development context (Section 3); the value and economic potential of biodiversity and forests (Section 4); USAID programming (Section 5); and the state of the environment and natural resource management (see Section 6). This includes a description of biodiversity, forests, ecosystems, and ecosystem services—along with key environmental trends and impacts of development. Environmental threats are described in terms of direct threats (i.e., direct human actions that harm biodiversity, tropical forests, and the environment) and their drivers in Section 7 (to be completed in Phase II of this assessment).

During Phase II of the assessment (forthcoming), the actions necessary to conserve and sustainably manage biodiversity and tropical forests will be evaluated and then linked to USAID strategy in the region.

West Africa is a vast region that encompasses several countries, a diverse range of ecosystems, and multiple approaches to manage habitat, endangered species, and ecosystems. West Africa includes 12 coastal countries, geographically bound by Mauritania to the north and Nigeria to the south and including Senegal, Gambia, Guinea-Bissau, Guinea, Sierra Leone, Liberia, Côte d’Ivoire, Ghana, Togo, and Benin. West Africa also includes three inland countries: Mali, Niger, and Burkina Faso. USAID/West Africa works across 21 countries in West Africa, implementing regional activities in 19 countries (excluding Gabon, São Tomé and Príncipe and Equatorial Guinea). The Mission oversees the operations of USAID offices in Benin and Côte d’Ivoire, and increasingly oversees the USAID/Cameroon portfolio, which is a non-presence country. USAID/West Africa does not have jurisdiction over the bilateral missions in Mali, Ghana, Liberia, Nigeria and Guinea/Sierra Leone. Responsibilities for certain bilateral missions in the Sahel have now been taken on by USAID/Senegal mission."This assessment summarizes the status of biodiversity and forests in these countries; several bilateral 118/119 assessments exist (e.g., Ghana, Liberia, Mali, Senegal, Niger, Burkina Faso, and Central Africa), as such, country-specific assessments complement this regional report with more country-specific information.

The region is challenged by its development context. Peace and robust governance remain ongoing challenges in West Africa, particularly in countries recovering from recent civil wars, like Liberia, Sierra Leone, and Côte d'Ivoire. While large-scale wars have largely ended in West Africa, new threats and challenges have emerged more recently, such as the Ebola epidemic, piracy, drug trafficking, and violent extremism.<sup>1</sup> West and Central Africa (combined) have the highest rates of out-of-school children in the world, at 36% in 2010. Unsurprisingly, the main disparities found in educational exclusion are between rural and urban areas, poor and rich households, and girls and boys. Civil conflict has exacerbated gender inequality and have resulted in high levels of gender-based violence leaving lasting physical, psychosocial, and economic impacts on women and girls. Furthermore, disease outbreak, such as Ebola, piracy in the Gulf of Guinea, illegal smuggling of narcotics, religious extremism, and inter-generational poverty all impact the capacity of countries in the region to address pressing threats to biodiversity and forests even while environmental factors may exacerbate existing economic and political tensions.

Three major ecosystem types cross these countries from west to east: deserts and xeric shrublands to the north; tropical and subtropical grassland, savannas, and shrublands in the middle; and tropical and subtropical moist broadleaf forests to the south. Within the region, the Guinean Forests are recognized as one of 35 global biodiverse “hotspots” with exceptionally high biodiversity, which is threatened by intense deforestation. Additionally, the World Wildlife Fund (WWF) identified seven ecoregions in West Africa as harboring exceptional biodiversity: Sudanian Savannas, Guinean Moist Forest, Cameroon Highland Forests, Upper Guinea Rivers and Streams (small river basin), Niger River Delta, Gulf of Guinea Mangroves, and Cameroon Crater Lakes.

Within the region, each country has also established its own protected areas, and the willingness and capacity of each country to manage those areas and enforce its laws varies from country to country.<sup>2</sup> This creates a complex patchwork of management and conservation regimes. Furthermore, most endangered species and biodiverse habitats in West Africa are confined to protected areas, which are predominantly small and fragmented in the region. Habitat fragmentation reduces species range and the high-suitability habitat within their range, and research has demonstrated that habitat fragmentation places species at higher risk of extinction.<sup>3</sup>

In addition to habitat fragmentation, other threats to biodiversity and forests in the region include illegal hunting, bushmeat trade, agricultural expansion, fire, and exploitation of forests for wood and charcoal. Mining for iron ore, diamonds, gold, and bauxite in the region has led to small-scale and industrial-scale mining, which is associated with land clearing and pollution. Oil and gas development in sensitive habitats threatens biodiversity and forests while weak governance enables poor environmental management of these industrial sites. Terrestrial-based pollution generated by industrial activities and urban areas then impacts freshwater and marine resources. Furthermore, overfishing and illegal and unregulated fishing, unmanaged coastal development, urbanization, and climate change impact the status of freshwater and marine resources in the region.

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<sup>1</sup> Marc A, N Verjee, and S Mogaka. 2015. The Challenge of Stability and Security in West Africa.

<http://www.worldbank.org/en/topic/fragilityconflictviolence/publication/the-challenge-of-stability-and-security-in-west-africa>

<sup>2</sup> Mallon DP, et al., 2015. An IUCN situation analysis of terrestrial and freshwater fauna in West and Central Africa. Occasional Paper of the IUCN Species Survival Commission No. 54. <https://portals.iucn.org/library/node/45226>

<sup>3</sup> Crooks KR, et al., 2017. Quantification of habitat fragmentation reveals extinction risk in terrestrial mammals. PNAS, July 3, 2017. 201705769; published ahead of print July 3, 2017. <https://doi.org/10.1073/pnas.1705769114>

# I. INTRODUCTION

## I.1 PURPOSE

This assessment supports the USAID/West Africa Mission in its development and implementation of a Regional Development Cooperation Strategy (RDCS) for 2020 – 2024. The assessment is a tool to facilitate planning and decision making by USAID/ West Africa and bilateral missions in the region and will inform ongoing and future USAID programming. Figure 1 depicts the West Africa region; the countries included in this assessment comprise the following countries: Benin, Burkina Faso, Cote d'Ivoire, Cape Verde, The Gambia, Ghana, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo, Chad, Cameroon and Guinea. This assessment summarizes the status of biodiversity and forests in these countries; several bilateral I18/I19 assessments exist (e.g., Ghana, Liberia, Mali, Senegal, Niger, Burkina Faso, and Central Africa), as such, the country-specific assessments complement this regional overview. This document includes a regional overview of the legal framework and regional organizations affecting conservation; a brief discussion of the value of economic potential of the ecosystem services within the USAID/ West Africa region; a review of USAID/ West Africa programming within the context of regional environmental threats; a summary of biodiversity and tropical forests within the USAID/ West Africa's geographic range and the status of tropical forest and biodiversity resources; and identification of potential negative impacts of proposed activities to biodiversity and tropical forests.

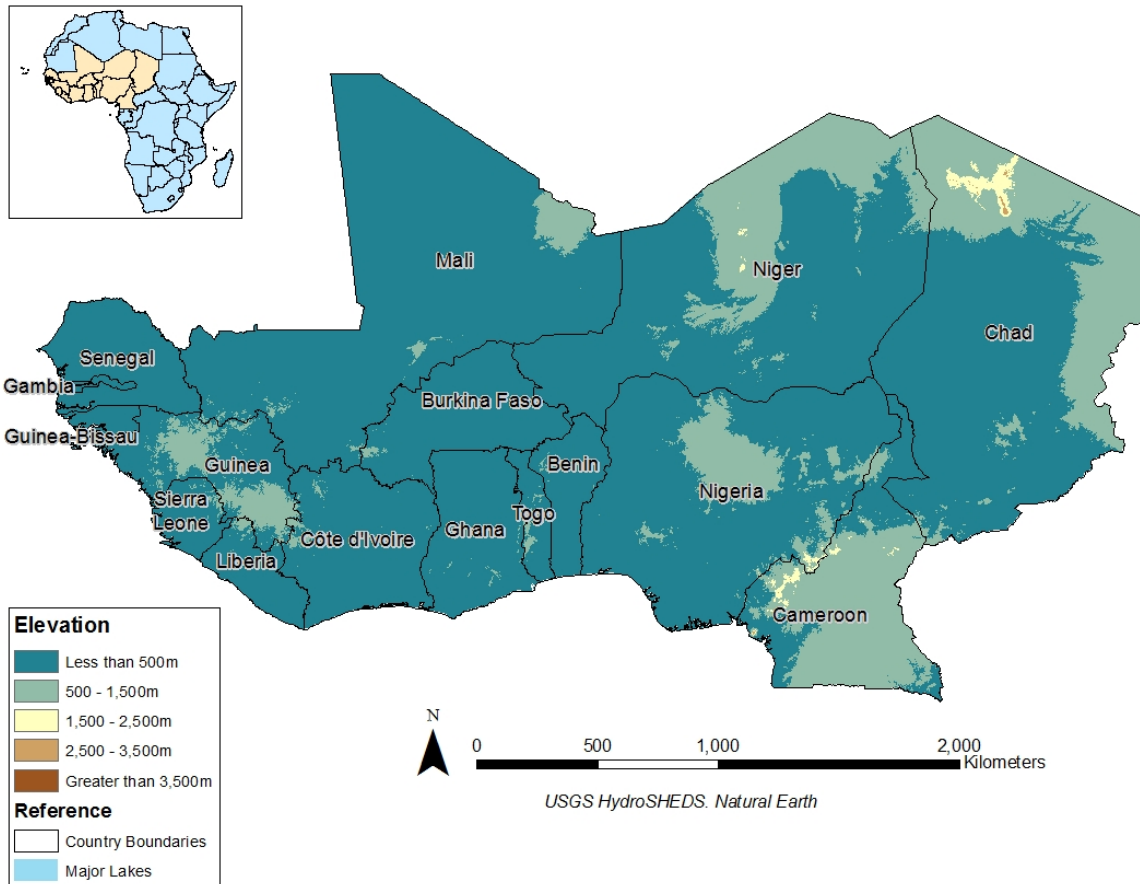


Figure 1. West Africa Region Covered under this assessment



This assessment revises and updates the 2013 I18/I19 Environmental Threats and Opportunities Assessment for West Africa. In doing so, this assessment specifically achieves the following, as required by FAA Sections I18 and I19:

- C) Identifies actions necessary to conserve tropical forests and biodiversity and the extent to which the Mission meets the “actions necessary”, and
- D) Develops recommendations that will guide the Mission in updating the “extent to which” section in the new regional strategy.

## **I.2 SCOPE**

In consideration of 1) the extensive geographic scope of the USAID/West Africa region; 2) the unique and expansive biodiversity and tropical forestry considerations in the countries under USAID/ West Africa’s regional coverage; and 3) the fact that FAA I18/I19 assessments are conducted at the country-level in addition to regional efforts, this assessment necessarily focuses on biodiversity and tropical forestry management from a regional perspective. Functionally, this means the analysis does not undertake to explore biodiversity or tropical forest management threats, drivers of those threats, or recommendations or opportunities to address those threats that are at a country level or bilateral in nature. Additionally, this assessment does not include a detailed evaluation of bilateral programming for applicable USAID programs within the region. Several bilateral I18/I19 assessments exist (e.g., Ghana, Liberia, Mali, Senegal, Niger, Burkina Faso, and Central Africa), as such, the country-specific assessments complement this regional report.

Instead, the assessment focuses predominantly on transboundary issues and opportunities, or issues and opportunities that otherwise require multilateral participation to most effectively address or undertake. As indicated in Figure 1, the specific countries of interest in this regional analysis include Benin, Burkina Faso, Cote d'Ivoire, Cape Verde, The Gambia, Ghana, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo, Chad, Cameroon, and Guinea. While this assessment does not evaluate each of these countries individually, it uses these countries to guide the analysis and provide illustrative examples.

## **I.3 METHODOLOGY**

The assessment was developed in two phases: i) a desk research and analysis phase, including briefings with USAID/West Africa and limited stakeholder consultation (Phase I); and ii) a field assessment phase (Phase 2) that includes in-country stakeholder meetings and site visits. The desk review under Phase I collected and synthesized available information on socioeconomic issues, ecology and conservation, environmental management, and USAID programming in West Africa. Phase I also involved geographic information system (GIS) mapping and analysis of regional data pertaining to biodiversity and tropical forestry, such as change in forest cover, development trends in areas of ecological importance, and changes in population density over time.

Phase II will include stakeholder consultations with entities such as: USAID Mission Directors, Team Leads of sector offices, and West Africa Biodiversity and Climate Change (WA BiCC) Chief of Party (COP), SERVIR COP, multilateral or intergovernmental organizations such as Economic Community of

West African States (ECOWAS), United Nations Environment, World Bank, Food and Agriculture Organization; active biodiversity and/or tropical forestry conservation Nongovernmental Organizations including World Wildlife Fund (WWF), IUCN, World Resources Institute, and others.

The assessment generally follows the 2017 Foreign Assistance Act Sections 118/119 Tropical Forest and Biodiversity Analysis Best Practices Guide, with some modifications (drawing from recently completed regional 118/119 assessments) to accommodate the regional focus of this assessment.

## 2. LEGAL FRAMEWORK AFFECTING CONSERVATION

This section provides an overview of the key institutions, policies, and priorities at the *regional* level in West Africa that directly and indirectly affect the sustainable management and conservation of biodiversity, forests, and ecosystems. This overview summarizes regional policy enforcement and effectiveness.

The core environmental requirements for USAID operating unit strategic plans are spelled out in ADS 201.5.10g, and accompanying Supplementary References are derived principally from Sections 117 through 119 of the Foreign Assistance Act.

### 2.1 INSTITUTIONS AND LEGAL FRAMEWORK

#### 2.1.1 REGIONAL INTERGOVERNMENTAL ORGANIZATIONS

##### PERMANENT INTER-STATE COMMITTEE FOR DROUGHT CONTROL IN THE SAHEL (CILSS)

Created in 1973 in response to a crippling drought in Sahel, the Permanent Inter-State Committee for Drought Control in the Sahel / Comité permanent Inter-Etats de Lutte contre la Sécheresse dans le Sahel (CILSS) aimed to equip vulnerable populations with abilities to predict, adapt to, and recover from their changing environment.<sup>4</sup> Today it includes the following thirteen West Africa Member States: Benin, Côte d'Ivoire, Gambia, Guinea, Guinea-Bissau, Mauritania, Senegal, Togo, Burkina Faso, Mali, Niger, Chad, and Cape Verde.



Figure 2. CILSS Member Countries

<sup>4</sup> USAID West Africa Factsheet: <https://www.usaid.gov/sites/default/files/documents/1860/CILSS%20Fact%20Sheet%20Oct%202015-AMD%20Cleared.pdf>

The mandate guiding the action of CILSS is to invest in solutions for food security and in the fight against the effects of drought and desertification through:

- Formulation, analysis, coordination, and harmonization of strategies and policies;
- Strengthening scientific and technical cooperation;
- Collection, processing, and dissemination of information;
- Capacity building of the various actors, including the private sector;
- Capitalization and dissemination of experiences and acquired knowledge; and
- Support in the implementation of strategies, policies, and programs.

At the organizational level, CILSS is located at three sites:

- Executive Secretariat, which is based in Ouagadougou, Burkina Faso;
- Institute of the Sahel (INSAH), which is based in Bamako, Mali, and supports the coordination, harmonization, and promotion of scientific and technical research in the Sahel countries by promoting and facilitating exchanges between the national systems involved in the fields of research (agricultural and population / development);
- AGRHYMET Regional Center, which is based in Niamey, Niger, is a specialized agency focused on building capacity of national institutions through i) data collection, processing, and information dissemination; ii) development of decision support tools; and iii) technical training and transfer of the tools, methods, and knowledge adapted to the Sahelian countries in the fields of climatology, agrometeorology, hydrology, crop protection, geomatics, and remote sensing.

The SERVIR West Africa project is an ongoing joint development initiative between CILSS, the National Aeronautics and Space Administration (NASA) and USAID. SERVIR works in partnership with leading regional organizations worldwide to support developing countries' use of information provided by Earth-observing satellites and geospatial technologies for managing climate risks and land use. The tools, products, and services developed from the project aim to improve awareness, increase access to information, and support analysis on climate-sensitive issues such as disasters, agriculture, water, ecosystems, and land use for use by decision makers across West Africa.

### **ECONOMIC COMMUNITY OF WEST AFRICAN STATES (ECOWAS)**

The Economic Community of West African States (ECOWAS) is a regional group of fifteen countries, founded in 1975. Member countries making up ECOWAS are Benin, Burkina Faso, Cape Verde, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Sierra Leone, Senegal, and Togo. Considered one of the pillars of the African Economic Community, ECOWAS was set up to foster the ideal of collective self-sufficiency for its member states.

As a trading union, it is also meant to create a single, large trading bloc through economic cooperation. Its mission is to promote economic integration in all fields of economic activity, particularly industry, transport, telecommunications, energy, agriculture, natural resources, commerce, monetary and financial questions, and social and cultural matters.

The multilateral agreement signed by the member states of ECOWAS includes a chapter covering environment and natural resources. More specifically, Article 29 establishes the following fundamental principles:<sup>5</sup>

1. Member States undertake to protect, preserve, and enhance the natural environment of the region and cooperate in the event of natural disasters.
2. To this end, they shall adopt policies, strategies and programs at national and regional levels and establish appropriate institutions to protect, preserve and enhance the environment, control erosion, deforestation, desertification, locusts, and other pests.

The ECOWAS Commission and the ECOWAS Bank for Investment and Development are its two main institutions designed to implement policies, pursue programs and carry out development projects in Member States. Such projects include intra-community road construction and telecommunications; and agricultural, energy, and water resources development. For example, the ECOWAS Commission is working on networking the laboratories on fertilizer quality control to improve crop productivity and prevent the use of chemical fertilizers from adversely affecting the environment.

There are also several specialized agencies working on environment issues within ECOWAS including the Regional Agency for Agriculture and Food (RAAF). Its mission is to strengthen the technical capacity of the ECOWAS Commission, including the Department of Agriculture, Environment, and Water Resources (AEWR), in the implementation of investment programs in the fields of agriculture, livestock, fisheries, and forestry.

The ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE) contributes to the sustainable economic, social, and environmental development of West Africa by improving access to modern, reliable, and affordable energy services, energy security, and the reduction of negative environmental externalities of the energy system (e.g., GHG emissions, local pollution).

Finally, the ECOWAS Coastal and Marine Resources Management Centre is the regional implementation center for the monitoring of coastal and marine resources management for the ECOWAS countries. It has responsibility for coordinating activities that utilize earth observation data from satellite to help manage fisheries resources and provides early warning information on ocean conditions for the benefit of artisanal fishers.

In November 2017, ECOWAS and the United States Government (USG) signed a certificate of recognition attesting to the multi-year Development Agreement between the two institutions. Under this agreement, USAID will provide up to US \$221 million over the period of five years, 2015 – 2019 in support of activities promoting ECOWAS priorities.<sup>6</sup> While USAID is currently supporting several projects and initiatives, none of them are focused on issues related to biodiversity and tropical forestry.

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<sup>5</sup> Revised Treaty, Economic Community of West African States (ECOWAS), ECOWAS Commission. Abuja, Nigeria, 1993. <http://www.ecowas.int/wp-content/uploads/2015/01/Revised-treaty.pdf>

<sup>6</sup> <http://www.ecowas.int/ecowas-u-s-renew-partnership-for-security-and-development-in-west-africa/>

## **WEST AFRICAN ECONOMIC MONETARY UNION (UEMOA)**

The West African Economic Monetary Union (UEMOA) is a free-trade zone that promotes economic integration among countries that use the CFA Franc, which is fixed to the Euro. It is composed of Benin, Burkina Faso, Côte d'Ivoire, Mali, Niger, Senegal, Togo, and Guinea-Bissau, which are all also members of ECOWAS. UEMOA has three advisory bodies: regional advisory bureau, collective territories advisory, and work and social dialogue advisory. There is no specific environmental focus within UEMOA's internal bodies.<sup>7</sup>

Between 2000 and 2009, UEMOA had the highest levels of regional trade integration in Africa, until it was passed by the South African Development Community (SADC). This is largely due to UEMOA's shared currency, shared central bank, and other mechanisms that reduce transaction costs. These factors have enhanced macroeconomic stability in the UEMOA, and countries in this zone typically outperform other sub-Saharan African countries in macroeconomic stability. However, structural barriers in the region, such as a poor institutional enabling environment and a lack of infrastructure, have led to poor global competitiveness. While the fixed exchange rate is important for stability, it limits international competitiveness compared to flexible exchange rates. Further, UEMOA countries have not converged towards similar economic growth levels as planned and instead, two converging groups have developed. Senegal and Côte d'Ivoire are converging towards higher than average levels of growth and Guinea-Bissau, Niger, and Togo are converging towards lower than average levels of growth.<sup>8</sup>

## **AFRICAN UNION**

The African Union (AU) is a political and administrative organization with several objectives, the primary of which is to promote and encourage unity among its 55-member states and citizens.<sup>9</sup> In addition, AU works to retain the independence of its members, to promote peace and security, to protect human rights, and to advance sustainable development economically and socially.

The AU is divided into several bodies, including the Assembly, the Executive Council, the Court of Justice, the Peace and Security Council, the Commission, the Pan-African Parliament, and the Economic, Social and Cultural Council (ECOSOCC). ECOSOCC is an advisory organ composed of different social and professional groups of the Member States of the Union. Within ECOSOCC, several Sectoral Cluster Committees (SCCs) have been established as key operational mechanisms to formulate opinions and provide inputs into the policies and programs of the AU. The Rural Economy and Agriculture (REA) cluster covers issues related to environment, climate change, water, natural resources, and desertification.

In 2015, REA supported the development of the African Strategy on Combating Illegal Exploitation and Illegal Trade in Wild Fauna and Flora in Africa.<sup>10</sup> The overall objective of the strategy is to prevent the illegal exploitation and illegal trade in wild fauna and flora in Africa through the dissemination and implementation of an Africa wide strategic framework. It has been formulated to guide a common,

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<sup>7</sup> West African Economic and Monetary Union. <http://www.uemoa.int/en/presentation-uemoa>

<sup>8</sup> Sy, A and M Sow. 2015. Four questions on the state of the West African Economic and Monetary Union and Implications for other regional economic communities. <https://www.brookings.edu/blog/africa-in-focus/2016/03/15/four-questions-on-the-state-of-the-west-african-economic-and-monetary-union-and-implications-for-other-regional-economic-communities/>

<sup>9</sup> <https://au.int/en/memberstates>

<sup>10</sup> [https://au.int/sites/default/files/documents/33796-doc-african\\_strategy\\_strategy\\_africaine\\_au.pdf](https://au.int/sites/default/files/documents/33796-doc-african_strategy_strategy_africaine_au.pdf)

coordinated response by countries in Africa to combat the illegal exploitation and illegal trade in wild fauna and flora.

The Executive Council established 14 Specialized Technical Committees (STCs) to cover issues across a range of thematic areas. The agriculture, rural development, water, and environment STC supports the development of relevant strategic goals and linkages in ongoing agriculture, rural development, water, and environment related initiatives.

### **THE INTERGOVERNMENTAL SCIENCE-POLICY PLATFORM ON BIODIVERSITY AND ECOSYSTEM SERVICES (IPBES)**

The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) is an intergovernmental body that assesses the state of biodiversity and of the ecosystem services it provides to society, in response to requests from decision makers. First established in 2012, IPBES now has 129 member and observer countries, including Benin, Burkina Faso, Cameroon, Cape Verde (observer), Chad, Côte d'Ivoire, Gambia (observer), Ghana, Guinea (observer), Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone (observer), and Togo.

IPBES provides policymakers with objective scientific assessments about the state of knowledge regarding the planet's biodiversity, ecosystems, and the benefits they provide, as well as the tools and methods to protect and sustainably use these vital natural assets. Their work consists of supporting members with the following:<sup>11</sup>

- Assessments: On specific themes (e.g., invasive alien species, sustainable land use, pollination, and land degradation) and methodological issues at both the regional and global levels.
- Policy Support: Identifying policy-relevant tools and methodologies, facilitating their use, and catalyzing their further development.
- Building Capacity and Knowledge: Identifying and meeting the priority capacity, knowledge, and data needs of IPBES member states, experts and stakeholders.
- Communications and Outreach

The West African Biodiversity and Ecosystem Services (WABES) is an initiative that facilitates networking and capacity-building across West Africa to support IPBES work programs and evaluations. The overarching goal is to link biodiversity and ecosystem service experts from West African universities, research institutes, and existing science-policy interfaces. WABES is funded by the International Climate Initiative (IKI) of the German Federal Ministry for the Environment, Nature Conservation, Construction, and Nuclear Safety (BMUB).

### **GLOBAL ALLIANCE FOR RESILIENCE (AGIR) - SAHEL AND WEST AFRICA**

Launched in 2012, AGIR is an alliance to foster improved synergy, coherence, and effectiveness of resilience initiatives in the 17 West African and Sahelian countries of the Sahel and West Africa. The Alliance is placed under the political and technical leadership of ECOWAS, CILSS, and the Union Economique et Monétaire Ouest Africaine - West African Economic and Monetary Union (UEMOA).

The Alliance considers itself as a policy tool aimed at channeling efforts of regional and international stakeholders towards a common results framework built around a regional agenda on food and

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<sup>11</sup> <https://www.ipbes.net/about>

nutritional security. This agenda is supported by other resilience strengthening sectoral policies and strategic objectives. Policies and objectives include the sustainable management of natural resources, particularly water, soil, and vegetation (including natural pastures), through the improvement of social dialogue and the strengthening of natural resource governance structures, from the local to the regional and national levels. AGIR also puts emphasis on the promotion of sustainable agricultural intensification practices, considering soil fertility, biodiversity conservation, and water management.<sup>12</sup>

Since its launch, ten countries (Burkina Faso, Cabo Verde, Chad, Côte d'Ivoire, Gambia, Guinea-Bissau, Mali, Niger, Senegal, and Togo) have adopted and started implementing their national resilience priorities (NRP-AGIR) which include operational frameworks for funding, implementation, monitoring, and assessment.

### **LAKE CHAD BASIN COMMISSION**

The Lake Chad Basin Commission (LCBC) was created in 1964 by the four countries bordering Lake Chad - Cameroon, Chad, Niger, and Nigeria. They were joined in 1994 by the Central African Republic and Libya was admitted in 2008. Observer status is held by Sudan, Egypt, the Republic of Congo, and the Democratic Republic of Congo. N'Djaména, Capital of Chad, hosts the Headquarters of the Commission.<sup>13</sup>

The mandate of the Commission is to sustainably and equitably manage the Lake Chad and other shared water resources of the Lake Chad Basin, to preserve the ecosystems of the Lake Chad Conventional Basin, and to promote regional integration, peace, and security across the Basin. As part of their mandate, the LCBC is charged with regulating the use of the waters of the lake and the basin for the development of livestock, crop, fishery, and water resources. It has also attempted to find ways to reverse the drastic decline in the size of the lake.

In recent years, however, the region has been faced with increasing and new forms of insecurity due in part to the absence of a dedicated regional bloc. As such, the LCBC's mandate for regional security cooperation has gained prominence with a formal mandate to provide civilian leadership to the Multinational Joint Task Force, an AU sanctioned cross-border military operation in the Lake Chad area.<sup>14</sup>

In 2015, the LCBC led development of the Lake Chad Development and Climate Resilience Action Plan with support from the World Bank.<sup>15</sup> The core idea of the Action Plan is that, in parallel to the restoration of peace and security, there is a need to turn Lake Chad into a rural hub for regional development. To achieve it, the Action Plan proposes actions in seven priority themes, including one dedicated to preserving the environmental capital of the lake itself. The activities proposed under this theme include investments and interventions to increase biodiversity and the ecology of the region,

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<sup>12</sup> Global Alliance for Resilience AGIR – Sahel and West Africa Regional Roadmap. 9 April 2013, Paris. [http://www.oecd.org/swac/publications/AGIR%20roadmap\\_EN\\_FINAL.pdf](http://www.oecd.org/swac/publications/AGIR%20roadmap_EN_FINAL.pdf)

<sup>13</sup> <https://www.preventionweb.net/organizations/1264/profile>

<sup>14</sup> Galeazzi G, A Medinilla, T Marclint Ebiede, S Desmidt, and B Byers. 2017. The Lake Chad Basin Commission (LCBC): Water and security at an inter-regional cross-road. Political Economy Dynamics of Regional Organisations (PEDRO). European Centre for Development Policy Management. <https://reliefweb.int/sites/reliefweb.int/files/resources/LCBC-Policy-Brief-PEDRO-Political-Economy-Dynamics-Regional-Organisations-Africa-ECDPM-2017.pdf>

<sup>15</sup> Lajaunie ML, A Bakalian, G Magrin, J Lemoalle. 2015. The Lake Chad development and climate resilience action plan. <http://documents.worldbank.org/curated/en/489801468186879029/pdf/102851v2WVPPI49275-Box394847B-PUBLIC-v2-main-report-Lake-Chad-Development-and-Action-Plan-English.pdf>



reforestation and soil conservation at the basin scale, and control and possible use of aquatic invasive plant species.

### **NIGER BASIN AUTHORITY**

The Niger Basin Authority (NBA) is one of the oldest African intergovernmental organizations, created in 1964. The NBA's mandate is to facilitate the coordinated and cooperative management of the Niger Basin. The member states of the river basin organization include Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Guinea, Mali, Niger, and Nigeria. Its mission is to promote cooperation between the member countries and to ensure the sustainable development of the River Niger in the fields of energy, water resources, agriculture, animal husbandry, fishing and fisheries, forestry, transport, communications, and industry.

In 2002, the NBA developed a "Shared Vision" process and Sustainable Development Action Program ("SDAP") – an \$8 billion, 20-year investment plan – consisting of a mix of large and small-scale investments in the basin.<sup>16</sup> In 2008, at the Eight Heads of State and Government Summit, West African Heads of State of the Niger Basin riparian countries adopted a twenty year, 5.5 billion Euro program to reforest, rehabilitate, and remove silt from the Niger River. Approximately 80% of the funding is to be earmarked for developing social and economic infrastructure, with a smaller amount to protect natural resources and ecosystems.<sup>17</sup> The plan is to be implemented in four five-year phases. The 2008 Summit also resulted in the adoption of a "Water Charter" designed to ensure that NBA Member States share the river's resources fairly and responsibly. Binding principles, shared strategies, and investment plans that are coordinated among member states provide a solid foundation for the cooperative development of cross-border water resources. The principles agreed by riparian states in their shared vision and Water Charter have, however, been the subject of debate at the political level.<sup>18</sup>

### **REGIONAL PARTNERSHIP FOR COASTAL AND MARINE CONSERVATION**

The Regional Partnership for Coastal and Marine Conservation (PRCM) is a coalition of actors working on the problems of the West African coastline and covering seven countries: Cape Verde, Gambia, Guinea Conakry, Guinea-Bissau, Mauritania, Senegal, and Sierra Leone. PRCM is governed by an evolving membership Charter that sets the rules and criteria for becoming a member.

PRCM focuses on the following three thematic areas:<sup>19</sup>

1. Conservation of Resources: PRCM focuses on the promotion and establishment of effective tools and mechanisms for coastal and marine zone conservation. PRCM also focus on developing long-lasting management that will increase the marine's natural resources.
2. Climatic Changes: PRCM and its partners pledge to work towards adaptive measures to reduce climate changes effects on the coastal and marine zones.

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<sup>16</sup> "Cooperative development of Fomi is particularly important given that the design and operating rules of the dam have the potential to influence the magnitude and share of both benefits and impacts for different riparians downstream of the dam". Major General Collins Ihekire, NBA. <http://www.worldbank.org/en/news/feature/2014/07/08/niger-river-basin-management-project-to-support-institutional-strengthening-of-the-niger-basin-authority-and-enhance-benefit-sharing-around-the-planned-fomi-dam>

<sup>17</sup> International Waters Learning Exchange & Resource Network. Global Environment Facility. 2018. <https://iwlearn.net/documents/legal-frameworks/niger-basin>

<sup>18</sup> Support for the Niger Basin Authority (NBA) / Autorité du Bassin du Fleuve Niger (ABN), GIZ Project Description. <https://www.giz.de/en/worldwide/14938.html>

<sup>19</sup> <http://www.prcmarine.org/en>

3. Coastal Risk Management
  - a. PRCM aims to take the coastlines issues and risks into account when planning at various levels to mitigate the negative impact of the coastline.
  - b. PRCM is working to finance projects that contribute to improving the conservation status of coastal species and habitats.

#### **SUB-REGIONAL FISHERIES COMMISSION**

The Sub-Regional Fisheries Commission (SRFC) is an inter-governmental fisheries cooperation organization established in 1985. It has seven Member States including Cabo Verde, The Gambia, Guinea, Guinea-Bissau, Mauritania, Senegal, and Sierra Leone. Its headquarters are in Dakar, Senegal.

The objectives of SRFC include the following:<sup>20</sup>

- Ensuring harmonization and consistency of national fisheries policies, with regards to the conservation and exploitation of fisheries resources.
- Fostering sub-regional cooperation for monitoring, control, and surveillance of fisheries zones, including providing institutional, legal and operational support to eliminate illegal, unreported and unregulated (IUU) fishing.
- Reinforcing the scientific and technical information systems and strengthening human capacities to undertake fisheries research activities.

The SRFC obtains its resources from contributions by its Member States, the amounts of which are determined based on a bi-annual budget and grants from technical and financial partners supporting the implementation of various projects.

#### **FISHERY COMMITTEE FOR THE WEST CENTRAL GULF OF GUINEA**

The Fisheries Committee for the West Central Gulf of Guinea (FCWC) is an intergovernmental organization established in 2007 that seeks to promote regional cooperation among its member states to ensure sustainable development, management, and conservation of marine resources. The committee is made up of six-member countries: Benin, Côte D'Ivoire, Ghana, Liberia, Nigeria, and Togo. Through policy and institutional reforms, regulations, and improved governance, FCWC aims to rebuild and maintain robust fisheries resources, create sustainable livelihoods for small-scale fishers and improve intra-regional and international trade of fish and fishery products.

Conservation and sustainable resource use is included as a priority area of focus. The FCWC's strategies to achieve this center around the development and implementation of appropriate management frameworks that ensure fisheries resources are harvested sustainably.

Specific activities include the following:

- Providing industry with transparent and acceptable management frameworks
- Increasing environmentally sustainable fishing practices
- Delivering cost-effective and efficient management
- Diversifying and increasing intra-regional and international trade in fish and fishery products
- Implementing an Ecosystem Approach to fisheries management

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<sup>20</sup> <http://www.spcsrp.org/en/presentation#Mandate>

- Improving public stewardship of coastal and marine ecosystems

FCWC also provides technical support to the West Africa Task Force (WATF), a regional working group focused on ending IUU fishing and crimes associated with fishing activities. This initiative relies on the sharing of fisheries information and intelligence between national agencies in charge of fisheries and strengthening the capacity of these Member States in terms of Monitoring, Control, and Surveillance (MCS).

### 2.1.2 RELEVANT INTERNATIONAL AND REGIONAL POLICIES AND LAWS

West African countries included in this assessment are party to several international and regional agreements or treaties relating to biodiversity, conservation, and environmental protection. Table I provides a selected list of the most relevant conservation agreements to which these countries are party. A more extensive list is provided in Annex E: List of International and Regional Treaties and Agreements in West Africa.

The ability of countries in the region to uphold the standards of the agreements for which they have signed varies greatly according to the strength of their governance, development of implementable policies, and willingness and ability to enforce their legislation. Overall, the existing legislation in the region for wildlife and biodiversity protection is considered inadequate, and consequently, many countries are limited in their ability to fulfill their obligations to the international agreements that they have signed.<sup>21</sup> Based on a country-by-country review of national legislation pertaining to biodiversity and conservation, IUCN suggests that there “is likely to be a lack of clarity in where responsibility for actions relating to wildlife management lies,” further inhibiting the ability of countries to meet their biodiversity protection goals and obligations. This was identified as an explicit weakness in the coordination of government agencies in Guinea.<sup>22</sup>

All countries in this Assessment have signed and ratified the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (see Table I), a global convention that relies upon individual countries to develop national legislation for its implementation. In 2012, CITES evaluated the effectiveness of legislation in signatory countries. Of the eight countries in this Assessment, only one was considered to have legislation generally meeting the requirements for implementation of CITES (Cameroon). Two countries have “legislation that is believed generally not to meet all of the requirements for the implementation of CITES” (Benin and Guinea), and three countries have “legislation that is believed generally not to meet the requirements for the implementation of CITES” (Cote d’Ivoire, Ghana, and Sierra Leone). In addition, Nigeria did not have legislation established for the implementation of CITES and was identified as a “party requiring attention as a priority”.<sup>23</sup>

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<sup>21</sup> Mallon DP, et al., 2015. An IUCN situation analysis of terrestrial and freshwater fauna in West and Central Africa. Occasional Paper of the IUCN Species Survival Commission No. 54. <https://portals.iucn.org/library/node/45226>

<sup>22</sup> Ibid.

<sup>23</sup> CITES Notification to the Parties No. 2012/036. <https://cites.org/sites/default/files/eng/notif/2012/E036.pdf>

**TABLE I REGIONAL AND INTERNATIONAL TREATIES RELEVANT TO BIODIVERSITY AND TROPICAL FORESTRY**

TYPE	NAME	YEAR (IN FORCE)	SUMMARY/KEY OBJECTIVES	WEST AFRICAN COUNTRIES THAT ARE PARTY TO THE AGREEMENT
<b>INTERNATIONAL TREATIES</b>				
Biodiversity	Cartagena Protocol on Biosafety	2003	<ul style="list-style-type: none"> <li>• Formulate of a harmonized regional biotechnology and biosafety policy to inform decision making on genetically modified organisms</li> <li>• Establish a regional biotechnology and biosafety unit at the EAC</li> <li>• Mobilize resources to support capacity building - human, infrastructure and institutional</li> <li>• Create strategies for public education, participation, awareness on biotechnology and biosafety</li> <li>• Develop a framework for a harmonized regional approach to global negotiations in biotechnology and biosafety</li> <li>• Establish a panel of experts to guide biosafety decision making and give risk assessment opinions</li> <li>• Establish EAC Centres of Excellence in biotechnology and biosafety</li> </ul>	Benin, Burkina Faso, Cameroon, Cape Verde, Chad, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Togo
Biodiversity	United Nations Convention on Combating Desertification (UNCCD) UNCCD Africa Regional Action	1994	<ul style="list-style-type: none"> <li>• Identify measures and arrangements, including the nature and processes of assistance provided by developed country parties, in accordance with the relevant provisions of the convention;</li> <li>• Provide for the efficient and practical implementation of the convention to</li> </ul>	Benin, Burkina Faso, Cameroon, Cape Verde, Chad, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo

**TABLE I REGIONAL AND INTERNATIONAL TREATIES RELEVANT TO BIODIVERSITY AND TROPICAL FORESTRY**

TYPE	NAME	YEAR (IN FORCE)	SUMMARY/KEY OBJECTIVES	WEST AFRICAN COUNTRIES THAT ARE PARTY TO THE AGREEMENT
	Programme (RAP)		<p>address conditions specific to Africa; and</p> <ul style="list-style-type: none"> <li>Promote processes and activities relating to combating desertification and/or mitigating the effects of drought within the arid, semi-arid and dry sub-humid areas of Africa.</li> </ul>	
Biodiversity	Convention on Biological Diversity (CBD)	1993	<ul style="list-style-type: none"> <li>Conservation of biodiversity</li> <li>Sustainable use of biodiversity</li> <li>Fair and equitable realization of benefits arising from use/exploitation of genetic resources</li> </ul>	Benin, Burkina Faso, Cameroon, Cape Verde, Chad, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo
Biodiversity	Ramsar Convention on Wetlands of International Importance	1975	<ul style="list-style-type: none"> <li>Conservation and sustainable use of wetlands</li> <li>Every three years, representatives of the contracting parties meet as the Conference of the Contracting Parties (COP), the policy-making organ of the convention which adopts decisions (resolutions and recommendations) to administer the work of the convention and improve the way in which the parties can implement its objectives.</li> </ul>	Benin, Burkina Faso, Cameroon, Cape Verde, Chad, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo
Biodiversity	Convention on International Trade in Endangered Species of Wild Fauna and Flora	1973	<ul style="list-style-type: none"> <li>To ensure that international trade in specimens of wild animals and plants does not threaten their survival.</li> <li>Subjects international trade in specimens of selected species to certain</li> </ul>	Benin, Burkina Faso, Cameroon, Cape Verde, Chad, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo

**TABLE I REGIONAL AND INTERNATIONAL TREATIES RELEVANT TO BIODIVERSITY AND TROPICAL FORESTRY**

TYPE	NAME	YEAR (IN FORCE)	SUMMARY/KEY OBJECTIVES	WEST AFRICAN COUNTRIES THAT ARE PARTY TO THE AGREEMENT
	(CITES)		controls. All import, export, re-export and introduction from the sea of species covered by the convention must be authorized through a licensing system. Each party to the convention must designate one or more management authorities in charge of administering that licensing system and one or more scientific authorities to advise them on the effects of trade on the status of the species.	
Biodiversity	Convention on the Conservation of Migratory Species of Wild Animals		<ul style="list-style-type: none"> <li>As an environmental treaty under the aegis of the United Nations Environment Program, CMS provides a global platform for the conservation and sustainable use of migratory animals and their habitats.</li> <li>CMS brings together the States through which migratory animals pass, the Range States, and lays the legal foundation for internationally coordinated conservation measures throughout a migratory range.</li> </ul>	Benin, Burkina Faso, Cameroon, Cape Verde, Chad, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Togo
<b>REGIONAL TREATIES</b>				
Biodiversity	West African Elephant Memorandum of Understanding	2005	<ul style="list-style-type: none"> <li>Under the auspices of the Convention on the Conservation of Migratory Species of Wild Animals, this MoU aims to protect the West African Elephant populations.</li> <li>Provides an international framework for</li> </ul>	Benin, Burkina Faso, Cote d'Ivoire, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo

**TABLE I REGIONAL AND INTERNATIONAL TREATIES RELEVANT TO BIODIVERSITY AND TROPICAL FORESTRY**

TYPE	NAME	YEAR (IN FORCE)	SUMMARY/KEY OBJECTIVES	WEST AFRICAN COUNTRIES THAT ARE PARTY TO THE AGREEMENT
			range State governments, scientists and conservation groups to collaborate in the conservation of the species and its habitat.	
Biodiversity	The Memorandum of Understanding (MoU) concerning Conservation Measures for Marine Turtles of the Atlantic Coast of Africa	1999	<ul style="list-style-type: none"> <li>Under the auspices of the Convention on the Conservation of Migratory Species of Wild Animals, this MoU focuses on the protection of six highly migratory marine turtle species that are estimated to have rapidly declined in numbers along the Atlantic Coast of Africa.</li> </ul>	Benin, Cameroon, Cape Verde, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo
Biodiversity	Memorandum of Understanding (MoU) Concerning the Conservation of the Manatee and Small Cetaceans of Western Africa and Macaronesia	2008	<ul style="list-style-type: none"> <li>Under the auspices of the Convention on the Conservation of Migratory Species of Wild Animals, this MoU aims to conserve manatees and small cetaceans of Western Africa and Macaronesia and their habitats</li> <li>Safeguards the associated values of these species for the people of the region.</li> </ul>	Benin, Cape Verde, Chad, Cote d'Ivoire, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Togo
Pollutants/ Toxins	Convention for Co-Operation in the Protection and Development of the Marine and Coastal Environment of the West and	1981	<ul style="list-style-type: none"> <li>To prevent, reduce, combat and control pollution of the marine environment along the West and Central African region</li> <li>To ensure sound environmental management of natural resources.</li> <li>Allows contracting states to enter into bilateral or multilateral agreements</li> </ul>	Benin, Cameroon, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo

**TABLE I REGIONAL AND INTERNATIONAL TREATIES RELEVANT TO BIODIVERSITY AND TROPICAL FORESTRY**

TYPE	NAME	YEAR (IN FORCE)	SUMMARY/KEY OBJECTIVES	WEST AFRICAN COUNTRIES THAT ARE PARTY TO THE AGREEMENT
	Central African Region; and Protocol		consistent with the Convention and international law.	
Conservation	Convention for Cooperation in the Protection, Management and Development of the Marine and Coastal Environment of the Atlantic Coast of the West, Central and Southern Africa Region (Abidjan Convention)	1984	<ul style="list-style-type: none"> <li>• Establishes an overarching legal framework for all marine-related programs in West, Central and Southern Africa.</li> <li>• Mission is to “Protect, Conserve and Develop the Abidjan Convention Area and its Resources for the Benefit and Well-being of its People.”</li> <li>• Addresses degradation of the world’s oceans and coastal areas through the sustainable management and use of the marine and coastal environment.</li> </ul>	Benin, Cameroon, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo
Biodiversity	African Convention on the Conservation of Nature and Natural Resources	1969	<ul style="list-style-type: none"> <li>• Enhance environmental protection;</li> <li>• Foster the conservation and sustainable use of natural resources;</li> <li>• Harmonize and coordinate policies in these fields with a view to achieving ecologically rational, economically sound and socially acceptable development policies and programs.</li> </ul>	Benin, Burkina Faso, Cameroon, Chad, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo



## 2.2 TRANSBOUNDARY CONSIDERATIONS FOR BIODIVERSITY AND TROPICAL FOREST MANAGEMENT

### 2.2.1 INCONSISTENCIES ACROSS BORDERS

The vast ecosystems of West Africa span multiple countries, and each country has its own set of laws, cultural norms, and regulations affecting habitats and biodiversity in those ecosystems. Each country has also established its own protected areas, and the willingness and capacity of each country to manage those areas and enforce its laws varies from country to country.<sup>24</sup> Furthermore, most endangered species and biodiverse habitats in West Africa are confined to protected areas, which are predominantly small and fragmented in the region. Habitat fragmentation reduces species range and the high-suitability habitat within their range, and research has demonstrated that habitat fragmentation places species at higher risk of extinction.<sup>25</sup> Large protected areas are important for the protection of biodiversity and adjoining clusters of areas can improve the effectiveness of conservation efforts, even if the sites are a mix of higher and lower IUCN protected area management categories.<sup>26</sup>

### 2.2.2 PRIORITY TRANSBOUNDARY ECOSYSTEMS

Conservation planning at the landscape scale is intended to address the challenges of effectively protecting and managing ecosystems that cover large areas and span more than one country. Potential benefits of landscape-level protection include the ability to “ensure long-term persistence of viable populations of larger species, ensure connectivity between designated protected areas, safeguard dispersal corridors between core populations and natural migration routes, and enhance resilience to the effects of climate change.”<sup>27</sup> Significant landscapes in West Africa are identified in Table 2.

TABLE 2 SIGNIFICANT TRANSBOUNDARY LANDSCAPES OF WEST AFRICA

LANDSCAPE	TRANSBOUNDARY COUNTRIES	SIZE (KM <sup>2</sup> )
Dja-Odzala-Minkebe (Tridom)	Cameroon, Gabon, ROC	141,000
Sangha Tri-National	CAR, Cameroon, ROC	36,236
Korup- Cross River	Cameroon, Nigeria	3,160
Takamanda-Cross River	Cameroon, Nigeria	>9,500
Niokolo-Badiar	Senegal, Guinea	>2,000

<sup>24</sup> Mallon DP et al. 2015. An IUCN situation analysis of terrestrial and freshwater fauna in West and Central Africa. Occasional Paper of the IUCN Species Survival Commission No. 54. <https://portals.iucn.org/library/node/45226>

<sup>25</sup> Crooks KR, et al. 2017. Quantification of habitat fragmentation reveals extinction risk in terrestrial mammals. PNAS, July 3, 2017. 201705769; published ahead of print July 3, 2017. <https://doi.org/10.1073/pnas.1705769114>

<sup>26</sup> Mallon DP, et al. 2015. An IUCN situation analysis of terrestrial and freshwater fauna in West and Central Africa. Occasional Paper of the IUCN Species Survival Commission No. 54. <https://portals.iucn.org/library/node/45226>

<sup>27</sup> Ibid.

**TABLE 2 SIGNIFICANT TRANSBOUNDARY LANDSCAPES OF WEST AFRICA**

LANDSCAPE	TRANSBOUNDARY COUNTRIES	SIZE (KM <sup>2</sup> )
WAPOK complex	Benin, Burkina Faso, Niger, Togo	31,231
Greater Gola landscape	Liberia, Sierra Leone	>5,000
Mount Nimba	Côte d'Ivoire, Guinea, Liberia	310
Ziama-Wonegizi	Guinea, Liberia	>3,276
Sapo-Taï	Côte d'Ivoire, Liberia	>9,000
Benoué-Faro-Bouba Njida Ecosystem	Cameroon, Chad, Nigeria	>14,000
Senegal River Delta	Mauritania, Senegal	6,417 (core 954)
Niokolo-Badiar	Senegal, Guinea	>2,000
Benoué-Faro-Bouba Njida Ecosystem	Cameroon, Chad, Nigeria	>14,000

Source: Adapted from An IUCN situation analysis of terrestrial and freshwater fauna in West and Central Africa (2015)

The W-Arly-Pendjari (WAP) complex is an example of an ecological landscape protected through a transboundary management system in West Africa. The WAP complex is a major expanse of intact Sudano-sahelian savanna under the protection of the W Regional Park (Benin, Burkina Faso, and Niger), the Arly Total Faunal Reserve (Burkina Faso), and the Pendjari National Park (Benin).<sup>28</sup> (See Figure 3.) This complex of national parks covers the largest of “terrestrial, semi-aquatic, and aquatic ecosystems in

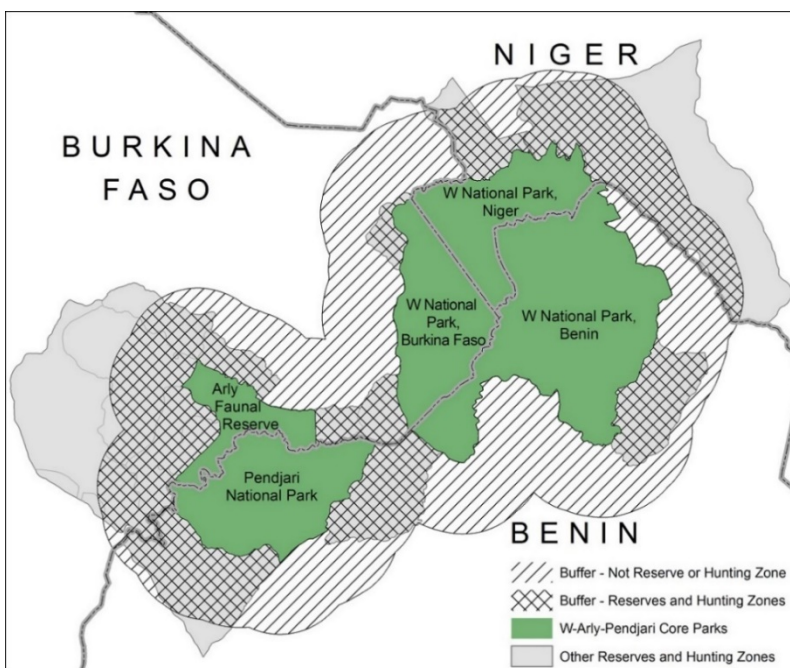


Figure 3: Map of W-Arly-Pendjari Complex on the borders of Burkina Faso, Benin, and Niger. Source: USGS

<sup>28</sup> USGS. Case Study: The W-Arly-Pendjari Transboundary Biosphere Reserve. <https://eros.usgs.gov/westafrika/case-study/w-arly-pendjari-transboundary-biosphere-reserve>

the West African savannah belt”<sup>29</sup> and it is recognized for its important biodiversity.<sup>30</sup> In addition to the core national parks, the transboundary reserves are surrounded by an additional 16 reserves (partial reserves and hunting zones) that function as buffer areas and transition zones. Land cover maps from 1975 to 2013 demonstrate relatively stable land cover within the three parks. In 2008, the three countries signed the Agreement on the Concerted Management of the W Transboundary Biosphere Reserve to improve the institutional cooperation for the management of the W Regional Park. These coordinated efforts have helped to control anthropogenic pressures and mitigate conflicts over exploitation practices and tenure systems around the core W Regional Park.<sup>31</sup> A recent analysis of natural vegetation across the WAP complex revealed that the coalition of protected areas “has been successful at protecting natural vegetation from agricultural expansion.”<sup>32</sup> However, an evaluation of the effect of this protection on habitat availability and quality is still needed to understand the effect of this conservation on biodiversity.

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<sup>29</sup> Amahowe IO, et al., 2013. Transboundary Protected Areas Management: Experiences from W-Arly-Pendjari Parks in West Africa. *Parks*, Vol 19.2. [https://cmsdata.iucn.org/downloads/parks\\_19\\_2\\_amahow\\_.pdf](https://cmsdata.iucn.org/downloads/parks_19_2_amahow_.pdf)

<sup>30</sup> USGS. Case Study: The W-Arly-Pendjari Transboundary Biosphere Reserve. <https://eros.usgs.gov/westafrica/case-study/w-arly-pendjari-transboundary-biosphere-reserve>

<sup>31</sup> IUCN. 2009. Transboundary Protected Areas: Legal Framework for the W Transboundary Biosphere Reserve (Benin, Burkina Faso, Niger). [http://cmsdata.iucn.org/downloads/w\\_biosphere\\_\\_en.pdf](http://cmsdata.iucn.org/downloads/w_biosphere__en.pdf)

<sup>32</sup> Shulte to Buhne H. et al. 2017. Protection status and national socio-economic context shape land conversion in and around a key transboundary protected area complex in West Africa. *Remote Sensing in Ecology and Conservation*. 3(4): 190-201. <http://doi.org/10.1002/rse2.47>

### 3. BACKGROUND AND DEVELOPMENT CONTEXT

#### 3.1 SOCIETY

West Africa is a diverse region, which, despite decades of historical violence, boasts some of the most stable nations in Africa. However, West African countries continue to rank low on the Human Development Index (HDI, see Table 3), which integrates three main indicators of human development: life expectancy at birth, average and expected years of schooling, and gross national income per capita.<sup>34</sup> Further, across West Africa women are disproportionately constrained by health, educational, and economic challenges.

West Africa's public health indicators (see selected indicators in Table 4) rank poorly compared to other regions in Africa and global averages. West Africa has high rates of fertility (5.70 children per woman, compared to the global average of 2.58), but almost one in three women lack forms of modern contraception.<sup>35</sup> Sierra Leone has one of the highest maternal mortality ratios in the world at 1,360 maternal deaths per 100,000 live births.<sup>36</sup> Under five mortality rates are also high, with Sierra Leone, Mali, Chad, and Nigeria all exceeding 100 deaths per 1,000 live births in 2016.<sup>37</sup> In 2015, life expectancy in West Africa ranged from 51.4 years in Sierra Leone, to 72.6 years in Cape Verde.<sup>38</sup> HIV/AIDS prevalence is relatively low compared to other regions (ranging from 1 to 4.5%) but is concentrated amongst marginalized populations, such as commercial sex workers (and their clients) and men who have sex with men.<sup>39</sup> Women face specialized challenges when it comes to accessing health care, particularly reproductive health care, which is exacerbated by lower education levels, a lack of decision-making power and control over family resources, and cultural norms such as early

**TABLE 3. HDI OF WEST AFRICAN COUNTRIES IN 2016, ORGANIZED FROM HIGHEST TO LOWEST<sup>33</sup>**

COUNTRY	HDI (RANK*)
Cape Verde	.648 (122)
Ghana	.579 (139)
Nigeria	.527 (152)
Cameroon	.518 (153)
Senegal	.494 (162)
Togo	.487 (166)
Benin	.485 (167)
Côte d'Ivoire	.474 (171)
The Gambia	.452 (173)
Mali	.442 (175)
Liberia	.427 (177)
Guinea-Bissau	.424 (178)
Sierra Leone	.420 (179)
Guinea	.414 (183)
Burkina Faso	.402 (185)
Chad	.396 (186)
Niger	.353 (187)

\*Ranking out of 188 countries listed

<sup>33</sup> Ibid.

<sup>34</sup> UNDP. Overview: Human Development Report 2016. 2016. [http://hdr.undp.org/sites/default/files/HDR2016\\_EN\\_Overview\\_Web.pdf](http://hdr.undp.org/sites/default/files/HDR2016_EN_Overview_Web.pdf)

<sup>35</sup> USAID/West Africa. 2015. Regional Development Cooperation Strategy 2015-2019.

<https://www.usaid.gov/sites/default/files/documents/1860/USAID-WA-RDCS-Public-Version-June%202015.pdf>

<sup>36</sup> UNICEF and WHO. 2017. Tracking Progress Towards Universal Coverage for Reproductive, Newborn and Child health: The 2017 Report. <http://data.unicef.org/wp-content/uploads/2018/01/Countdown-2030.pdf>

<sup>37</sup> Ibid.

<sup>38</sup> World Bank. World Development Indicators. <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators>

<sup>39</sup> USAID/West Africa. 2015. Regional Development Cooperation Strategy 2015-2019.

<https://www.usaid.gov/sites/default/files/documents/1860/USAID-WA-RDCS-Public-Version-June%202015.pdf>

marriage, fosterage and betrothals, and female genital mutilation.<sup>40</sup> Early marriage is a significant challenge for women in West Africa, where four in ten women between ages 20 and 24 are married before they are 18 (a third are married by 15). Child marriage prevalence varies by country in West Africa, where Niger has 76 percent and Cape Verde has 18 percent prevalence. Child marriage has significant negative consequences for girl's health and education which act as deterrants for economic growth. Child marriage often leads to early pregnancy, which limits women's employment opportunities, and cuts short education, which reduces expected earnings in the future. One study revealed that child marriage costs trillions to the global economy.<sup>41</sup>

**TABLE 4. SELECTED PUBLIC HEALTH INDICATORS FOR WEST AFRICAN COUNTRIES<sup>42</sup>**

COUNTRY	MATERNAL MORTALITY (2015)	UNDER FIVE MORTALITY (2016)	LIFE EXPECTANCY AT BIRTH (2015)
Benin	405	97.6	60.6
Burkina Faso	371	84.6	59.9
Cameroon	596	79.7	57.6
Cape Verde	42	21.4	72.6
Chad	856	127.3	52.6
Côte d'Ivoire	645	91.8	53.1
The Gambia	706	65.3	61
Ghana	319	58.8	62.4
Guinea	679	89	59.4
Guinea-Bissau	549	88.1	57
Liberia	725	67.4	62
Mali	587	110.6	57.5
Niger	553	91.3	59.7
Nigeria	814	104.3	52.3
Senegal	315	47.1	66.8
Sierra Leone	1360	113.5	51.4
Togo	368	75.7	59.9

One major contributing factor to the low HDI found in most West African countries is educational challenges. As shown in Table 5, years of schooling and literacy rates are still quite low across the region. West and Central Africa (combined) have the highest rates of out-of-school children in the

<sup>40</sup> Ibid.

<sup>41</sup> Girls not Brides. 2017. Child Marriage in West and Central Africa. <https://www.girlsnotbrides.org/wp-content/uploads/2017/10/Child-Marriage-in-West-Central-Africa.pdf>

<sup>42</sup> Sources: UNICEF and WHO. Tracking Progress Towards Universal Coverage for Reproductive, Newborn and Child health: The 2017 Report. 2017. <http://data.unicef.org/wp-content/uploads/2018/01/Countdown-2030.pdf>; World Bank. World Development Indicators. <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators>

world, at 36% in 2010. Unsurprisingly, the main disparities found in educational exclusion are between rural and urban areas, poor and rich households, and girls and boys. Barriers to education include cost; lack of schools and school resources (including teachers); cultural factors; and poor perceptions of education's value. Other indirect barriers include the political environment; insecurity and conflict; poor institutional capacity; and even natural disasters.<sup>43</sup>

**TABLE 5. SELECTED EDUCATION INDICATORS, 2015<sup>44</sup>**

COUNTRY	EXPECTED YEARS OF SCHOOLING	MEAN YEARS OF SCHOOLING	LITERACY RATES: AGE 15 AND OVER, CAN READ AND WRITE (% OF TOTAL POPULATION)
Benin	12.1	3.6	38.4 %
Burkina Faso	7.7	1.5	36 %
Cameroon	10.4	6	75 %
Cape Verde	13.5	n/a	86.8 %
Chad	7.3	2.3	22.3 %
Côte d'Ivoire	8.8	5	43.1 %
The Gambia	9.2	3.4	55.5 %
Ghana	11.4	6.8	76.6 %
Guinea	8.8	2.7	30.4 %
Guinea-Bissau	n/a	n/a	59.9 %
Liberia	9.9	4.5	47.6 %
Mali	8.4	2.4	33.1 %
Niger	5.3	1.7	19.1 %
Nigeria	10	6	59.6 %
Senegal	9.5	2.8	57.7 %
Sierra Leone	9.5	3.4	48.1 %
Togo	11.9	4.7	63.7 %

As mentioned above, women are disproportionately lagging in most areas of development. The United Nations Development Programme (UNDP)'s Gender Development Index (GDI) is a direct measure of the gender gap in three areas of human development: health, knowledge and living standards, using the same indicators as the HDI. The West African countries all range between .79 (Mali) and .9 (Ghana), which makes them all part of the "fifth" group, which has the highest relative levels of gender gaps (see Table 6).<sup>45</sup> The Gender Inequality Index (GII) measures gender inequality in reproductive health (using

<sup>43</sup> D'Aiglepierrre R and O Simon. 2014. Global Initiative on out-of-school Children: Regional Report, West and Central Africa. UNICEF. <http://uis.unesco.org/sites/default/files/documents/out-of-school-children-west-central-africa-regional-report-education-2014-en.pdf>

<sup>44</sup> Sources: UNDP Human Development Reports and CIA World Factbook, <https://www.cia.gov/library/publications/the-world-factbook/fields/2103.html>

<sup>45</sup> UNDP. 2015. Gender Development Index. <http://hdr.undp.org/en/composite/GDI>

maternal mortality and adolescent birth rate indicators), empowerment (measured by the proportion of parliamentary seats occupied by females (see Table 6) and proportion of adult females and males aged 25 years and older with some level of secondary education) and economic status, measured by labor market participation. Out of 188 countries, West African Countries rank between 131 (Ghana) and 155 (Côte d'Ivoire).<sup>46</sup> Recent conflicts and wars in Liberia, Sierra Leone, and Côte d'Ivoire resulted in high levels of gender-based violence (GBV) which leave lasting physical, psychosocial, and economic impacts for women and girls. Further, women in the region are often excluded from peace talks post-conflict<sup>47</sup>, and excluded from governmental decision-making in general (see Table 6). However, Côte d'Ivoire, Ghana, Guinea, Liberia, Nigeria, Senegal, and Sierra Leone all have action plans in place to promote women's participation in peacebuilding and reconstruction in response to the UN Security Council Resolution 1325 on women, peace, and security.<sup>48</sup>

TABLE 6. SELECTED GENDER INDICATORS, 2015 <sup>49</sup>

COUNTRY	GDI (GROUP NO.*)	GII (RANK**)	PERCENT OF PARLIAMENT SEATS HELD BY WOMEN
Benin	.86 (5)	.61 (144)	7.2 %
Burkina Faso	.87 (5)	.62 (185)	9.4 %
Cameroon	.85 (5)	.57 (138)	27.1 %
Cape Verde	n/a	n/a	20.8 %
Chad	.77 (5)	.7 (186)	14.9 %
Côte d'Ivoire	.81 (5)	.67 (155)	9.2 %
The Gambia	.88 (5)	.64 (173)	9.4 %
Ghana	.9 (5)	.55 (131)	10.9 %
Guinea	.8 (5)	n/a	21.9 %
Guinea-Bissau	n/a	n/a	13.7 %
Liberia	.83 (5)	.65 (150)	10.7 %
Mali	.79 (5)	.69 (156)	8.8 %
Niger	.73 (5)	.7 (187)	13.3 %
Nigeria	.85 (5)	n/a	5.8 %
Senegal	.88 (5)	.52 (162)	42.7 %
Sierra Leone	.87 (5)	.65 (151)	12.4 %
Togo	.84 (5)	.56 (166)	17.6 %

\*Groups 1-5 are based on the absolute deviation from gender parity in HDI values.

Group 1 has the least gender disparity, and group 5 the most.

\*\*Ranking out of 188 countries listed

<sup>46</sup> UNDP. 2015. Gender Inequality Index. <http://hdr.undp.org/en/content/gender-inequality-index-gii>

<sup>47</sup> USAID/West Africa. 2015. Regional Cooperation Development Strategy 2015-2019.

<https://www.usaid.gov/sites/default/files/documents/1860/USAID-WA-RDCS-Public-Version-June%202015.pdf>

<sup>48</sup> Ibid.

<sup>49</sup> Sources: UNDP. 2015. Gender Development Index. <http://hdr.undp.org/en/composite/GDI>; UNDP. Gender Inequality Index. 2015. <http://hdr.undp.org/en/content/gender-inequality-index-gii>

### 3.1.1 MAJOR CHALLENGES

Peace and robust governance remain as ongoing challenges in West Africa, particularly in countries recovering from recent civil wars, like Liberia, Sierra Leone, and Côte d'Ivoire. While large-scale wars have largely ended in West Africa, new threats and challenges have emerged more recently, such as the Ebola epidemic, piracy, drug trafficking, and violent extremism.<sup>50</sup>

The 2014 Ebola outbreak in West Africa, which started in Guinea, was the deadliest Ebola outbreak in history. According to the Centers for Disease Control and Prevention, as of April 2016, there were 11,325 deaths, mainly in Guinea, Sierra Leone, and Liberia.<sup>51</sup> The Ebola crisis has left severe, lasting social and economic consequences for the countries involved, as well as the region. The World Bank estimated the overall monetary cost of the crisis at \$2.8 billion due to drastic regional changes in investment, production, and consumption.<sup>52</sup> There have been countless social knock-on effects such as weakened health and education systems, an erosion of communal and ceremonial traditions, and thousands of children who lost parents.<sup>53</sup> Food security and livelihoods are also impacted because of crisis management measures that resulted in closed borders and trade reductions.<sup>54</sup> What started as a public health crisis morphed into a humanitarian disaster affecting every sector, leaving negative human development impacts for years to come.

Piracy in the Gulf of Guinea is a major rising threat in West Africa. Driven mainly by a quadrupling of oil prices between 2000 and 2012, a lucrative black market in refined petroleum products has led to increased attacks on oil tankers in the Gulf. This conflict has been difficult to manage due to poor cooperation between coastal countries, inadequate maritime policies, weak borders, and desperate communities that are taken advantage of by criminal networks. Maritime piracy has weakened the stability and economic development of coastal countries while undermining livelihoods such as fishing and marine trade.<sup>55</sup>

Another challenge fueled by international criminal networks is the illegal smuggling of narcotics. West Africa has recently become a transit hub for drugs originating from South American producing nations to the European market (See Figure 4). Due to its convenient halfway location, weak political institutions, and connection with the global economy, West Africa has become a major transit point for the drug trade. Trafficking of this nature has proven to have debilitating effects, such as state capture and funding of rebel movements. There is also a risk of developing local drug markets and gangs, which can lead to further instability. The region has responded by launching the West Africa Coast Initiative

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<sup>50</sup> Marc, A, N Verjee, and S Mogaka. 2015. The Challenge of Stability and Security in West Africa. <http://www.worldbank.org/en/topic/fragilityconflictviolence/publication/the-challenge-of-stability-and-security-in-west-africa>

<sup>51</sup> Centers for Disease Control and Prevention. 2016. 2014-2016 Ebola Outbreak in West Africa. <https://www.cdc.gov/vhf/ebola/outbreaks/2014-west-africa/index.html>

<sup>52</sup> Zafar A, C Talati, and E Graham. 2016. 2014-2015 West Africa Ebola Crisis: Impact Update. <http://pubdocs.worldbank.org/en/297531463677588074/Ebola-Economic-Impact-and-Lessons-Paper-short-version.pdf>

<sup>53</sup> United Nations Development Group. Socio-Economic Impacts of Ebola Virus Disease in West African Countries. 2015. <https://reliefweb.int/sites/reliefweb.int/files/resources/ebola-west-africa.pdf>

<sup>54</sup> Ibid.

<sup>55</sup> Marc, A, N Verjee, and S Mogaka. 2015. The Challenge of Stability and Security in West Africa. <http://www.worldbank.org/en/topic/fragilityconflictviolence/publication/the-challenge-of-stability-and-security-in-west-africa>



(WACI)<sup>56</sup> to support ECOWAS countries to address illicit drug trafficking, organized crime, and drug abuse in West Africa.<sup>57</sup>

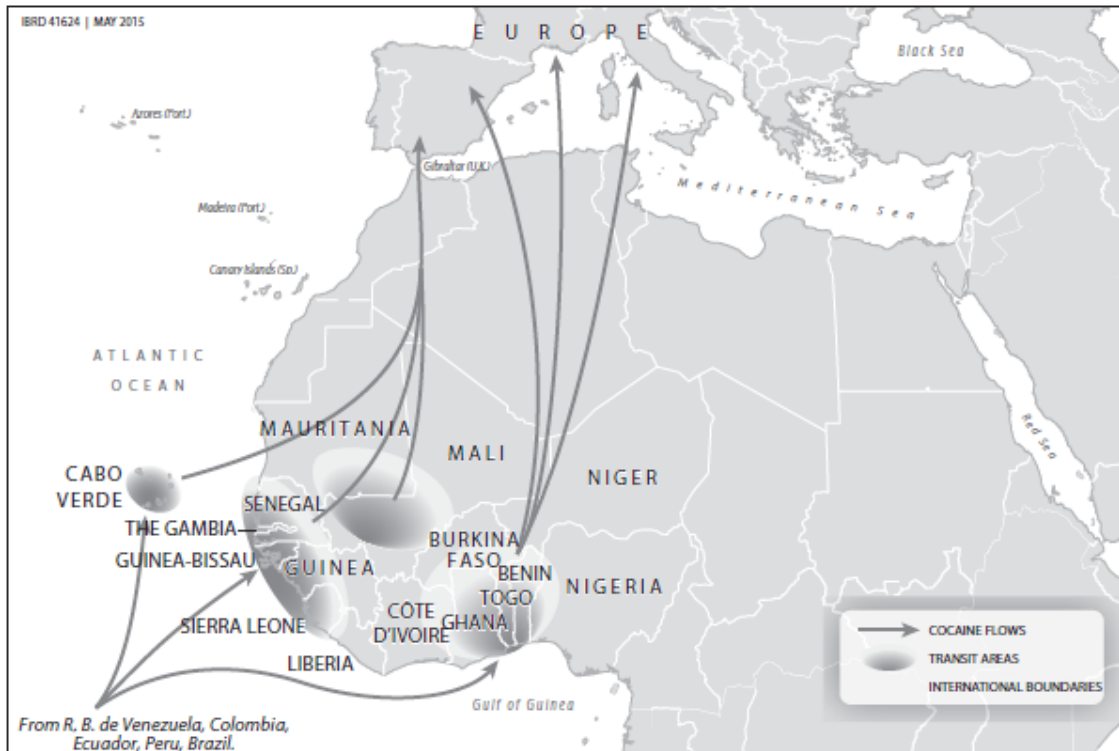


Figure 4. Flow of Cocaine from Latin America via West Africa to Europe. Source: UNODC 2013

The growth of violent extremism is the most notorious threat facing West Africa. Boko Haram, a Jihadist military organization based in Northeastern Nigeria, was founded in 2002 to create a “pure” Islamic state under Sharia law. While doctrinal influence and international support from radical groups have had significant influence, local factors have also played a role. Poverty, illiteracy, and unemployment have driven many youths to seek membership in Boko Haram.<sup>58</sup> In 2009, Boko Haram attacks on police stations and government buildings led to the capture and killing of their leader, which led to increased insurgency. Boko Haram is widely recognized internationally as a terrorist organization, which is now attempting to hold on to territory rather than solely conduct guerrilla warfare.<sup>59</sup>

Environmental factors are likely to exacerbate existing economic and political tensions. For example, in Nigeria, environmental conditions in the region drive conflict between herdsmen and farmers. In Northern Nigeria, the Sahara Desert is moving south at an alarming rate, and Lake Chad is becoming increasingly dry. Fulani herdsmen who used to rely on this lake for their livestock are beginning to move further and further south, where they begin to encounter indigenous farmers. Clashes between the two groups over resources for their livelihoods has led to over 3,000 deaths and 62,000 displaced people.<sup>60</sup>

<sup>56</sup> See more on WACI here: <https://www.unodc.org/westandcentralafrica/en/west-africa-coast-initiative.html>

<sup>57</sup> Marc, A, N Verjee, and S Mogaka. 2015. The Challenge of Stability and Security in West Africa. <http://www.worldbank.org/en/topic/fragilityconflictviolence/publication/the-challenge-of-stability-and-security-in-west-africa>

<sup>58</sup> Ibid.

<sup>59</sup> BBC. 2016. Who are Nigeria’s Boko Haram Islamist group? <http://www.bbc.com/news/world-africa-13809501>

<sup>60</sup> Adekola, O. 2018. Nigeria’s conflict is a result of environmental devastation across West Africa. <https://theconversation.com/nigerias-conflict-is-a-result-of-environmental-devastation-across-west-africa-91694>

As climate change exacerbates resource-scarcity, these types of conflicts are likely to become a norm in the region.

### 3.2 POPULATION TRENDS

West Africa's population is almost 380 million, making up 5% of the global population. With the highest population growth rate in the world, the population is expected to reach 909 million by 2050.<sup>61</sup> The most populous countries are Nigeria (the most populous country in Africa at around 196 million), Ghana (around 30 million), and Côte d'Ivoire (around 25 million).<sup>62</sup> Population density in West Africa reflects the physical environment and urbanization trends; the northern, drier part of the region is sparsely populated and the more arable while water-rich regions, with favorable climate and soil, are more highly populated.<sup>63</sup> Urbanization has also increasingly become a factor in population density, as 46.7% of

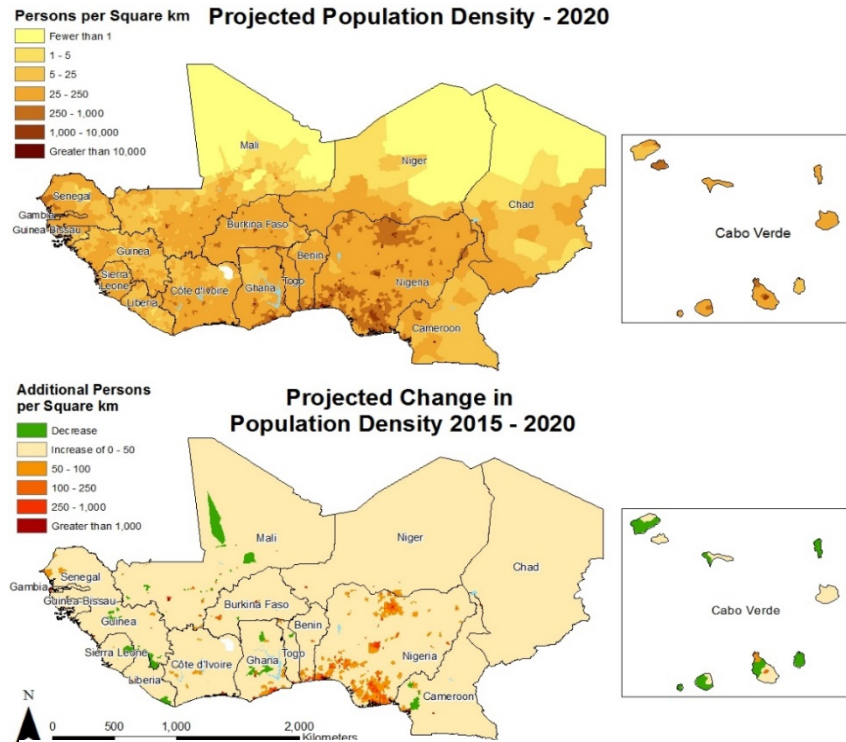


Figure 5. Population Density and Population Density Change in West Africa, 2015.

the population in the region is now urban.<sup>64</sup> While West Africa's annual population growth rate is on average 2.75%, some of the major cities in West Africa have growth rates of up to 9%. These population trends, in turn, impact the landscape, as the consumption patterns of those in urban areas require urban peripheral land use to grow certain crops, and rural areas benefit from remittances from the city and either abandon or increase agricultural activities.<sup>65</sup> While more than half of the region's population is female, they are often excluded from political life because of poverty, illiteracy, or societal norms.<sup>66</sup>

<sup>61</sup> USAID/West Africa. 2015. RDCS. <https://www.usaid.gov/sites/default/files/documents/1860/USAID-WA-RDCS-Public-Version-June%202015.pdf>

<sup>62</sup> UN Department of Economic and Social Affairs. Western Africa Population. 2018. <http://www.worldometers.info/world-population/western-africa-population/>

<sup>63</sup> USGS. 2015. West Africa Land Use and Land Cover Dynamics: Population. 2015. <https://eros.usgs.gov/westafrica/node/156>

<sup>64</sup> UN Department of Economic and Social Affairs. 2018. Western Africa Population. <http://www.worldometers.info/world-population/western-africa-population/>

<sup>65</sup> USGS. 2015. West Africa Land Use and Land Cover Dynamics: Population. <https://eros.usgs.gov/westafrica/node/156>

<sup>66</sup> USAID/West Africa. 2015. RDCS. <https://www.usaid.gov/sites/default/files/documents/1860/USAID-WA-RDCS-Public-Version-June%202015.pdf>

**TABLE 7. GINI INDEX OF WEST AFRICAN COUNTRIES, RANKED FROM LEAST EQUAL TO MOST EQUAL**<sup>67</sup>

COUNTRY	GINI INDEX
Guinea-Bissau	50.7 (2010)
Benin	47.8 (2015)
The Gambia	47.3 (2002)
Cape Verde	47.2 (2007)
Cameroon	46.5 (2014)
Chad	43.3 (2011)
Togo	43 (2015)
Nigeria	43 (2009)
Ghana	42.2 (2012)
Côte d'Ivoire	41.7 (2015)
Senegal	40.3 (2011)
Burkina Faso	35.3 (2014)
Sierra Leone	34 (2011)
Niger	34 (2014)
Guinea	33.7 (2012)
Liberia	33.2 (2014)
Mali	33 (2009)

### 3.3 ECONOMY

In 2016, West Africa had the slowest GDP growth of any region in Africa at 0.4% due to a recession in Nigeria, the region's largest economy. However, Nigeria's GDP is expected to increase to 3.6% in 2018 and 3.8% in 2019 due to increased oil production and growth in agriculture. Côte d'Ivoire, Ghana, Benin, Burkina Faso, and Sierra Leone are also expected to grow at 5% or more.<sup>68</sup> Despite these expectations, West Africa still faces high levels of poverty, unemployment, food insecurity, and poor health.<sup>69</sup> Liberia, Niger, and Sierra Leone have some of the lowest GDPs per capita in the world.<sup>70</sup> At the same time, West African countries have been making strides in reducing income inequality, and between 1991 and 2011, West African countries outperformed other regions in Africa in improving economic equality.<sup>71</sup> According to the Gini Index, which measures the actual distribution of income relative to a perfectly equal distribution (0 being perfect equality and 100 perfect inequality), Guinea-Bissau has the highest income inequality in the region at 50.7, and Mali the lowest at 33 (see Table 7).<sup>72</sup> Some of the key drivers of income inequality in West Africa include population density, dependence on natural resources, domestic investment rate, government consumption expenditure, inward foreign direct investment, trade openness, international remittances, and civil conflicts.<sup>73</sup>

ECOWAS is a 15-country<sup>74</sup> regional economic integration group fostering self-sufficiency for its members. Despite this mandate, West African

<sup>67</sup> Source: World Bank. GINI Index (World Bank estimate)- Country Ranking. <https://www.indexmundi.com/facts/indicators/SI.POV.GINI/rankings>

<sup>68</sup> AfDB. 2018. African Economic Outlook 2018.

[https://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/African\\_Economic\\_Outlook\\_2018\\_-\\_EN.pdf](https://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/African_Economic_Outlook_2018_-_EN.pdf)

<sup>69</sup> USAID/West Africa. 2015. RDCS. <https://www.usaid.gov/sites/default/files/documents/11860/USAID-WA-RDCS-Public-Version-June%202015.pdf>

<sup>70</sup> CIA World Factbook. 2017. Country Comparison: GDP-Per Capita (PPP). <https://www.cia.gov/library/publications/the-world-factbook/rankorder/2004rank.html>

<sup>71</sup> Odusola et al. 2017. Income Inequality Trends in sub-Saharan Africa. UNDP.

<http://www.africa.undp.org/content/rba/en/home/library/reports/income-inequality-trends-in-sub-saharan-africa--divergence--dete.html>

<sup>72</sup> World Bank. 2016. GINI Index (World Bank estimate)- Country Ranking. <https://www.indexmundi.com/facts/indicators/SI.POV.GINI/rankings>

<sup>73</sup> Anyanwu, JC, AE Erhijakpor & E Obi. 2016.. Empirical Analysis of the Key Drivers of Income Inequality in West Africa.

<sup>74</sup> Member countries: Benin, Burkina Faso, Cape Verde, Cote d' Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Sierra Leone, Senegal and Togo

countries are still barely integrated. Intra-West African trade is only about 11% of total trade, and Francophone ECOWAS members are still highly connected to France economically. In 2015, trade between ECOWAS and the European Union accounted for \$58.2 million. Further, West African countries produce similar commodities, which, along with corruption at borders and checkpoints, disincentivizes regional trade. Nigeria, accounting for almost 80% of the region's GDP, would need to lead if West Africa were to improve its intra-regional trade. ECOWAS aims to speed up the process by implementing a common currency by 2020.<sup>75</sup>

The West African Economic Monetary Union (UEMOA) is a free-trade zone that promotes economic integration among countries that use the CFA Franc, which is fixed to the Euro. It is composed of Benin, Burkina Faso, Côte d'Ivoire, Mali, Niger, Senegal, Togo, and Guinea-Bissau, which are all also members of ECOWAS. UEMOA has three advisory bodies: regional advisory bureau, collective territories advisory, and work and social dialogue advisory. There is no specific environmental focus within UEMOA's internal bodies.<sup>76</sup> Before being surpassed by the South African Development Community (SADC), UEMOA had the highest levels of regional trade integration in Africa between 2000 and 2009. This is largely due to UEMOA's shared currency, shared central bank, and other mechanisms which reduced transaction costs and enhanced macroeconomic stability for the countries in UEMOA. The structural barriers in the region however, including poor institutional enabling environment and a lack of infrastructure, have led to poor global competitiveness. The fixed exchange rate, while beneficial for stability, limited internal competitiveness. Further, UEMOA countries have not converged towards similar economic growth levels as planned. Senegal and Côte d'Ivoire have moved towards higher than average levels of growth while Guinea-Bissau, Niger, and Togo are moving towards lower than average levels of growth<sup>77</sup>.

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<sup>75</sup> Newnetwork. 2017. ECOWAS: Good cop, bad trader. <http://newafricanmagazine.com/ecowas-good-cop-bad-trader/>

<sup>76</sup> West African Economic and Monetary Union. <http://www.uemoa.int/en/presentation-uemoa>

<sup>77</sup> Sy A and M Sow. Four questions on the state of the West African Economic and Monetary Union and Implications for other regional economic communities. 2015. <https://www.brookings.edu/blog/africa-in-focus/2016/03/15/four-questions-on-the-state-of-the-west-african-economic-and-monetary-union-and-implications-for-other-regional-economic-communities/>

## 4. VALUE AND ECONOMIC POTENTIAL

### 4.1 VALUE OF BIODIVERSITY

Studies estimating the value of biodiversity are scarce, and some researchers suggest that attempts to value ecosystems may not adequately account for intangible benefits or can lead to real commodification of environmental goods.<sup>78</sup> Due to the paucity of information on the value of biodiversity in West Africa, this section focuses on providing brief descriptions of ecosystem goods and services and examples of valuations of these services from research in the region.

### 4.2 ECOSYSTEM GOODS AND SERVICES

The ecosystems of West Africa provide a wide variety of services to local populations, the region, and the world. There are few studies that have estimated the value of ecosystem services, particularly those specific to the West Africa region. The following sections summarize some of the more significant ecosystem services in the region and provide examples of valuations of these services.

**Forests:** The Guinean Forests provide myriad ecosystem services that support the health and livelihoods of local communities. They play a vital role in several hydrological functions that protect water quality, regulate water flows, control erosion, and regulate soil salinity. Additionally, the forests provide the source of water for drinking, fishing, irrigation, industrial use, and energy generation—services upon which the local communities rely. Timber and non-timber forest products are the source of cooking fuel, building materials, food, and medicines for local and regional communities. A 2011 study in northern Benin estimated that non-timber forest products accounted for 39% of income in interviewed rural households, and the demand for non-timber forest products is likely to increase.<sup>79</sup> The Guinean Forests also support cultural activities, including ecotourism and traditional sacred groves (sometimes known as “fetish groves”) in local communities within the forests. Of global importance, the forests also provide climate regulating services through carbon storage and sequestration.<sup>80</sup>

**Terrestrial Wildlife:** Data on illegal hunting and the bushmeat trade in the savanna biome is scarce, but it is estimated that these activities contribute significantly to the economies and food security in many countries. However, illegal hunting is largely unsustainable, and the practice is highly wasteful and inefficient because it “captures only a fraction of the value of the resource it destroys.”<sup>81</sup> A 2015 survey of 162 households estimates that the net value of hunting fauna in the Niger Delta is \$473 per

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<sup>78</sup> Neuteleers S and Engelen. 2015. Talking money: How market-based valuation can undermine environmental protection. *Ecological Economics*, 117:253-260. <https://doi.org/10.1016/j.ecolecon.2014.06.022>

Ninan KN and M Inoue. 2013. Valuing forest ecosystem services: What we know and what we don't. *Ecological Economics*, 93: 137-149. <https://doi.org/10.1016/j.ecolecon.2013.05.005>

<sup>79</sup> Heubach K, et al., 2011. The economic importance of non-timber forest products (NTFPs) for livelihood maintenance of rural west African communities: A case study from northern Benin. *Ecological Economics*, 70:1991-2001. <https://doi.org/10.1016/j.ecolecon.2011.05.015>

<sup>80</sup> Ecosystem Profile: Guinean Forests of West Africa Biodiversity Hotspot. 2015. Critical Ecosystem Partnership Fund.

<sup>81</sup> Lindsey P, et al. 2015. Illegal hunting and the bush-meat trade in savanna Africa: drivers, impacts and solutions to address the problem. FAO, Panthera/Zoological Society of London/Wildlife Conservation Society report, New York. 79 pages. <http://www.fao.org/publications/card/en/c/867eb204-47de-4c00-a43c-324839da3fba>

household (or \$88,410 for all households).<sup>82</sup> Furthermore, wildlife is essential to certain industries, such as game hunting and nature-based tourism. Big game hunting covers approximately 13,000 km<sup>2</sup> in West Africa, with most big-game hunting taking place in Benin and Burkina Faso, and with Guinea and Ghana demonstrating potential for developing big-game hunting areas (hunting is banned in Cote d'Ivoire). Overall, however, hunting is not a significant source of income or revenue in West Africa. Similarly, while nature-based tourism is a significant industry in well-established, wildlife-rich parts of Africa, wildlife tourism is not a major industry in the countries of West Africa, and there are few studies that attempt to evaluate the industry in these countries. Ghana has a burgeoning wildlife tourism sector, with main attractions including Guinean forest birds and primates, and savanna species in northern sites such as Mole National Park.<sup>83</sup> Despite West Africa's low rank among other African regions in terms of tourism, it is estimate that the region attracted over 4.5 million visitors and generated \$3.2 billion in revenue from tourism in 2012 (note that this estimate applies to the entire tourism sector, not just nature-based tourism).<sup>84</sup>

*Aquatic Ecosystems and Wildlife:* Freshwater ecosystems in West Africa provide benefits to local and national economies. Some of the ecosystem services from wetlands include providing water, electricity, food, medicines, building material, flood control, and water purification. The “value of fisheries production for major river systems in western Africa is estimate as just over \$200 million per year,” and “the value of wetland agricultural, fishing and fuel wood benefits” in the Hadejia-Nguru wetlands of Northern Nigeria was estimated to be around \$34 - \$51 per ha in 1997. The Niger Delta is a significant source of fish for the region. A 2015 survey of 251 families estimated the net economic value of fishing in the Niger Delta wetlands to be \$3,404 per household (or \$854,509 for all families surveyed).<sup>85</sup>

*Mangroves:* Mangroves of West Africa provide “nutrients to coastal waters, wood and non-wood forest products, and salt production, as well as protection from coastal erosion”. It is estimated that 1 km of mangroves can provide up to \$200,000 - \$900,000 annually in benefits and services. With a combined area of 12,800 km<sup>2</sup> covered by mangroves in Nigeria, Guinea, Cameroon, Sierra Leone, Ghana, Liberia, Cote d'Ivoire, and Benin, the total value of ecosystem services provided by mangroves to West Africa is significant.<sup>86</sup>

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<sup>82</sup> Adekola, O., et al. 2015. Inequality and ecosystem services: The value and social distribution of Niger Delta wetland services. *Ecosystem Services*, 12: 42-54. <https://doi.org/10.1016/j.ecoser.2015.01.005>

<sup>83</sup> Mallon, D.P., et al., 2015. An IUCN situation analysis of terrestrial and freshwater fauna in West and Central Africa. Occasional Paper of the IUCN Species Survival Commission No. 54.

<sup>84</sup> Ecosystem Profile: Guinean Forests of West Africa Biodiversity Hotspot. 2015. Critical Ecosystem Partnership Fund.

<sup>85</sup> Adekola, O., et al, 2015. Inequality and ecosystem services: The value and social distribution of Niger Delta wetland services. *Ecosystem Services*, 12: 42-54. <https://doi.org/10.1016/j.ecoser.2015.01.005>

<sup>86</sup> Mallon, D.P., et al., 2015. An IUCN situation analysis of terrestrial and freshwater fauna in West and Central Africa. Supplemental Information. Occasional Paper of the IUCN Species Survival Commission No. 54.

## 5. USAID PROGRAMMING

### 5.1 MISSION GOAL AND PRINCIPLES

USAID/West Africa's 2015-2019 Regional Development Cooperation Strategy (RDCS)<sup>87</sup> has an overarching goal of “Social and economic well-being advanced by West Africans”. This goal is expanded upon by the Mission’s development hypothesis:

#### USAID/WEST AFRICA DEVELOPMENT HYPOTHESIS

*If West African Systems of non-violent conflict management are strengthened, if broad-based economic growth and resilience are advanced through regional partners, and if the utilization of quality health services is increased in West Africa, then social and economic well-being will be advanced by West Africans.*

The RDCS applies the following strategic principles to project design in support of this hypothesis:

- African-led
- Regional perspective
- Support of regional partners’ efforts and priorities
- Pursuit of a long-term vision balanced with short-term, achievable results.

USAID/West Africa targets the following sectoral challenges and opportunities through their programming: peace and governance, primarily countering violent extremism; trade and investment; agriculture and food security; environment and climate change; and health. The following cross-cutting themes are also encompassed in the development hypothesis: capacity building, gender, youth, governance, climate change, resilience, and conflict. Section 5.3 below describes how USAID’s programming aims to address these challenges.

### 5.2 GEOGRAPHIC FOCUS OF PROGRAMMING

USAID/West Africa works across 21 countries in West Africa<sup>88</sup>, implementing regional activities in 19 countries (excluding Gabon, São Tomé and Príncipe and Equatorial Guinea). The Mission oversees the operations of USAID offices in Benin and Côte d’Ivoire, and increasingly oversees the USAID/Cameroon portfolio, which is a non-presence country. USAID/West Africa does not have jurisdiction over the bilateral missions in Mali, Ghana, Liberia, Nigeria and Guinea/Sierra Leone. Responsibilities for certain bilateral missions in the Sahel have now been taken on by USAID/Senegal mission.<sup>89</sup> This assessment summarizes the status of biodiversity and forests in the following countries: Benin, Burkina Faso, Cote d'Ivoire, Cape Verde, The Gambia, Ghana, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo, Chad, Cameroon and Guinea. Several bilateral I I8/I I9 assessments exist (e.g., Ghana,

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<sup>87</sup> See the full RDCS at <https://www.usaid.gov/sites/default/files/documents/1860/USAID-WA-RDCS-Public-Version-June%202015.pdf>

<sup>88</sup> According to the RDCS, these 21 countries include Benin, Burkina Faso, Cameroon, Cape Verde, Chad, Côte d’Ivoire, Equatorial Guinea, Gabon, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, São Tomé and Príncipe, Senegal, Sierra Leone, and Togo.

<sup>89</sup> More information about the division of responsibilities between USAID/West Africa and USAID/Senegal can be found in section IV of the RDCS.

Liberia, Mali, Senegal, Niger, Burkina Faso, and Central Africa), as such, country-specific assessments complement this regional overview.

### 5.3 DEVELOPMENT OBJECTIVES

This section summarizes USAID/West Africa’s Development Objectives (DOs) and Intermediate Results<sup>90</sup> (IRs), as well as the Mission’s Support Objective, intended to contribute to the development goal by supporting USAID programming.

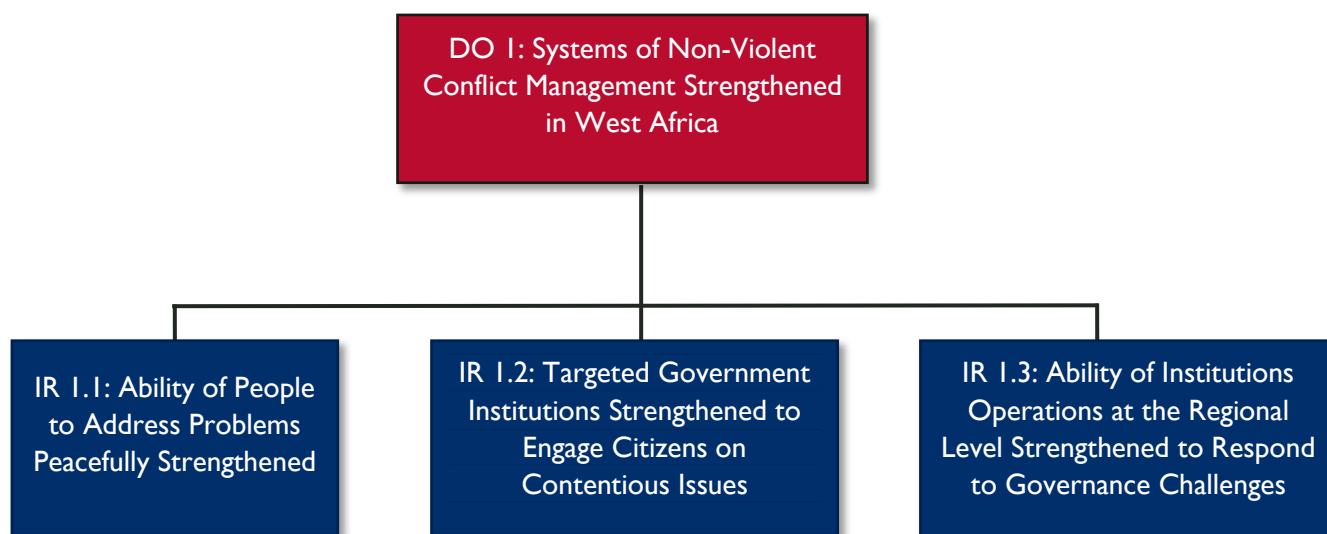


Figure 6. DO 1: Systems of Non-Violent Conflict Management Strengthened in West Africa

USAID’s DO 1 targets peaceful conflict management as a key factor in regional stability. To meet this DO, USAID uses the following IRs and sub-IRs:

#### IR 1.1 **Ability of People to Address Problems Peacefully Strengthened**

IR 1.1.1 Targeted communities more engaged with governing authorities to solve problems

IR 1.1.2 Targeted civil society organizations strengthened

IR 1.1.3 Resistance to violent extremism increased in targeted communities

IR 1.1.4 Responsible media in targeted zones strengthened

#### IR 1.2 **Targeted Government Institutions Strengthened to Engage Citizens on Contentious Issues**

IR 1.2.1 Engagement mechanisms between communities and governing authorities enhanced

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<sup>90</sup> IRs are smaller objectives which, when addressed and combined, can achieve a DO.



IR 1.2.2 Elections systems strengthened

IR 1.2.3 Judicial, legislative and other government systems strengthened

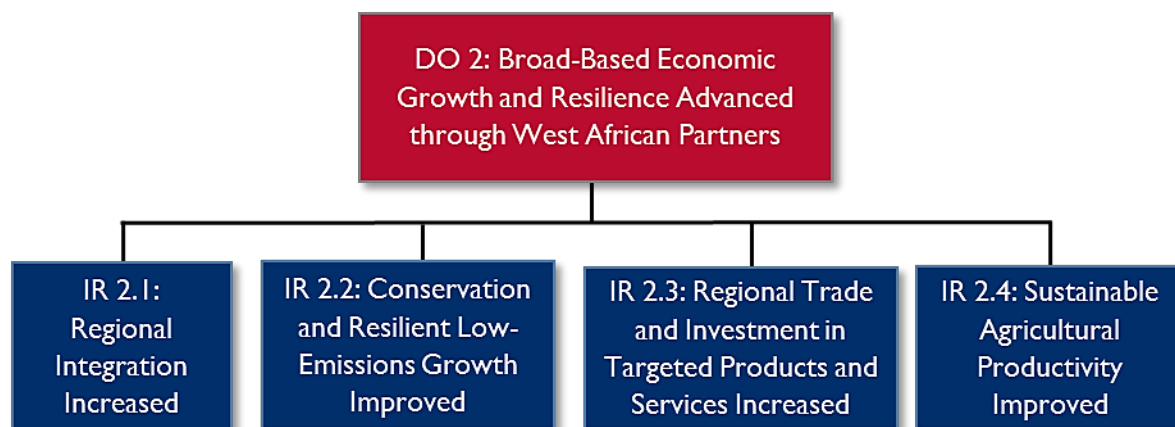
**IR 1.3 Ability of Institutions Operations at the Regional Level Strengthened to Respond to Governance Challenges**

IR 1.3.1 Lessons learned and information shared across countries

IR 1.3.2 ECOWAS regional conflict early warning system improved

IR 1.3.3 Management systems of institutions working at the regional level improved

IR 1.3.4 Analytical capabilities in conflict management expanded



*Figure 7 DO 2: Broad-Based Economic Growth and Resilience Advanced through West African Partners*

USAID’s DO 2 focuses on economic growth through the interconnected sectors of agriculture, trade, and the environment. To meet this DO, USAID uses the following IRs and sub-IRs:

**IR 2.1 Regional Integration Increased**

IR 2.1.1 Increased harmonization of targeted regional policies, regulations and procedures

IR 2.1.2 More integrated and coordinated regional systems

IR 2.1.3 Leadership of regional organizations enhanced

**IR 2.2 Conservation and Resilient Low-Emissions Growth Improved**

IR 2.2.1 Ecologically sound practices, tools and approaches for resilient growth demonstrated

IR 2.2.2 Environmental governance in the region improved

IR 2.2.3 Capacity to integrate climate change and biodiversity knowledge into decision-making enhanced

### IR 2.3 **Regional Trade and Investment in Targeted Products and Services Increased**

IR 2.3.1 Improved private sector competitiveness

IR 2.3.2 Improved competitiveness of the transport and logistics sector

IR 2.3.3 Increased access to clean, reliable energy

### IR 2.4 **Sustainable Agricultural Productivity Improved**

IR 2.4.1 Access to inputs increased

IR 2.4.2 Utilization of best practices and technologies increased

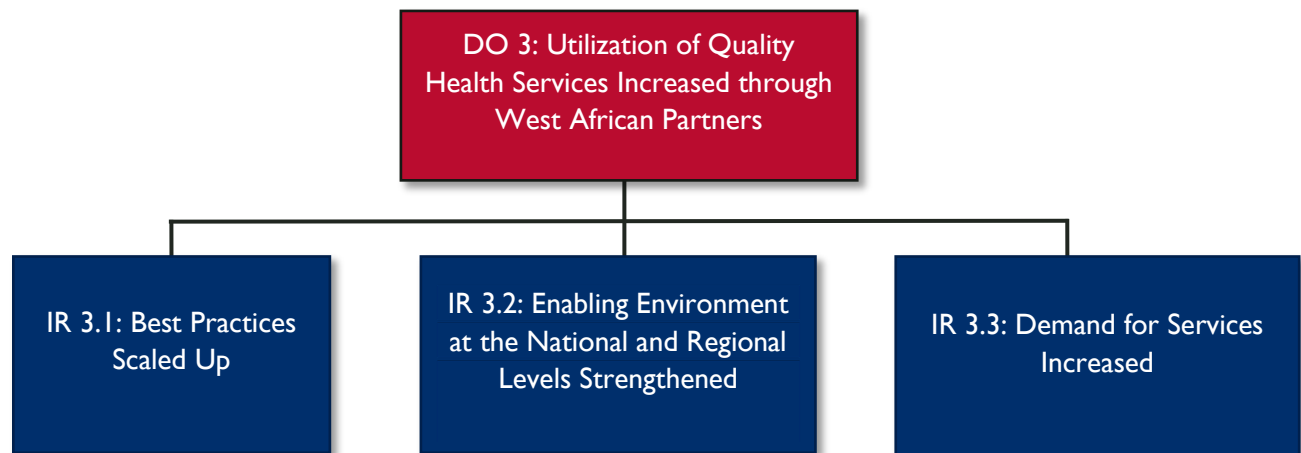


Figure 8. DO 3: Utilization of Quality Health Services Increased through West African Partners

USAID DO 3 focuses on the improved access and increased utilization of services by West Africans, with a strong reliance on development partners. To meet this DO, USAID uses the following IRs and sub-IRs:

#### IR 3.1 **Best Practices Scaled Up**

IR 3.1.1 High impact, evidence-based interventions piloted in target countries

IR 3.1.2 Regional and national priorities harmonized

IR 3.1.3 Service provision standards applied

#### IR 3.2 **Enabling Environment at National and Regional Levels Strengthened**

IR 3.2.1 Capacity of regional and national institutions and organizations strengthened

IR 3.2.2 Evidence- and rights-based policies adopted

IR 3.2.3 Attitudes toward health-seeking behaviors improved

### IR 3.3 Demand for Services Increased

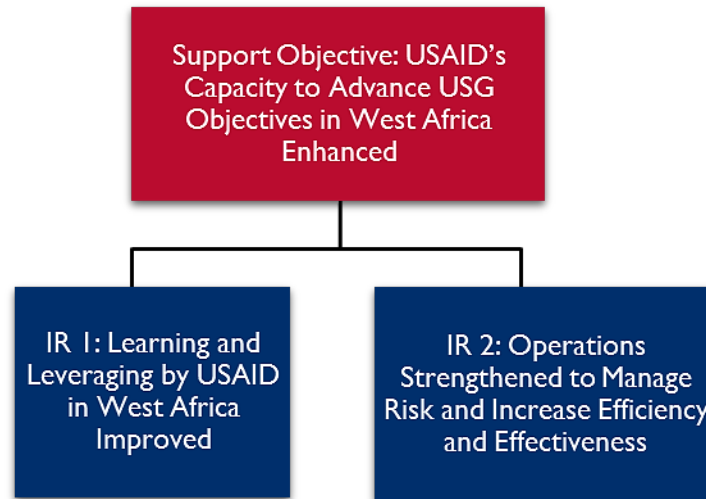


Figure 9. Support Objective: USAID's Capacity to Advance USG Objectives in West Africa Enhanced

USAID's Support Objective is intended promote a unified and coherent development agenda in the region by embodying the Agency's priorities in science, technology, innovation and partnerships. USAID/West Africa operates as a regional support system for other missions in the region, particularly those without a large USAID presence in-country. This support includes technical assistance, financial management, hiring/supervision of staff, and environmental compliance. This Support Objective is reinforced by the following IRs and sub-IRs:

#### IR 1 Learning and Leveraging by USAID in West Africa Improved

IR 1.1 Collaboration among USAID Staff Enhanced

IR 1.2 USAID Staff Trained

#### IR 2 Operations Strengthened to Manage Risk and Increase Efficiency and Effectiveness

IR 2.1 High Quality Technical and Operational Services Provided

## 5.2 PROGRAMMING

This section will describe USAID programming in terms of key subject areas and does not describe the current organizational structure of USAID/West Africa offices.

### 5.3.1 PEACE AND GOVERNANCE<sup>91</sup>

USAID/West Africa's Peace and Governance program focuses on countering violent extremism and promoting conflict early warning and response to improve systems of non-violent conflict resolution at local, national, and regional levels. The Trans-Sahara Counter Terrorism Partnership (TSCTP) works in at-risk communities to strengthen resistance to recruitment and radicalization by extremist organizations. The Peace through Development II (PDEVII) project addresses the socioeconomic, political, and cultural drivers of extremism through youth empowerment, promotion of moderate views, strengthening of civil society, and capacitating local governance. ECOWARN, managed by ECOWAS, is an early warning and response network that aims to anticipate and mitigate conflicts. USAID has also launched the West Africa Network for Peacebuilding (WANEP) to mitigate electoral violence in countries with upcoming elections. Finally, the Evaluation and Analytical Services (EAS) project uses situational assessments, violent extremism risk assessments and impact evaluations to improve USAID's programming in this area.

### 5.3.2 AGRICULTURE AND FOOD SECURITY<sup>92</sup>

USAID/West Africa works closely with regional institutions to harmonize trade and agricultural policy, encourage investment, and capacitate farmers with improved information and technology. The U.S. Government's Feed the Future (FtF) strategy supports the ECOWAS-implemented Comprehensive Africa Agriculture Development Program (CAADP)'s goal of sustaining agricultural growth rates at above 6% annually. FtF also aligns with ECOWAS's regional agricultural focus on increased productivity, improved regional trade, and institutional capacity building. The following programs are crucial for achieving regional transformation in agriculture:

- The **Partnership for Agricultural Research, Education, and Development (PAIRED) in West Africa** will support the West and Central African Council for Agricultural Research and Development (CORAF) to more effectively work with stakeholders to improve food security for rural farmers.<sup>93</sup>
- The **Enhancing Growth through Regional Agricultural Input Systems (ENGRAIS)** aims to increase farmer's access to inputs by strengthening capacity of West African institutions along the fertilizer supply chain.<sup>94</sup>
- The **C4Cotton Partnership** and the **UEMOA Cotton Competitiveness Program** are creating sustainable partnerships in the cotton sector to improve cotton production in Burkina Faso, Benin, Chad and Mali.

### 5.3.3 ENVIRONMENT<sup>95</sup>

USAID/West Africa's environmental programming target biodiversity conservation; water, sanitation, and hygiene (WASH) access; climate change action; and promotion of environmentally sound design of activities. The West Africa Biodiversity and Climate Change Project (WA-BiCC) is key to these

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<sup>91</sup> USAID/West Africa. 2018. Democracy, Human Rights and Governance. <https://www.usaid.gov/west-africa-regional/democracy-human-rights-governance>

<sup>92</sup> USAID/West Africa. West Africa Agriculture Fact Sheet.

<sup>93</sup> USAID/West Africa. PAIRED Factsheet.

<sup>94</sup> USAID/West Africa. ENGRAIS Fact Sheet

<sup>95</sup> USAID/West Africa. West Africa Environment Fact Sheet.

endeavors. WA-BiCC works with regional partners like ECOWAS and the Mano River Union to improve governance and policy related to natural resource management in the region with the goal of reducing wildlife tracking, deforestation, and forest degradation, and promoting climate-resilient growth along the coast. USAID also collaborates with the U.S. National Aeronautics and Space Administration (NASA) and other in-region organizations involved with the dissemination and use of geospatial technology and analyses related to climate change. USAID's WASH programming aims to improve access, sustainability, and synergies among WASH activities in the region. USAID also works to address capacity gaps by supporting in-region institutions such as national laboratories for water quality analyses and the African Water Association. USAID has also engaged the private sector through the West Africa Sanitation Service Delivery activity in Ghana, Benin, and Côte d'Ivoire. Finally, USAID's regional environmental compliance team encourages and trains USAID staff in the environmentally sound design and management of USAID activities.

#### 5.3.4 ENERGY<sup>96</sup>

USAID/West Africa's energy program focuses on increasing investment in the energy sector. Together with ECOWAS and its subsidiary institutions (Regional Centre for Renewable Energy and Energy Efficiency (ECREE) and West Africa Power Pool (WAPP), USAID is working to increase electricity transmission and distribution, as well as to increase the amount of cleaner energy projects. To scale mini-grid clean energy projects across the region, USAID leverages private investment, in collaboration with Power Africa, through the Africa Development Bank and through Development Credit Authority. USAID also supports WAPP in developing public-private partnerships (PPPs) to scale electricity generation to a capacity large enough to supply regional markets.

#### 5.3.5 HEALTH<sup>97</sup>

In the health sector, USAID/West Africa works to improve regional and global health targets, such as Ending Preventable Child and Maternal Deaths (EPCMD), eradicating AIDS by 2030, and improving the use of contraceptives and family planning. USAID depends on strategic partnerships to increase the utilization of health services and to achieve better health outcomes, such as the Ouagadougou partnership, which includes nine francophone West African countries. Other partnerships include the West African Health Organization, the Abidjan-Lagos Corridor Organization, the Global Fund, and the World Bank. The main strategic areas of intervention are family planning and maternal and child health; HIV/AIDS prevention, care, and support; local capacity strengthening; research and evaluation; and private sector engagement.

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<sup>96</sup> USAID/West Africa. West Africa Energy Program Fact Sheet.

<sup>97</sup> USAID/West Africa. West Africa Health Fact Sheet.

## 6. TROPICAL FORESTS, WATERS, AND BIOLOGICAL DIVERSITY

### 6.1 MAJOR ECOSYSTEM TYPES AND STATUS

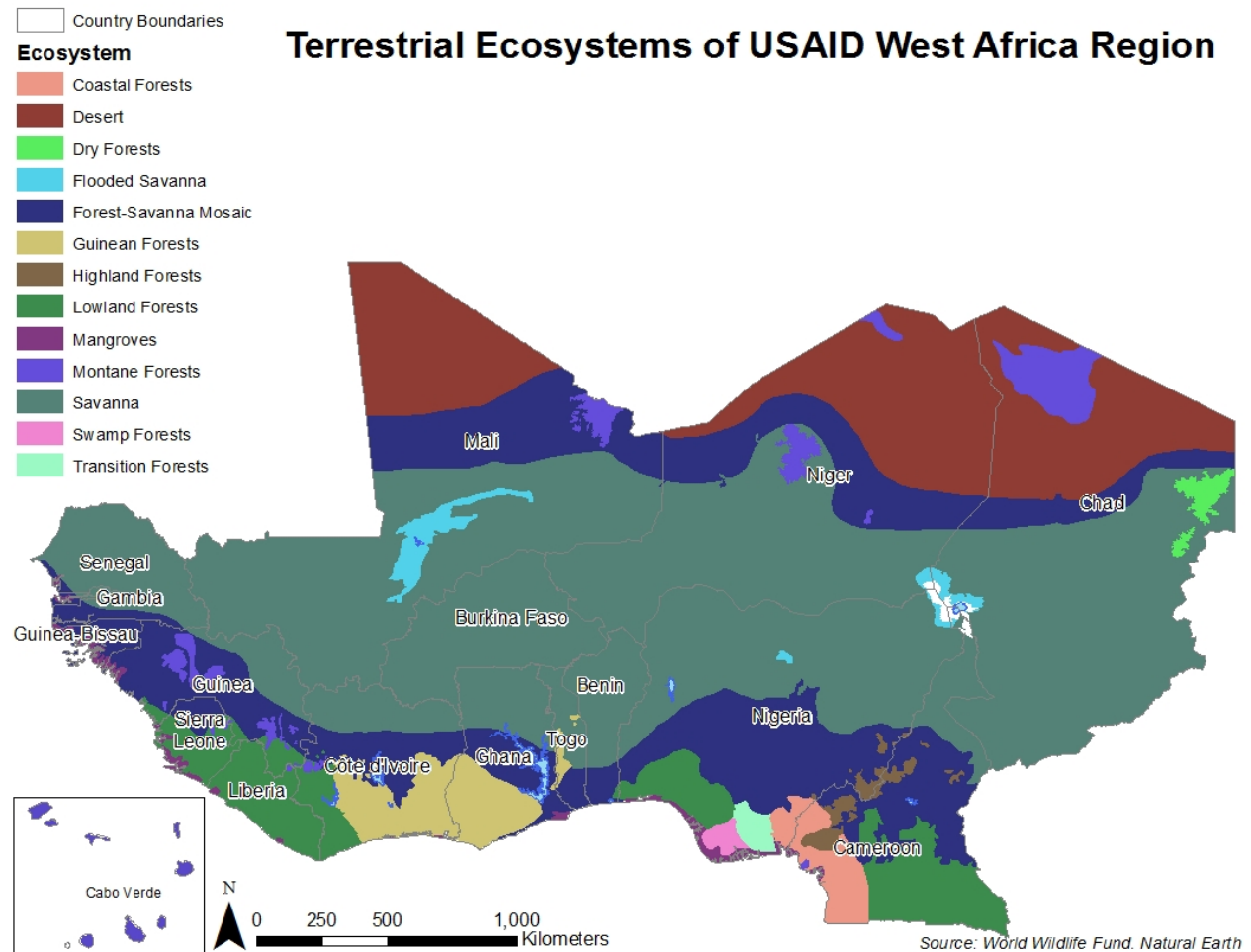


Figure 10. Ecosystems of West Africa

West Africa, a vast section of the continent, is composed of diverse landscapes and ecosystems. West Africa includes 12 coastal countries, geographically bound by Mauritania to the north and Nigeria to the south and including Senegal, Gambia, Guinea-Bissau, Guinea, Sierra Leone, Liberia, Côte d'Ivoire, Ghana, Togo, and Benin. West Africa also includes three inland countries: Mali, Niger, and Burkina Faso. For the purposes of this assessment, this section primarily evaluates the types and status of ecosystems in the focus countries of Benin, Burkina Faso, Cote d'Ivoire, Cape Verde, The Gambia, Ghana, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo, Chad, Cameroon and Guinea. Three major ecosystem belts cut across these countries from west to east: deserts and xeric shrublands to the north; tropical and subtropical grassland, savannas and shrublands in the middle; and tropical and subtropical moist broadleaf forests to the south.

There are three broadly recognized classifications used to define the landscape and biodiversity:

- Major biomes: West Africa includes two primary biomes. The West African region is bound to the north by a belt of savanna and grasslands known as the Sudan-Guinea Savanna. Within the savanna, a forest-savanna mosaic transitions the landscape into the moist broadleaf Guinean Forests, consisting of the Upper Guinean Forest and the Nigeria-Cameroon block (or the Lower Guinean Forest).<sup>98</sup> The Nigeria-Cameroon block extends to the southernmost boundary of the region for this assessment.
- Biodiversity hotspots: The Guinean Forests are recognized by Conservation International as one of 35 global “hotspots”. Exceptionally high diversity and extreme deforestation make this hotspot one of the top global priorities for conservation, particularly primate conservation.<sup>99</sup>
- Global ecoregions: WWF’s Global 200 project (2012) analyzed global patterns of biodiversity to identify a set of the earth’s terrestrial, freshwater, and marine ecoregions harboring exceptional biodiversity. The report identifies seven global ecoregions in West Africa: Sudanian Savannas, Guinean Moist Forest, Cameroon Highland Forests, Upper Guinea Rivers and Streams (small river basin), Niger River Delta, Gulf of Guinea Mangroves, and Cameroon Crater Lakes.

The organization of ecosystems to discuss status, trends, and threats in West Africa is guided by the classifications described above. Mangrove forest are located on the coastal edge of the Guinean Forests, and coastal and marine areas span the entire coast of the geographic region. Because of the potential importance of mangroves and coastal and marine areas of West Africa, these areas are discussed as separate ecosystems in the sections below.

## **6.2 GRASSLANDS, SAVANNAS AND SHRUBLAND**

To the north of the Guinean Forests lies a band of grasslands, savannas and shrublands known as the Sudan-Guinea Savanna. The band dips south between Ghana and Nigeria, forming the gap that separates the Upper Guinean Forest and the Nigeria-Cameroon block of the Guinean Forests. The band of savannas and shrublands is divided into the Sahelian Acacia Savanna to the north, the Sudanian Savanna to the south. The Sudanian Savanna is further divided into the West Sudanian Savanna, which travels through the West Africa region, and the East Sudanian Savanna, which lies east of the Cameroon Highlands.<sup>100</sup>

Within this savanna band, the West Sudanian Savanna is the ecoregion that predominantly falls in West Africa. It covers approximately 1,638,426 square kilometers (632,600 square miles) and runs south of the Sahel from the Atlantic Ocean (beginning in Senegal and Gambia) into Nigeria where it meets the Cameroon Highlands. It crosses through the West African countries of Côte d’Ivoire, Burkina Faso,

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<sup>98</sup> Mallon DP, et al.. 2015. An IUCN situation analysis of terrestrial and freshwater fauna in West and Central Africa. Supplemental Information. Occasional Paper of the IUCN Species Survival Commission No. 54.

Miller CS and WD Gosling. 2014. Quaternary forest associations in lowland tropical West Africa. *Quaternary Science Reviews*, 84:7-25. <https://doi.org/10.1016/j.quascirev.2013.10.027>

<sup>99</sup> Ecosystem Profile: Guinean Forests of West Africa Biodiversity Hotspot. 2015. Critical Ecosystem Partnership Fund.

<sup>100</sup> Miller CS and WD Gosling. 2014. Quaternary forest associations in lowland tropical West Africa. *Quaternary Science Reviews*, 84:7-25. <https://doi.org/10.1016/j.quascirev.2013.10.027>

Ghana, Togo, and Benin. A hot and dry climate supports a wooded savanna in this ecoregion with large tree species and an understory of long grasses, shrubs, and herbs.

As part of the larger Sudanian region, which has more than 1,000 endemic plants, this ecoregion is important for floral endemism. However, the number of plant species endemic to the West Sudanian Savanna is unknown. Faunal endemism in the Sudan-Guinea Savanna is relatively low, claiming only four strictly endemic species (two small mammals and two birds).<sup>101</sup> The ecoregion's importance to faunal biodiversity is captured in its role in the annual passage of migratory birds and the past migrations of large mammals, the latter of which has significantly diminished as a result of habitat alteration and hunting along the migratory route.<sup>102</sup> Despite habitat degradation, rare and endemic montane flora species are still found in the Mandara plateau in Nigeria, and the Jos Plateau (also in Nigeria) still contains West Africa's only population of Klipspringer (*Oreotragus oreotragus porteousi*), a small antelope, in its remnant woodland forest.

Between the West Sudanian Savanna and the Guinean Forests lies a transition forest-savanna mosaic range known as the Guinean Forest-Savanna Mosaic. It consists of drier forest interspersed with savannas and open grasslands, and it covers approximately 673,655 square kilometers (260,100 square miles) from Senegal to Nigeria, crossing through Gambia, Guinea Bissau, Guinea, Sierra Leone, Côte d'Ivoire, Ghana, Togo, and Benin. WWF indicates that the ecosystem may offer critical habitat for differentiation and speciation,<sup>103</sup> but specific information on biodiversity and endemism for this ecosystem is not available.

The Sahelian Acacia Savanna reaches into the northern portion of the West African region defined by this assessment, touching the northernmost areas of Burkina Faso. Because this savanna comprises a minor part of the region covered in this assessment, it will not be analyzed in-depth.

## 6.2.1 THREATS

While many protected areas exist, they are largely underfunded with little enforcement. Hunting, even in protected areas, has decimated populations of large mammals across the savanna zone in West Africa, particularly with the assistance of semi-automatic weapons and 4-wheel drive vehicles which make hunting practices more productive.<sup>104</sup> Illegal hunting and bushmeat trade is emerging as a severe threat to wildlife populations across the African savanna biome. Wildlife populations of all types of species in West Africa seem to be collapsing, large carnivores are particularly vulnerable due to their significant home range, which increases encounters with snares set for other species.<sup>105</sup>

Other threats in the West Sudanian Savanna include agricultural activities, fire, and clearance for wood and charcoal. These activities have resulted in a greatly reduced, degraded, and fragmented savanna

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<sup>101</sup> Mallon DP, et al. 2015. An IUCN situation analysis of terrestrial and freshwater fauna in West and Central Africa. Supplemental Information. Occasional Paper of the IUCN Species Survival Commission No. 54.

<sup>102</sup> Western Africa: Stretching from Senegal through Niger. World Wildlife Fund. <https://www.worldwildlife.org/ecoregions/at0722>

<sup>103</sup> Western Africa: Stretching from Nigeria to Senegal. World Wildlife Fund. <https://www.worldwildlife.org/ecoregions/at0707>

<sup>104</sup> Mallon DP, et al. 2015. An IUCN situation analysis of terrestrial and freshwater fauna in West and Central Africa. Occasional Paper of the IUCN Species Survival Commission No. 54. <https://portals.iucn.org/library/node/45226>

<sup>105</sup> Lindsey P, et al. 2015. Illegal hunting and the bush-meat trade in savanna Africa: drivers, impacts and solutions to address the problem. FAO, Panthera/Zoological Society of London/Wildlife Conservation Society report, New York. 79 pages. <http://www.fao.org/publications/card/en/c/867eb204-47de-4c00-a43c-324839da3fba>



habitat.<sup>106</sup> For instance, land used for agriculture in Togo has increased by 266 percent from 1975 to 2013, which is the highest rate of agricultural expansion in West Africa.<sup>107</sup>

Principal protected areas in the savanna zone include: Niokolo-Koba NP (Senegal), Boucle du Baoulé NP (Mali), Comoé NP (Côte d'Ivoire), the transboundary WAP complex (Niger, Burkina Faso and Benin), Mole NP (Ghana), Kainji Lake NP (Nigeria), Zakouma NP (Chad), Manovo-Gounda-Saint Floris NP (CAR), and the Benoué-Faro-Bouba Njida complex (Cameroon).

### 6.3 MOIST BROADLEAF FORESTS

The moist broadleaf forests of West Africa are encompassed in a region known as the Guinean Forests, which extend across the southern part of West Africa and into Central Africa north of the Congo Wilderness Area. Mainly composed of lowland to montane forests, the Guinean Forests cover 621,705 km<sup>2</sup><sup>108</sup> and can be divided into two sub regions: the “Upper Guinean Forests” and the “Nigeria-Cameroon” block (or the “Lower Guinean Forests”). The sub regions are separated by a gap in Benin consisting of farmland, savanna, and degraded dry forest.<sup>109</sup> Together, the Upper Guinean Forests and the Nigeria-Cameroon block cover part or all of 11 countries in West Africa. The Upper Guinean Forests span Guinea, Sierra Leone, Liberia, Côte d'Ivoire, Ghana, and Togo. The Lower Guinean Forests extend from western Nigeria into Cameroon and include the islands of Bioko, Pagalu, Sao Tome, and Principe (see Figure 11).

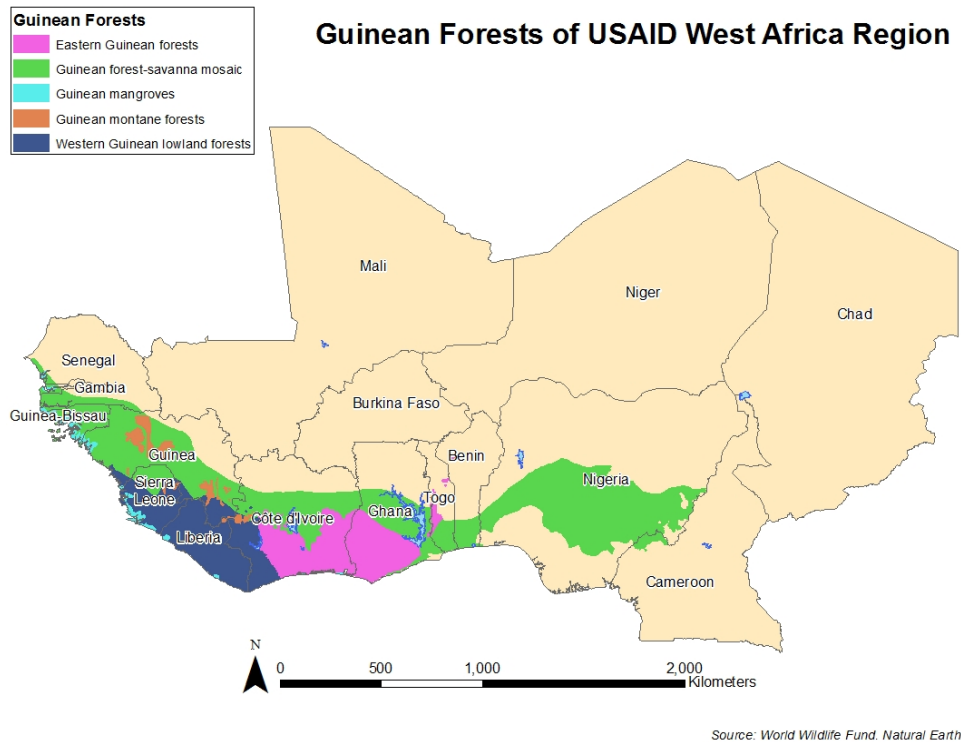


Figure 11. Guinean Forests of West Africa

<sup>106</sup> Western Africa: Stretching from Senegal through Niger. World Wildlife Fund. <https://www.worldwildlife.org/ecoregions/at0722>

<sup>107</sup> Land Use, Land Cover, and Trends in Togo. USGS. <https://eros.usgs.gov/westafrica/land-cover/land-use-land-cover-and-trends-togo>.

<sup>108</sup> Ecosystem Profile: Guinean Forests of West Africa Biodiversity Hotspot. 2015. Critical Ecosystem Partnership Fund.

<sup>109</sup> Mittermeier RA. 2004., *Hotspots Revisited: Earth's Biologically Richest and Most Endangered Ecoregions*.

The Guinean Forests support high levels of species and endemism and have been identified by Conservation International as one of 35 global “hotspots.” It is estimated that the Guinean Forests are home to approximately 9,000 species of vascular plants, of which 1,800 are endemic. The forests also support approximately 419 mammal species (65 endemic), 917 bird species (48 endemic), 107 reptile species (20 endemic), and 269 amphibian species (118 endemic). There are also five Critically Endangered and 21 Endangered species in this region.<sup>110</sup> Mammalian diversity is extremely high in the Guinean Forests, and primate diversity in the region is exceptional. The hotspot supports 30 primate species, six of which are endemic to the Upper Guinean Forest and nine to the Lower Guinean Forest.<sup>111</sup> Many of the endemic species in the Guinean Forests have highly restricted ranges, making them highly vulnerable to deforestation.

### 6.3.1 UPPER GUINEAN FOREST

Due to its high concentrations of endemic species, and the exceptional loss of habitat, the Upper Guinean Forest is widely recognized as a priority site for conservation.<sup>112</sup> The region primarily consists of two ecoregions: Eastern Guinean Forest and the Western Guinean Lowland Forest. The Western Guinean Lowland Forest stretches from the eastern border of Guinea, through Sierra Leone and Liberia, and into Côte d'Ivoire. This portion of the Upper Guinean Forest supports more distinctive flora and fauna and has more endemic species than its neighboring Eastern Guinea Forest.<sup>113</sup> The Western Guinean Lowland Forest experiences seasonal rains up to 3,300 mm per year, making it one of the wettest in West Africa, but also has short but intense dry seasons. The region's forest vegetation is largely attributable to its generally warm and humid climate.

The Upper Guinean Forest contains the Gola and Lofa-Mano Forest, which is a mix of lowland forests along the Sierra Leonean and Liberian borders drained by three rivers. This is the largest westernmost contiguous tropical rainforest in the Upper Guinean forests. The Grebo-Taï Forests, including the Cestos-Sapo-Grebo-Taï-Cavally Corridor are also found in the Upper Guinean Forest (Côte d'Ivoire and Liberia). This forest represents the largest contiguous block of tropical rainforest within the Upper Guinean Forest Ecosystem and provides habitat for more than a quarter of Africa's mammals. In Côte d'Ivoire, it consists of Taï National Park and three adjacent classified forests (Cavally, Goin-Débé, Haute-Dodo). In Liberia, it consists of Sapo National Park, Grebo National Forest (>900 km<sup>2</sup> of which has been proposed to be transformed into a national park) and several large forest concessions in Liberia.<sup>114</sup>

The Upper Guinean Forest is also home to the Nimba (or Upper Guinean) Highlands, which stretch between Guinea, Sierra Leone, Liberia, and Côte d'Ivoire. The Nimba Highlands are an important montane region consisting of a transboundary mountain range with cloud forests and grassy mountain tops. The mountains support an extraordinary number of endemic bats and amphibians.<sup>115</sup> Mount Nimba, located on the borders of Guinea, Liberia, and Côte d'Ivoire, is a World Biosphere Reserve and World Heritage site. Critically endangered species, such as the Nimba Toad (*Nimbaphrynoides*

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<sup>110</sup> Ecosystem Profile: Guinean Forests of West Africa Biodiversity Hotspot. 2015. Critical Ecosystem Partnership Fund.

<sup>111</sup> Ibid.

<sup>112</sup> The Deforestation of the Upper Guinean Forest. USGS. <https://eros.usgs.gov/westafrica/land-cover/deforestation-upper-guinean-forest>

<sup>113</sup> Western Africa: Coastal areas of Guinea, Cote d'Ivoire, Liberia, and Sierra Leone. World Wildlife Fund.

<https://www.worldwildlife.org/ecoregions/at0130>

<sup>114</sup> <http://www.un-grasp.org/the-tai-sapo-forest-complex/>

<sup>115</sup> Mittermeier RA. 2004. Hotspots Revisited: Earth's Biologically Richest and Most Endangered Ecoregions.

*occidentalis*) and Lamotte's Roundleaf Bat (*Hipposideros lamottei*) can only be found in Mount Nimba.

### 6.3.2 NIGERIA-CAMEROON BLOCK

Extending to the Sanaga River, the Nigeria-Cameroon block is a considerably smaller section of the Guinean Forests than its Upper Guinean Forest neighbor. Nevertheless, the Nigeria-Cameroon region contains important ecosystems, including two areas designated by WWF as priority regions for conservation: The Coastal Congolian forests and the Cameroon Highland forests, an important montane region. The Nigeria-Cameroon block is home to the endangered Nigerian-Cameroon Chimpanzee (*Pan troglodytes ssp. Elliotti*), a primate endemic to the region who has the smallest geographic range and the smallest population of all the Chimpanzee subspecies.<sup>116</sup> The region also contains three notable protected forests: The Cross River National Park, the Ejagham Forest Reserve, and the Korup National Park.

The Cross River National Park represents Nigeria's last rainforest due to threats resulting in deforestation (as discussed in Section 6.3.4). It is acclaimed as one of the UN's 25 biodiversity hotspots in the world and is the home of the Cross-River Gorilla. The Korup National Park is one of Africa's oldest tropical forests and has primary forest growth in the southern parts of the park. It is also regarded as having exceptional flora and fauna diversity.

### 6.3.3 FOREST TRENDS

Due to extreme and extensive habitat fragmentation and degradation, the Guinean Forests are among the most severely threatened in the world.<sup>117</sup> Forest coverage in this hotspot has declined dramatically with most notable declines in Togo, Nigeria, and Benin (as a percentage of land cover in 1990) (see Table 8). This loss of forest has made the Guinean Forests one of the most fragmented regions on the planet. Commercial logging and slash-and-burn agriculture are prevalent throughout the Guinean Forests and are the primary causes of deforestation. In addition, plantation agriculture for products such as oil palm, rubber, bananas, and cacao have displaced forest in Côte d'Ivoire, Ghana, Nigeria, Cameroon, and Togo. Togo has lost 73 percent of its forest area from 1990 to 2015 (see Table 8). This high rate of deforestation is due to its relatively small land area originally covered by forest (only 17 percent in 1990) and pressures of subsistence agriculture.<sup>118</sup>

Abundance of iron ore, diamonds, gold, or bauxite in the region has led to small-scale and industrial-scale mining, which is another cause of deforestation and pollution. Mount Nimba lies atop a high-quality iron-ore deposit, resulting in immense pressure to conduct mining activities on the mountain. Mining has already taken place on the Liberian side, and a portion of the Mont Nimba World Heritage Site on the Guinean side was degazetted in 1992 in preparation for mining. In 1993, the boundaries of the original World Heritage Site were changed to exclude the mining area. Mining continues to threaten this and other World Heritage Sites in West Africa (Comoé National Park in Côte d'Ivoire, and Dja Wildlife Reserve in Cameroon).<sup>119</sup>

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<sup>116</sup> The IUCN Red List of Endangered Species. *Pan troglodytes ssp. ellioti*. <http://dx.doi.org/10.2305/IUCN.UK.2016-2.RLTS.T40014A17990330.en>

<sup>117</sup> Mittermeier RA. 2004. Hotspots Revisited: Earth's Biologically Richest and Most Endangered Ecoregions.

<sup>118</sup> International Tropical Timber Organization. 2011. Status of Tropical Forest Management 2011.

[http://www.itto.int/direct/topics/topics\\_pdf\\_download/topics\\_id=2660&no=0&disp=inline](http://www.itto.int/direct/topics/topics_pdf_download/topics_id=2660&no=0&disp=inline)

<sup>119</sup> Mallon DP, et al. 2015. An IUCN situation analysis of terrestrial and freshwater fauna in West and Central Africa. Occasional Paper of the IUCN Species Survival Commission No. 54. Gland, Switzerland and Cambridge, UK: IUCN. x + 162pp.

**TABLE 8 PERCENTAGE CHANGE IN WEST AFRICAN FOREST AREA (1,000 KM<sup>2</sup>) FROM 1990 TO 2015 <sup>120</sup>**

COUNTRY	1990 (1,000 KM <sup>2</sup> )	2015 (1,000 KM <sup>2</sup> )	TOTAL CHANGE (1,000 KM <sup>2</sup> )	TOTAL CHANGE (%)
BENIN	57.6	43.1	-14.5	-25.2
BURKINA FASO	68.5	53.5	-15.0	-21.9
CAMEROON	243.2	188.2	-55.0	-22.6
CAPE VERDE	0.6	0.9	+0.3	+55.7
CHAD	67.1	48.8	-18.3	-27.3
COTE D'IVOIRE	102.2	104.0	+1.8	+1.8
THE GAMBIA	4.4	4.9	+0.5	+10.4
GHANA	86.3	93.4	+7.1	+8.2
GUINEA	72.6	63.6	-9.0	-12.4
GUINEA-BISSAU	22.2	19.7	-2.4	-11.0
LIBERIA	49.3	41.8	-7.5	-15.2
MALI	66.9	47.2	-19.8	-29.5
NIGER	19.5	11.4	-8.0	-41.3
NIGERIA	172.3	69.9	-102.4	-59.4
SENEGAL	93.5	82.7	-10.8	-11.5
SIERRA LEONE	31.2	30.4	-0.7	-2.4
TOGO	6.9	1.9	-5.0	-72.6

Source: World Bank 2016 (<http://data.worldbank.org>)

From 2000 to 2012, there have been small areas of tree cover gain throughout the agricultural mosaic. While these gains result in food and building materials, they may not offer the same biological benefits as the original denser forest cover.<sup>121</sup> Additionally, the data in Table 8 depict change in total forest area but not trends in forest degradation. For example, there was a net gain in forest cover in Ghana from 1990 to 2015, as indicated in Table 8. However, from 1990 to 2010, the area of dense forest cover (where forest canopy cover is greater than 60%) degraded by 9,186 km<sup>2</sup>, but the area of open forest cover (where the forest canopy cover is between 15% and 60%) expanded over the same period by nearly 15,000 km<sup>2</sup>.<sup>122</sup> These data indicate that while overall forest cover increased in Ghana, the forest area with dense canopy was degraded at a rate of about 460 km<sup>2</sup> per year since 1990.

The gains in open forest cover (other than gains resulting from forest degradation) may be partially attributable to the establishment of forest plantations in previously forested or degraded areas or lands

<sup>120</sup> Forest area in this figure is defined as “land under natural or planted stands of trees of at least 5 meters in situ, whether productive or not, and excludes tree stands in agricultural production systems (for example, in fruit plantations and agroforestry systems) and trees in urban parks and gardens.”

<sup>121</sup> Ecosystem Profile: Guinean Forests of West Africa Biodiversity Hotspot. 2015. Critical Ecosystem Partnership Fund.

<sup>122</sup> Kuudaar E. 2016. Ghana Case Study: Prepared for FAO as part of the State of the World's Forests 2016 (SOFO). <http://www.fao.org/3/a-C0183e.pdf>

outside of forest reserves or from logging in denser forest stands. In 2000, the Forest Commission of Ghana established the National Forest Plantation Development Programme, which aims to expand forest cover by 200 km<sup>2</sup> per year through the establishment of forest plantations.<sup>123</sup> As of 2014, this program had established 1,800 km<sup>2</sup> of forest plantations.

As described above, FAO estimates that total forest cover (dense and degraded) in the eight countries (including the Upper and Lower Guinean Forests) was as high as 814,000 km<sup>2</sup> in 1990 but had been reduced to nearly 634,000 km<sup>2</sup> in 2015. However, other sources report far lower estimates of forest cover. Mittermeier (2004) reported that the Guinean Forest originally consisted of 620,000 km<sup>2</sup> of dense forest.<sup>124</sup> USGS estimates that the Upper Guinean Forest retains only approximately 165,000 km<sup>2</sup> of forest cover (70,000 km<sup>2</sup> of dense forest cover and 95,000 km<sup>2</sup> of degraded forest) as of 2013 (see Figure 12). USGS also estimates that approximately 6% of the remaining dense forest is contained in Guinea, 4% in Sierra Leone, 49% in Liberia, 21% in Côte d'Ivoire, 18% in Ghana, and 2% in Togo.<sup>125</sup> In addition to the different timeframes and geographies evaluated, it is likely that these estimates differ due to differences in methodology and definitions of forest cover. Nevertheless, the research consistently supports the conclusion that deforestation and forest degradation are persistent problems in the Guinean Forests.

Most of the forest removal in the Upper Guinean Forest—as much as 85%—likely occurred prior to 1975. Persistent demands on the forest for wood products and land for plantations and farming contributed to an additional loss of 65,000 km<sup>2</sup> of forest from 1975 to 2013. Deforestation continues as a result of previously-mentioned threats, all of which are exacerbated by political instability and increasing population pressure in the ecosystem countries.

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Forest Resource Assessment, Ghana Country Profile, 2015. <http://www.fao.org/3/a-az221e.pdf>

<sup>123</sup> Forestry Commission of Ghana: National Forest Plantation Development Programme.

<http://fcghana.org/page.php?page=291&section=28&typ=1>

<sup>124</sup> Mittermeier RA. 2004. Hotspots Revisited: Earth's Biologically Richest and Most Endangered Ecoregions.

<sup>125</sup> USGS. 2015. *The Deforestation of the Upper Guinean Forest*. <https://eros.usgs.gov/westafrika/land-cover/deforestation-upper-guinean-forest>

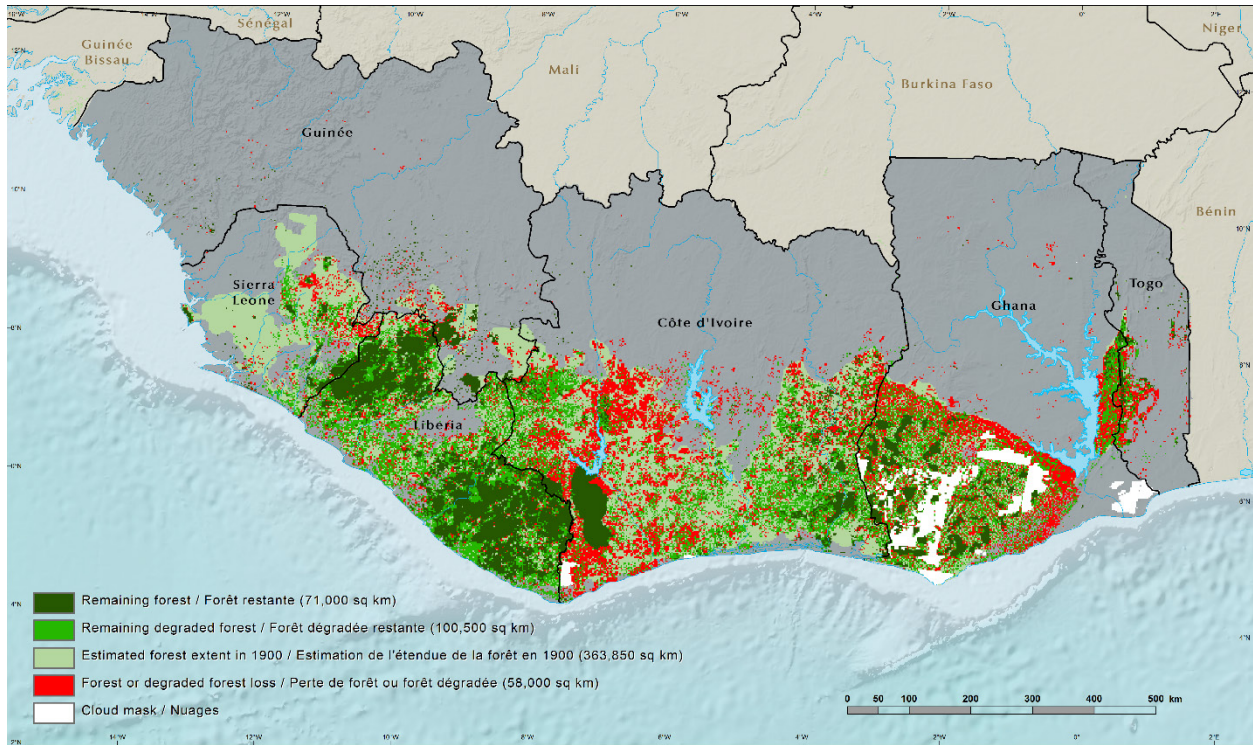


Figure 12. Upper Guinean Forest Change from 1975 to 2013<sup>126</sup>

Despite efforts beginning as early as the 1960s to designate and effectively manage protected areas in the countries of the Guinean Forest, protected areas remain small. Of the remaining 70,000 km<sup>2</sup> of dense forest in the Upper Guinean Forest, only 32,000 km<sup>2</sup> are in protected areas such as national parks, classified forests, nature reserves, and wildlife sanctuaries. Another source estimates that as of 2010, less than 10 percent of the ecoregion fell within protected areas.<sup>127</sup> Even within these protected areas, poor or non-existent management leaves these areas vulnerable to threats such as rampant wildlife hunting. Civil conflict in Côte d'Ivoire, Guinea, Sierra Leone, and Liberia leave little funding for managing protected areas and limit the amount of conservation investment that can be made in these countries.<sup>128</sup> Only 3% of the original extent of the hotspot is protected when considering only those areas classified in IUCN categories I to IV.<sup>129</sup>

<sup>126</sup> *The Deforestation of the Upper Guinean Forest*. USGS. <https://eros.usgs.gov/westafrica/land-cover/deforestation-upper-guinean-forest>

<sup>127</sup> Junker J, et al. 2015. Integrating wildlife conservation with conflicting economic land-use goals in a West African biodiversity hotspot. *Basic and Applied Ecology*, 16(2015): 690-702.

<sup>128</sup> Western Africa: Coastal areas of Guinea, Cote d'Ivoire, Liberia, and Sierra Leone. World Wildlife Fund. <https://www.worldwildlife.org/ecoregions/at0130>

<sup>129</sup> Mittermeier RA. 2004. Hotspots Revisited: Earth's Biologically Richest and Most Endangered Ecoregions.

### 6.3.4 THREATS

This section summarizes the primary threats to habitat and/or species in West Africa's moist broadleaf forest areas. The most significant cause of deforestation is attributable to agricultural expansion, with agriculture-forest mosaic now covering approximately 80% of the original Guinean Forest area.<sup>130</sup>

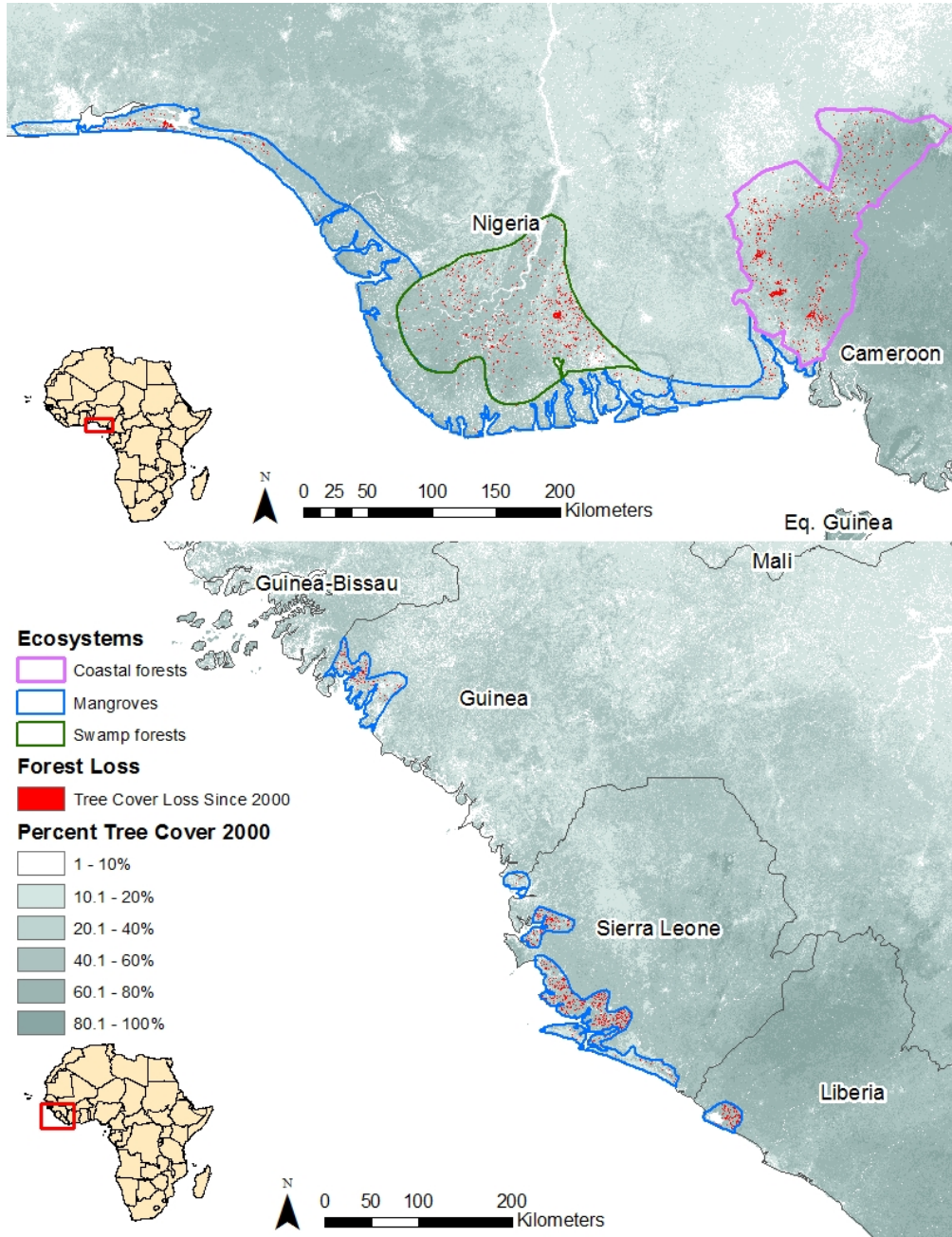


Figure 13. Deforested Mangrove Areas in West Africa

<sup>130</sup> Ecosystem Profile: Guinean Forests of West Africa Biodiversity Hotspot. 2015. Critical Ecosystem Partnership Fund.

**TABLE 9 THREATS TO MOIST BROADLEAF FORESTS**

CATEGORY OF THREAT	SPECIFIC THREATS
Human Intrusions and Disturbance	Conflict, Insecurity, and Refugees Economic Corridors and Infrastructure Development Dams and Natural System Modifications Agricultural Run-off, Poisoning and Industrial Pollution Disease Climate Change Residential and Commercial Development
Agricultural Development	Land-clearing for Subsistence Agriculture Commercial Agriculture Expansion (e.g., cacao, palm oil, rubber, etc.)
Resource Extraction and Energy Production	Legal and Illegal Logging Fuelwood and Charcoal Production Mining and Mineral Extraction Oil and Gas Extraction Associated Infrastructure Development
Exploitation of Biological Resources	Commercial Trade in Wild Plants and Animals Wildlife Trafficking Hunting and Bushmeat Invasive and Other Problematic Species, Genes

#### 6.4 COASTAL/MARINE AREAS

West Africa’s coastal and marine areas include the West African Marine Ecoregion (WAMER) and further south, the Gulf of Guinea. WAMER covers 3,500 km of coastline from Mauritania to Guinea and includes rocky cliffs, sandy beaches, sea grass prairies, mangroves, and estuaries. Due to cold coastal upwelling that makes plankton abundant, this marine area is one of the most diverse and important fishing areas in the world. It is home to over 1,000 fish species, dolphins, whales, five species of endangered marine turtles and the largest remaining breeding colony of monk seals on Earth. West Africa’s coast is also the seasonal home for six million migrating birds from Europe. Further, Cape Verde’s cold-water coral reefs are also considered a major site for endemism and a global hot spot for biodiversity.<sup>131</sup> Cold water reefs were also recently (2017) discovered off the coast of Ghana. The Gulf of Guinea’s flora and fauna are limited relative to WAMER due to low salinity, high turbidity, and an ancient climate regression to cooler waters that made conditions less favorable for marine species. However, the Gulf of Guinea does support some important fisheries, particularly near Ghana and Côte d’Ivoire, where coastal upwelling creates more favorable conditions for marine life.<sup>132</sup>

<sup>131</sup> World Wildlife Fund. 2017. West Africa Marine: About the area. [http://wwf.panda.org/what\\_we\\_do/where\\_we\\_work/west\\_africa\\_marine/area/](http://wwf.panda.org/what_we_do/where_we_work/west_africa_marine/area/)

<sup>132</sup> Jain P, et al. 2011. Gulf of Guinea. Britannica. <https://www.britannica.com/place/Gulf-of-Guinea>



## 6.4.1 THREATS

West Africa's coastline faces numerous interconnected challenges related to population growth, urbanization, coastal development, pollution, and climate change. West Africa's soft and sandy coastline makes it particularly vulnerable to erosion, which is exacerbated by coastward migration, poor land use planning, lack of adequate drainage systems and coastal settlements in fragile areas. Climate change will further increase the severity of erosion and flooding, putting coastal communities and ecosystems at risk.<sup>133</sup> Togo has already constructed a breakwater and jetties to protect 15 km of beach along its 56-kilometer coastline, but erosion is continuing to wear away the coast in other locations at a rate of up to 10 meters per year.<sup>134</sup> Coastal sedimentation has a negative impact on cold water reefs through turbidity decreased light penetration, as well as direct negative impacts on coral organisms which can become buried or require high levels of energy to expel dust<sup>135</sup>. Further, the same industries and developments that impact erosion (such as mining, agro-industries, and tourism) also impact water quality through pollution from shipping operations, oil spills, and poor waste and wastewater management. Only a small percentage of sewage is treated in West Africa, which means most untreated waste ends up in coastal areas with negative impacts on marine life, particularly fisheries, which are a critical resource for West Africa's food security and economy.<sup>136</sup>

### WEST AFRICA COASTAL AREAS MANAGEMENT PROGRAM (WACA)

The World Bank established WACA in 2015 to assist West African countries (Benin, Côte d'Ivoire, Ghana, Mauritania, São Tomé and Príncipe, Senegal, and Togo) in managing coastal erosion and flooding. WACA uses a mix of technical assistance and investments to reduce coastal vulnerability and promote climate-resilient coastal management. The program focuses on livelihoods, economic development, social welfare, and the growth of key industries such as agro-industries, fisheries, off-shore petroleum exploration and production, and tourism. WACA includes collaborative partnerships with WAEMU, the Nordic Development Fund and Africa Climate Investment Readiness Partnership Trust Fund.

For more information, see:

<http://pubdocs.worldbank.org/en/622041448394069174/1606426-WACA-Brochure.pdf>

## 6.5 MANGROVES<sup>137 138 139</sup>

The West African mangrove ecoregion is found along the coast of 10 countries in West Africa, from Senegal to Nigeria stretching along the coast of Central African countries such as Gabon, Democratic Republic of Congo (DRC) and Angola, covering more than 18,000 km<sup>2</sup>. In the more western regions,

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<sup>133</sup> West African Coastal Areas Management Program. 2016. Managing Coastal Risks in West Africa. <http://documents.worldbank.org/curated/en/624481467995659649/pdf/101185-REVISED-PUBLIC-WACA-KS3-Managing-Coastal-Risks-April-2016.p>

<sup>134</sup> Badjeck, Bohn and Sommerville. Climate Change and Water Resources in West Africa: Coastal Biophysical and Institutional Analysis. 2014. [https://www.climatelinks.org/sites/default/files/asset/document/WAVA\\_Coastal\\_Biophysical\\_and\\_Inst.pdf](https://www.climatelinks.org/sites/default/files/asset/document/WAVA_Coastal_Biophysical_and_Inst.pdf)

<sup>135</sup> Monteiro et al. 2008. Coral assemblages of Cabo Verde: preliminary assessment and description. [https://www.researchgate.net/publication/235633591\\_Coral\\_assemblages\\_of\\_Cabo\\_Verde\\_preliminary\\_assessment\\_and\\_description](https://www.researchgate.net/publication/235633591_Coral_assemblages_of_Cabo_Verde_preliminary_assessment_and_description)

<sup>136</sup> West African Coastal Areas Management Program. 2016. Reducing Marine and Coastal Pollution. <http://documents.worldbank.org/curated/en/397931467989463615/pdf/101187-REVISED-PUBLIC-WACA-KS5-Reducing-Marine-Coastal-Pollution-April-2016.pdf>

<sup>137</sup> Tognett S. Mangroves, Western Africa. World Wildlife Fund. <https://www.worldwildlife.org/ecoregions/at1401>

<sup>138</sup> USAID and USGS. Mangrove Changes. West Africa: Land Use and Land Cover Dynamics. <https://eros.usgs.gov/westafrica/mangrove>

<sup>139</sup> Feka N. 2014. Literature Review: West African Mangrove Conservation and Sustainable Use. USAID WA BiCC.

mangroves are found mostly in lagoon systems, while in the central and southern regions, they are found more in sediment deposits in river mouths. The Guinean mangroves extend from Senegal to Sierra Leone and are characterized by a large tidal range and high freshwater input. In this region, mangroves may extend 160 km inland. The largest river mouth that contains mangroves in the region is the Niger River Delta, where mangroves capture the majority of an estimated 20 million m<sup>3</sup> sediment load annually. Containing almost 50% of total mangroves in the region, Nigeria has the most widespread mangrove ecosystem in West Africa (see Figure 14). About 14% of West African mangroves are in Protected Areas, primarily in the Douala-Edua Faunal Reserve in Cameroon (1600 km<sup>2</sup>) and the Anlo-Keta Lagoon Complex and Songor Lagoon bar in Ghana.

While no endemic species are found in these mangroves, they are nonetheless important habitats for pelagic fish communities, migratory birds, and some threatened species of marine animals including the manatee (*Trichechus senegalensis*), soft-skinned turtle (*Trionyx triunguis*), and pygmy hippopotamus (*Hexaprotodon liberiensis heslopi*). Mangroves are some of the most productive ecosystems on the planet, thriving in places where many other plants cannot survive. They provide important functions such as coastal protection, provision of wood and non-wood products, salt production, biodiversity preservation, and provision of habitat, breeding, and migratory grounds for various marine organisms. Further, coastal communities rely on mangroves for fuelwood and fishing, where West Africa’s coastal fisheries contribute \$400 million annually to West Africa’s economy.

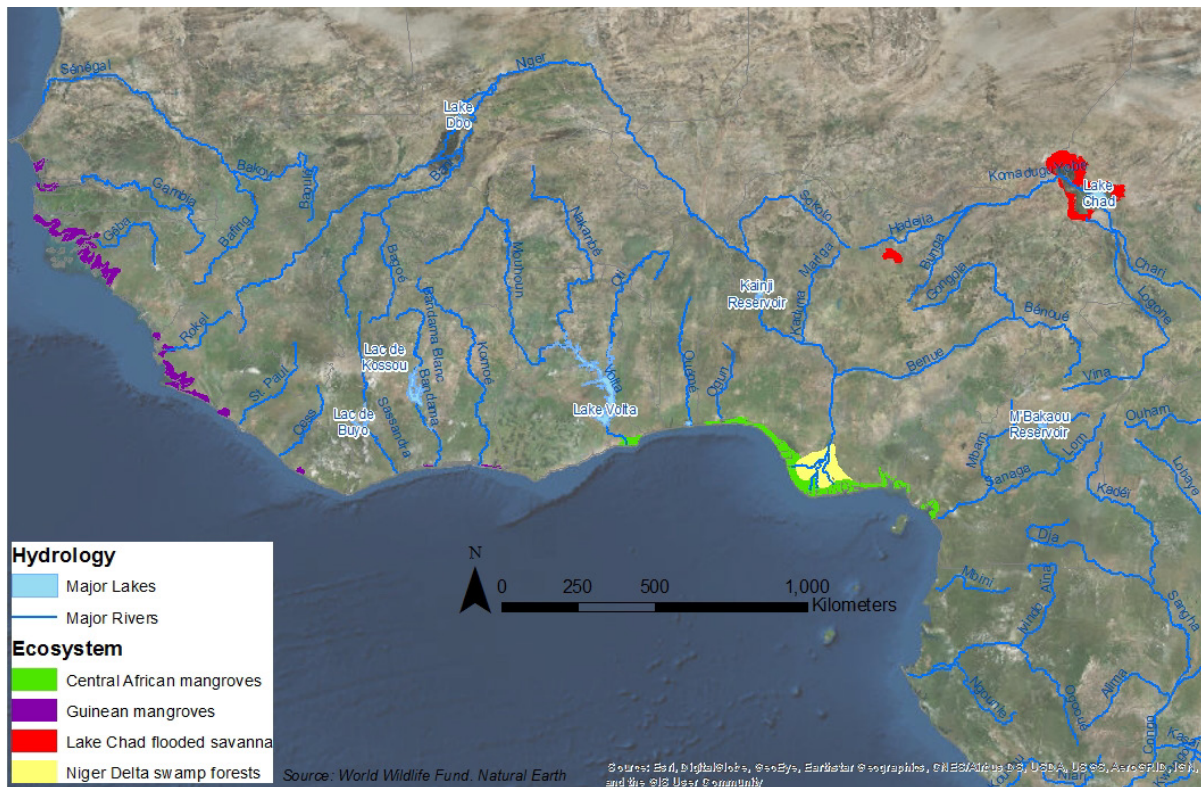


Figure 14. Rivers, Wetlands, and Mangroves of West Africa

### 6.5.1 THREATS

Mangroves are naturally spatially dispersed ecosystems; however, further fragmentation impacts biodiversity via decreases in abundance and diversity of fish, alteration of hydrologic and reproductive

patterns, and reduce habitat available for other organisms. Larger threats to mangroves are total loss of mangrove zones to development, deforestation, and agriculture. Climate change also poses an immediate threat to mangrove forests, and poor governance leads to weak management of mangroves.

- *Wood harvesting:* Along the coast, communities rely on mangroves for wood fuel for curing fish as well as construction material, while growing cities are demanding more and more charcoal, fuelwood, and agricultural land that drives coastal development and deforestation of mangrove forests.
- *Development:* Most strategic and economic cities in West Africa are found along the coast, where coastal resource-based industries are growing at a fast pace, particularly off-shore petroleum extraction. Impacts from the petroleum industry include coastal subsidence (exacerbated by climate change) and large-scale mortality of marine species from infrastructure development and oil spills. In Nigeria, seismic lines are located directly in the Niger Delta mangrove forests to support coastal oil development.
- *Agriculture:* Some varieties of African rice can grow in brackish water, which leads to the conversion of mangrove forests for agriculture. Mangroves located further upstream are also threatened by direct and indirect agricultural activities such as river damming and diversion for irrigation and fertilizer leaching. Conflicts also arise between fishing and farming communities over resource use.
- *Population growth:* West Africa has one of the fastest growing populations in the world, particularly in coastal areas and major urban centers. Population growth contributes to increasing demand for wood products as well as fisheries, which are supported by mangrove forests.
- *Climate Change:* Climate change will lead to rising sea levels, coastal erosion, and more frequent, intense, and unpredictable storm surges. Mangroves are intolerant of prolonged inundation, and will thus be directly affected by climate change impacts along the coast. These same coastal impacts will also affect coastal communities and the coastal resources they rely on, such as mangroves and fisheries. Projections indicate that 580,000 people in Cameroon may be forced to relocate due to sea level rise. Further, mangrove loss leads to a feedback effect that further exacerbates climate change. Mangroves are an extremely proficient carbon sink, as they can trap and store carbon longer than any other ecosystem. Thus, depletion of mangroves represents a loss of this stored carbon. Mangroves also buffer coastal populations from storm surges and help reduce coastal erosion, services that will be lost with their deforestation.
- *Weak governance:* The West Africa Regional Mangroves and Climate Change workshop<sup>140</sup> participants identified a lack of overarching policies and strategies guiding mangrove management as a major challenge, as well as a lack of coherence between policy, practice, and research. Different institutions and ministries can have overlapping responsibilities when it comes to managing mangrove forests, but they often follow their own mandates without adequate communication with each other.

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<sup>140</sup> USAID/West Africa. 2014. Workshop Report: West Africa Regional Mangroves and Climate Change. [http://www.fcmcglobal.org/documents/Mangroves\\_Report.pdf](http://www.fcmcglobal.org/documents/Mangroves_Report.pdf)

## 6.6 WEST AFRICAN LAKES AND RIVERS

West Africa has 28 transboundary watersheds, eleven of which are major river basins. The four largest river basins (Volta, Niger, The Gambia, and Senegal) have a total watershed area of 3 million km<sup>2</sup>, with a combined distance of 8,700 km.<sup>141</sup> The Fouta Djallon Highlands in Guinea is the source of seven major rivers in the region: the Niger, The Gambia, Senegal, Corubal, Kaba, Kolente, and Kayenga-Géba.<sup>142</sup> The Niger is West Africa's largest river at 4,180 km. It passes through most of the region's climatic zones before merging with the Benue River, its major tributary, and draining into the Gulf of Guinea through the Niger Delta in Nigeria.<sup>143</sup> Outside of Cape Verde, West African countries all share at least one river with a bordering country. The transboundary nature of most of the region's rivers makes effective water resource management a challenge, as many countries rely on resources from rivers that originate in other countries.<sup>144</sup>

Lake Chad is the largest lake in West Africa, and the fourth largest on the continent. It covers 2,500 km<sup>2</sup> at the borders of Cameroon, Chad, Niger, and Nigeria. Despite its relatively large size, Lake Chad is covers only 10% of its 1960 territory. The lake is divided into a northern and southern basin by a swamp belt containing islands, reed beds and open water. During seasonal flooding, local pastoralists make use of the yaéré grasslands in this area. Lake Chad supports two species of near-endemic passerine birds, as well as West African manatees, which can be found in the Baniangi, Logone and Chari River tributaries of Lake Chad. Nigeria's Chad Basin National Park (2,258 km<sup>2</sup>) protects a small area of the Lake Chad basin.<sup>145</sup> Another lake of note in the region is Lake Volta in Ghana, which is one of the largest man-made lakes in the world, covering 8,502 km<sup>2</sup>. It was created when the Akosombo Dam was built on the Volta River, which, in addition to creating a large reservoir upstream, also flooded 15,000 homes and led to the resettlement of 78,000 people. The dam's hydroelectric power plant generates 912 megawatts of electricity, while the lake is a major fishing ground and source of irrigation water for farms in the Accra plains below the dam site.<sup>146</sup>

### 6.6.1 THREATS

West African lakes and rivers face both overlapping and diverging threats. Due to the transboundary nature of both Lake Chad and most of West Africa's rivers, effective regional water resource management is crucial, but lacking, which allows for unsustainable development and over-withdrawal of water resources. Lakes and rivers also face the current and impending threats of a growing population and economic development, which increases demand for water resources, coupled with a changing climate. Freshwater withdrawal for agriculture, industry and domestic use is projected to triple by 2025 while the availability of freshwater is expected to continue to decline. Further, land-use changes, agriculture and land degradation, including soil erosion and deforestation, increase runoff and weaken

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<sup>141</sup> See the USAID Background Paper for the ARCC West Africa Regional Climate Change Vulnerability Assessment for a table showing the details of the major West African river basins: [https://pdf.usaid.gov/pdf\\_docs/PA00JNGV.pdf](https://pdf.usaid.gov/pdf_docs/PA00JNGV.pdf)

<sup>142</sup> Baptista et al. 2013. Background Paper for the ARCC West Africa Regional Climate Change Vulnerability Assessment. USAID. [https://pdf.usaid.gov/pdf\\_docs/PA00JNGV.pdf](https://pdf.usaid.gov/pdf_docs/PA00JNGV.pdf)

<sup>143</sup> USGS Physical Geography of West Africa. <https://eros.usgs.gov/westafrica/physical-geography>

<sup>144</sup> Baptista et al. 2013. Background Paper for the ARCC West Africa Regional Climate Change Vulnerability Assessment. USAID. [https://pdf.usaid.gov/pdf\\_docs/PA00JNGV.pdf](https://pdf.usaid.gov/pdf_docs/PA00JNGV.pdf)

<sup>145</sup> IUCN. 2015. An IUCN situation analysis of terrestrial and freshwater fauna in West and Central Africa – Supplementary Information. <https://portals.iucn.org/library/sites/library/files/documents/SSC-OP-054-Supp.pdf>

<sup>146</sup> Bhutia TK and G Lotha. 2017. Lake Volta. Encyclopaedia Britannica. <https://www.britannica.com/place/Lake-Volta>

precipitation mechanisms, which in turn decreases freshwater supply. Non-renewable aquifers, specifically groundwater resources, are also declining across the region, which will increase demand for surface water.<sup>147</sup> Other sources of freshwater pollution include household waste and wastewater (particularly where municipal service delivery is lacking), and industrial effluents, especially from gold mining.<sup>148</sup> Finally, Lake Chad faces the complex issue of insecurity resulting from Boko Haram's activities in the region, which have impacted lakeside infrastructure and economic activities and displaced many communities.<sup>149</sup>

## 6.7 WEST AFRICA INLAND AND COASTAL WETLANDS

Wetlands are defined as areas of land saturated with water, either permanently or seasonally, such that it takes on the characteristics of a distinct ecosystem. Wetlands provide numerous environmental, social, and economic ecosystem services.<sup>150</sup> The most important roles FAO identified for wetlands are described below:

*Preservation of biological diversity:* Wetlands such as tidal and freshwater marshes, coastal lagoons, and estuaries, serve as vitally important breeding grounds for many species of shrimp, fish, and waterfowl. Wetlands can also serve as essential staging areas for waterfowl in their migration routes. All types of wetlands may harbor unique plants and animals.

*Production of goods:* Wetlands are extremely productive ecosystems. Estuaries and tidal wetlands, particularly mangroves, serve as important nursery areas for most species of fish and shrimp which are later caught offshore. Shallow water areas are, in general, rich fishing grounds. Flood plains are important grazing areas for cattle and wildlife and vital spawning grounds for many fish species. Swamp forest may yield valuable timber.

*Production of services:* Wetlands support local climatic features such as contributing to local rainfall and likewise may serve as natural, low-cost water purification systems (herbaceous swamps), recreation areas (hunting, fishing, and boating), buffer zones to protect against floods, and/or storm barriers to reduce or prevent coastal erosion (e.g., mangroves).<sup>151</sup>

Wetlands are typically classified as coastal wetlands or inland wetlands. Tidal coastal wetlands and estuarine environments in West Africa typically support mangroves, described above. Inland wetlands are typically freshwater (non-tidal) including the Senegal, Niger and Longone-Chari River floodplains, inland deltas (such as the Niger Delta in Mali) and lacustrine wetlands (such as near Lake Chad). The floodplains of the Niger, Senegal, Gambia and Volta rivers play an important role in moderating recurrent rainfall deficits in the Sahel as they travel from high-rainfall areas of the Sudano-Guinean

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<sup>147</sup> El Vilaly and El Vilaly. 2013. Climate Change and Water Resources in West Africa: Transboundary River Basins. USAID.

[https://www.climatelinks.org/sites/default/files/asset/document/Transboundary%2520River\\_CLEARED.pdf](https://www.climatelinks.org/sites/default/files/asset/document/Transboundary%2520River_CLEARED.pdf)

<sup>148</sup> Pare S and LY Bonzi-Coulibaly. 2013. Water quality issues in West and Central Africa: present status and future challenges.

<sup>149</sup> Lajaunie ML, et al. 2015. Lake Chad Development and Climate Resilience Action Plan. World Bank.

<http://documents.worldbank.org/curated/en/489801468186879029/pdf/102851-v2-WFP-P149275-Box394847B-PUBLIC-v2-main-report-Lake-Chad-Development-and-Action-Plan-English.pdf>

<sup>150</sup> Baptista et al. 2013. Background Paper for the ARCC West Africa Regional Climate Change Vulnerability Assessment. USAID.

[https://pdf.usaid.gov/pdf\\_docs/PA00JNGV.pdf](https://pdf.usaid.gov/pdf_docs/PA00JNGV.pdf)

<sup>151</sup> FAO, "Chapter 7: Environmental considerations in irrigation development", *Irrigation potential in Africa: A basin approach*, n.d.,

<<http://www.fao.org/docrep/W4347E/w4347e10.htm>>

region through drier Sahel zones. These wetlands provide important ecological and economic revenues, such as the Niger Inland Delta, which is the largest wetland in West Africa. It supports 550,000 people, including 80,000 fishermen,<sup>152</sup> as well as the threatened West African Manatees, hippos, crocodiles, 110 species of fish and countless wetland birds.<sup>153</sup>

West African countries are home to 60 Ramsar wetland sites. The Ramsar convention is an intergovernmental treaty to protect and manage wetlands and their resources.<sup>154</sup> A complete list of Ramsar Sites by country can be found in Annex C: Ramsar Sites in West Africa.

### 6.7.1 THREATS

Threats to wetlands include impoundments, irrigation, oil exploitation, over-exploitation of resources, and invasive alien species.<sup>155</sup> Population growth and climate change will exacerbate these threats. Erosion and sea level rise will impact coastal wetlands, particularly mangrove forests, and increase the risk of saltwater intrusion into surface water and groundwater aquifers, which then threatens farming along the coast.<sup>156</sup>

Additionally, Adekola and Mitchell (2011) list the following specific threats as the main challenges to the Niger inland delta:

- Aquaculture, which threatens mangroves, and by extension, livelihoods that depend on mangroves
- Oil exploration/exploitation, which increases marine species' mortality and reduces plant photosynthetic activity
- Dredging, which directly impacts mangroves and hydrology, increases erosion and siltation, and causes estuarine acidification and heavy metal pollution
- Invasive plants, which decrease genetic diversity
- Damming, which reduces water and sediment flow
- Human activities (deforestation; unsustainable hunting, overfishing, and logging) which results in a loss of flora and fauna
- Wetland reclamation (from agriculture and urbanization) which results in a loss of flora and fauna
- Climate change (mentioned above)
- Industrial and domestic effluents which increase soil and water pollution
- Indiscriminate use of fertilizer, which causes water pollution<sup>157</sup>

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<sup>152</sup> Baptista et al. 2013. Background Paper for the ARCC West Africa Regional Climate Change Vulnerability Assessment. 2013. USAID. [https://pdf.usaid.gov/pdf\\_docs/PA00JNGV.pdf](https://pdf.usaid.gov/pdf_docs/PA00JNGV.pdf)

<sup>153</sup> Mallon DP, et al. 2015. An IUCN situation analysis of terrestrial and freshwater fauna in West and Central Africa. Supplemental Information. Occasional Paper of the IUCN Species Survival Commission No. 54.

<sup>154</sup> About the Ramsar Convention. Ramsar. <https://www.ramsar.org/about-the-ramsar-convention>

<sup>155</sup> Mitchell. SA. 2013. The status of wetlands, threats and the predicted effect of global climate change: the situation in Sub-Saharan Africa.

<sup>156</sup> Bapstista et al. Background Paper for the ARCC West Africa Regional Climate Change Vulnerability Assessment. 2013. USAID. [https://pdf.usaid.gov/pdf\\_docs/PA00JNGV.pdf](https://pdf.usaid.gov/pdf_docs/PA00JNGV.pdf)

<sup>157</sup> Adekola O and G Mitchell. 2011. The Niger Delta wetlands: threats to ecosystem services, their importance to dependent communities and possible management measures. <https://www.tandfonline.com/doi/abs/10.1080/21513732.2011.603138>

## 6.8 MARINE AND FRESHWATER FISHERIES

West Africa is home to some of the most productive fisheries in the world due to coastal cold-water upwelling that bring nutrients to the surface, attracting an abundance of marine life.<sup>158</sup> West Africa's fisheries are crucial for food security, employment, and the regional economy. Fisheries in the WAMER are responsible for generating \$400 million annually<sup>159</sup> while fisheries production in West Africa's major river systems are valued at over \$200 million annually.<sup>160</sup> While fishing has contributed to local communities for centuries, decades of over-fishing and increasing industrial exploitation have depleted over 50% of West Africa's fisheries. Local artisanal fishers must now travel further and further, while competing with industrial trawlers, to reach depleted fish stocks.<sup>161</sup> There are two main sub-regional organizations of West African countries responsible for sustainably managing West African fishery resources. The Sub-Regional Fisheries Commission includes Cape Verde, the Gambia, Guinea, Guinea-Bissau, Mauritania, Senegal, and Sierra Leone. Almost 80% of fish caught in these countries are small pelagic species like sardinella, horse mackerel, and shad.<sup>162</sup> The Fishery Committee for the West Central Gulf of Guinea includes Liberia, Côte d'Ivoire, Ghana, Togo, Benin, and Nigeria. The major fishery resources for these countries are pelagic species like sardines, anchovy, Spanish mackerel, and chestnut bur; large pelagic fish like tuna; and demersal species like mollusk and shellfish.<sup>163</sup>

### 6.8.1 THREATS

The greatest threat to West Africa's marine fisheries is illegal, unreported, and unregulated (IUU) fishing, which is estimated to account for between one third and half of the total catch in the region. The main types of IUU fishing are unlicensed foreign industrial vessels and artisanal vessels, fishing in prohibited areas, and use of illegal nets. Estimates from 2005 indicate that Guinea is losing \$110 million a year and Sierra Leone is losing \$29 million a year due to IUU fishing.<sup>164</sup> Chinese vessels, which are mainly trawlers (one of the most destructive fishing methods), are increasingly taking advantage of weak fisheries management to unsustainably exploit West African fisheries. Between 2000 and 2006, and 2011 and 2012, there were 183 documented cases of IUU Fishing by Chinese companies in only six West African countries (The Gambia, Guinea, Guinea-Bissau, Mauritania, Senegal, and Sierra Leone).<sup>165</sup> As fish stocks decrease, fishers resort to more destructive fishing techniques, such as dynamite, bottom trawling and beach seining.<sup>166</sup> Other threats to fisheries include pollution, which reduces the

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<sup>158</sup> WWF. 2017. West Africa Marine: About the area. [http://www.panda.org/what\\_we\\_do/where\\_we\\_work/west\\_africa\\_marine/area/](http://www.panda.org/what_we_do/where_we_work/west_africa_marine/area/)

<sup>159</sup> WWF. 2017. Depletion of fisheries could affect millions in west Africa.

[http://www.panda.org/what\\_we\\_do/where\\_we\\_work/west\\_africa\\_marine/area/fisheries/](http://www.panda.org/what_we_do/where_we_work/west_africa_marine/area/fisheries/)

<sup>160</sup> Smith KG, et al. 2009. The Status and Distribution of Freshwater Biodiversity in West Africa.

[https://www.iucn.org/downloads/the\\_status\\_and\\_distribution\\_of\\_freshwater\\_biodiversity\\_in\\_western\\_africa.pdf](https://www.iucn.org/downloads/the_status_and_distribution_of_freshwater_biodiversity_in_western_africa.pdf)

<sup>161</sup> Greenpeace. 2015. Africa's Fisheries' Paradise at a Crossroads: Investigating Chinese Companies Illegal Fishing Practices in West Africa.

[https://www.greenpeace.org/africa/Global/africa/graphics/Scam%20on%20the%20African%20Coast/AFRICA%E2%80%99S%20FISHERIES%E2%80%99%20PARADISE%20AT%20A%20CROSSROADS\\_FULL%20REPORT.pdf](https://www.greenpeace.org/africa/Global/africa/graphics/Scam%20on%20the%20African%20Coast/AFRICA%E2%80%99S%20FISHERIES%E2%80%99%20PARADISE%20AT%20A%20CROSSROADS_FULL%20REPORT.pdf)

<sup>162</sup> Sub-Regional Fisheries Commission. Overview. <http://www.spcsrp.org/fr/content/pr%C3%A9sentation#mandat>

<sup>163</sup> Fishery Committee for the West Central Gulf of Guinea. 2010. Our Fishery Resources. <https://www.fcwc-fish.org/fisheries/our-fishery-resources.html>

<sup>164</sup> Daniels A, et al. 2016. Western Africa's missing fish: The impacts of IUU fishing and under-reporting catches by foreign fleets. ODI.

<https://www.odi.org/sites/odi.org.uk/files/resource-documents/10665.pdf>

<sup>165</sup> Greenpeace. 2015. Africa's Fisheries' Paradise at a Crossroads: Investigating Chinese Companies Illegal Fishing Practices in West Africa.

[https://www.greenpeace.org/africa/Global/africa/graphics/Scam%20on%20the%20African%20Coast/AFRICA%E2%80%99S%20FISHERIES%E2%80%99%20PARADISE%20AT%20A%20CROSSROADS\\_FULL%20REPORT.pdf](https://www.greenpeace.org/africa/Global/africa/graphics/Scam%20on%20the%20African%20Coast/AFRICA%E2%80%99S%20FISHERIES%E2%80%99%20PARADISE%20AT%20A%20CROSSROADS_FULL%20REPORT.pdf)

<sup>166</sup> WWF. 2017. Depletion of fisheries could affect millions in west Africa.

[http://www.panda.org/what\\_we\\_do/where\\_we\\_work/west\\_africa\\_marine/area/fisheries/](http://www.panda.org/what_we_do/where_we_work/west_africa_marine/area/fisheries/)

productivity of fisheries,<sup>167</sup> and climate change. Climate change threatens coastal habitats for fish while also altering species distribution. Coupled with a growing population, climate change and overfishing will lead to a deficit between supply of fish and demand for protein, as well as losses in livelihoods and regional economic security.<sup>168</sup>

In addition to overfishing and climate change, West Africa's freshwater fisheries face additional, unique threats, as identified by Smith et al. (2009):<sup>169</sup>

- Deforestation, which causes runoff and sedimentation in rivers and lake systems
- Water pollution from urban development, industrial waste, and pesticides, which impacts habits and reduces ecosystem productivity
- Dams, which alter flow regimes, block migration routes, and reduce floodplains
- Invasive species, such as water hyacinth, which block transportation; damage fishery, irrigation, hydroelectric, and water supply equipment; increase evapo-transpiration; and reduce light penetration in lakes

## 6.9 TERRESTRIAL FAUNA AND FLORA

According to IUCN, there are 762 different threatened or near threatened animal species (terrestrial and aquatic) that live in Benin, Burkina Faso, Cote d'Ivoire, Cape Verde, Cameroon, Chad, The Gambia, Ghana, Guinea, Guinea-Bissau, Mali, Niger, Nigeria, Liberia, Senegal, Sierra Leone, and Togo. Nearly all these species are listed as Vulnerable (261), Endangered (200), or Critically Endangered (100). (See Annex F for a complete list of these species.) These countries have 120 endemic vertebrate species (27 mammals, 13 birds, three chameleons, 76 amphibians, and one shark or ray), 74 of which are identified by IUCN as Threatened (20 mammals, eight birds, two chameleons, and 44 amphibians).<sup>170</sup> There are 829 species of plants that are threatened or near threatened in these countries. Like the animals in West Africa, nearly all plant species are listed as Vulnerable (383), Endangered (216), or Critically Endangered (141). According to IUCN, no endemic plant species have been recorded in Benin, Burkina Faso, Cote d'Ivoire, Cape Verde, Cameroon, Chad, The Gambia, Ghana, Guinea, Guinea-Bissau, Mali, Niger, Nigeria, Liberia, Senegal, Sierra Leone, or Togo.<sup>171</sup>

Cameroon has, by far, the highest rate of endemism among these countries, with 77 endemic species, largely attributable to its high number of endemic amphibians. The Cameroon Highlands is an exceptionally important habitat for amphibians in West Africa. The highlands contain 33 endemic amphibian species that are critically endangered or endangered. Drainage, forest clearance, and conversion to agricultural are among the most prominent reasons for habitat loss and degradation, which are the predominant threats to amphibians in West Africa.

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<sup>167</sup> West African Coastal Areas Management Program. 2016. Reducing Marine and Coastal Pollution. <http://documents.worldbank.org/curated/en/397931467989463615/pdf/101187-REVISED-PUBLIC-WACA-KS5-Reducing-Marine-Coastal-Pollution-April-2016.pdf>

<sup>168</sup> Lam VVY, et al. 2012. Climate change impacts on fisheries in West Africa: implications for economic, food and nutritional security.

<sup>169</sup> Smith KG, et al. 2009. The Status and Distribution of Freshwater Biodiversity in West Africa.

[https://www.iucn.org/downloads/the\\_status\\_and\\_distribution\\_of\\_freshwater\\_biodiversity\\_in\\_western\\_africa.pdf](https://www.iucn.org/downloads/the_status_and_distribution_of_freshwater_biodiversity_in_western_africa.pdf)

<sup>170</sup> These totals represent the sum of endemism in each country, as reported by IUCN. Some double counting may exist.

<sup>171</sup> IUCN Red List version 2017-3: Tables 6a, 6b, and 8c. Last Updated: 05 December 2017. Numbers reflect the total number of species recorded for each country for comprehensively assessed taxonomic groups only.



WWF has identified global “priority species” that it considers especially important for the ecosystem or for people. Among the list, WWF has identified three species in West Africa (See the table below).

TABLE 10 WWF PRIORITY SPECIES IN WEST AFRICA				
NAME	SCIENTIFIC NAME	LOCATION IN TARGET COUNTRIES	IUCN STATUS	YEAR ASSESSED
<b>Chimpanzee</b>	<b><i>Pan troglodytes</i> spp</b>		<b>EN</b>	<b>2016</b>
• Western chimpanzee	<i>P. t. verus</i>	Côte d'Ivoire, Ghana, Guinea, Guinea Bissau, Sierra Leone, Nigeria, Liberia, Mali, Senegal, (extinct in Gambia, Burkina Faso, Benin, Togo)		
• Central chimpanzee	<i>P. t. troglodytes</i>	Cameroon		
• Nigeria-Cameroon chimpanzee	<i>P. t. ellioti</i>	Nigeria, Cameroon		
<b>African Elephant</b>	<b><i>Loxodonta africana</i> spp</b>		<b>VU</b>	<b>2008</b>
• Savannah elephant	<i>Loxodonta africana africana</i>	Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Ghana, Guinea, Liberia, Mali, Nigeria, Senegal Sierra Leone, Togo (extinct in Gambia)		
• Forest elephant	<i>Loxodonta africana cyclotis</i>	Grassy plains and woodlands Côte d'Ivoire, Liberia, Ghana		
<b>Western gorilla</b>	<b><i>Gorilla Gorilla</i> spp</b>		<b>CR</b>	<b>2016</b>
• Cross River gorilla	<i>G. g. diehli</i>	South-eastern Nigeria and western Cameroon		
• Western Lowland Gorilla	<i>G. g. gorilla</i>	Cameroon		
<b>African teak</b>	<b><i>Pericopsis elata</i></b>		<b>EN</b>	<b>1998</b>
		Cameroon, Côte d'Ivoire, Ghana, Nigeria		
<b>Giraffe</b>	<b><i>Giraffa camelopardalis</i></b>		<b>VU</b>	<b>2016</b>
		Cameroon, Niger, Chad (extinct in Guinea and Nigeria)		
<b>African Lion</b>	<b><i>Panthera leo</i></b>		<b>VU</b>	<b>2016</b>
		Benin, Burkina Faso, Cameroon, Côte d'Ivoire, Ghana, Guinea, Guinea Bissau, Niger, Nigeria, Senegal, Mali, Togo (extinct in Sierra Leone)		

Source: WWF Priority Species. [http://wwf.panda.org/knowledge\\_hub/endangered\\_species/](http://wwf.panda.org/knowledge_hub/endangered_species/)

IUCN Red List. <http://www.iucnredlist.org>

Pygmy Hippopotamus *Choeropsis liberiensis* is endemic to the Upper Guinea Forest with range countries including Guinea, Sierra Leone, Liberia, and Côte d'Ivoire.

### 6.9.1 THREATS TO WILDLIFE

Habitats and wildlife in West Africa are suffering from a variety of threats including deforestation; illegal hunting; bushmeat trade; civil conflict and war; pollution; energy production and mining; infrastructure development; disease; invasive species; and climate change.<sup>172</sup> As summarized in IUCN's 2015 Situation Analysis of Terrestrial and Freshwater Fauna in West and Central Africa, extensive habitat loss in West Africa is largely responsible for the current status of wildlife in the region. Illegal logging, accounting for approximately 80% of timber extraction from Ghana, may have contributed to the significant decline (50%) in the abundance of forest understory bird species.<sup>173</sup>

Expanding agricultural land for commodities such as rubber, cotton, oil palm, cocoa, and crops have been the cause of extensive clear-cutting activities. Additionally, habitat destruction (forest loss and pollution) resulting from mining activities is significant in the "mineral-rich" West Africa. Finally, bushmeat hunting, poaching, and illegal international trade of wildlife is threatening wildlife even within intact and protected areas of the region. These three threats are described in more detail below.

#### ILLEGAL HUNTING AND BUSHMEAT TRADE

Relatively less research is available on bushmeat hunting in West Africa than in the neighboring Central Africa region, but illegal hunting and bushmeat trade is recognized as a serious threat to wildlife in West Africa<sup>174</sup> (See Figure 15). Bushmeat serves as the primary source of animal protein for many rural and forest areas of West Africa where fish and livestock are not feasible alternatives. Even in urban areas where more protein options exist, bushmeat is sometimes the preferred choice for reasons such as cost and taste. Bushmeat is also a source of income, particularly in rural communities. Hunting for bushmeat provides a steady income, and it "serves as a reliable fallback in times of financial need". For example, in Côte d'Ivoire, the shrinking cotton economy for the decade between 1985 and 1995 spurred economic diversification initiatives that included subsistence and market hunting.<sup>175</sup>

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<sup>172</sup> Mallon DP, et al. 2015. An IUCN situation analysis of terrestrial and freshwater fauna in West and Central Africa. Occasional Paper of the IUCN Species Survival Commission No. 54. Gland, Switzerland and Cambridge, UK: IUCN. x + 162pp.

<sup>173</sup> Arcilla N, et al., 2015. Severe declines of understory birds follow illegal logging in Upper Guinea forests of Ghana, West Africa. *Biological Conservation*, 188:41-49. <https://doi.org/10.1016/j.biocon.2015.02.010>

<sup>174</sup> Mallon DP, et al. 2015. An IUCN situation analysis of terrestrial and freshwater fauna in West and Central Africa. Occasional Paper of the IUCN Species Survival Commission No. 54. Gland, Switzerland and Cambridge, UK: IUCN. x + 162pp. FAO. Illegal Hunting and Trade: Implications for Livelihoods, Sustainable Forest Management and Wildlife. Twentieth Session of the African Forestry and Wildlife Commission. January 2016.

<sup>175</sup> Mallon DP, et al. 2015. An IUCN situation analysis of terrestrial and freshwater fauna in West and Central Africa. Occasional Paper of the IUCN Species Survival Commission No. 54. Gland, Switzerland and Cambridge, UK: IUCN. x + 162pp.

Demand for bushmeat driven by human population growth, urbanization, and wealth is causing an increase in commercialization of illegal hunting and breaking down traditional taboos associated with killing particular species or use of nontraditional hunting timing and techniques.<sup>176</sup>

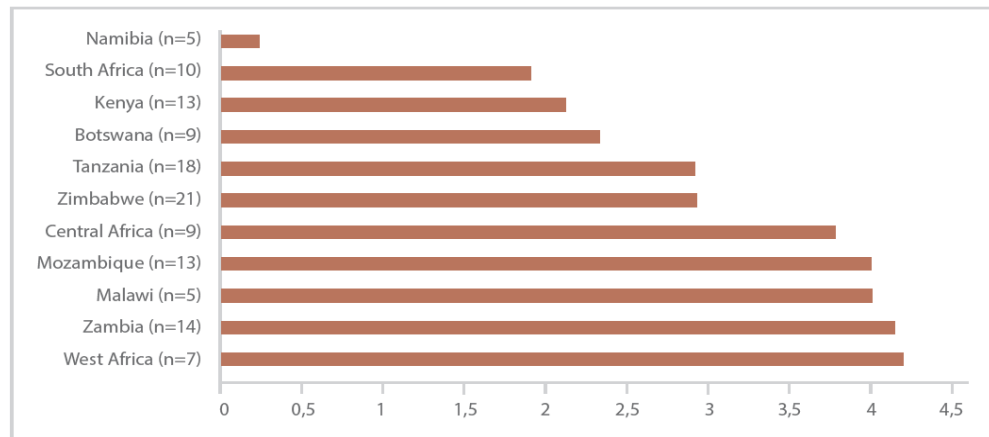


Figure 15. Threat of Illegal Bushmeat Hunting to Wildlife. Mean scores given to illegal bushmeat hunting as a threat to wildlife in protected areas during a survey of experts affiliated with each protected area (n=133). Respondents were asked to indicate the severity of each threat to wildlife in the protected area on a scale of 0-5 (where 5 is very serious, and 0 not an issue at all) Source: Lindsey et al. (2015)

In a recent study, illegal hunting of bushmeat was identified as a major contributor to wildlife population declines—an even greater threat to wildlife than the illegal hunting of larger animals such as elephants and rhinos.<sup>177</sup>

Bushmeat hunting, escalated by expanding human populations, is the primary cause of primate loss in West Africa.<sup>178</sup> An assessment of one market on border between Liberia and Côte d'Ivoire estimated that an average of 33 primates were exchanged daily. The most abundant primate being sold was the *Cercopithecus petaurista* (Lesser spot-nosed monkey), comprising 25% of all primates being sold at this market. Overall, the study estimates that primates in Liberia's Konobo District are “likely being hunted at rates approaching unsustainable levels and are in danger of extirpation”.

Hunting has also contributed to the decline of several large animals in West Africa. Savanna elephants in West Africa have small, isolated populations that are further declining as result of poaching. Nigeria and Côte d'Ivoire lost an estimated 1,000 elephants in recent decades as a result of poaching.<sup>179</sup> The W-Arly-Pendjari (WAP) (located on the borders of Niger, Burkina Faso, and Benin) elephant population remains as the only area in West or Central Africa with over 2,000 savanna elephants.<sup>180</sup> Hunters specializing in elephants are motivated by ivory, but the meat is a profitable by-catch of the hunts with potential earnings as high as \$5,000 for an adult male.<sup>181</sup> The Black Rhinoceros *Diceros bicornis* formerly

<sup>176</sup> FAO. 2016. Illegal Hunting and Trade: Implications for Livelihoods, Sustainable Forest Management and Wildlife. Twentieth Session of the African Forestry and Wildlife Commission. January 2016.

<sup>177</sup> Lindsey P, et al. 2015. Bushmeat, wildlife-based economies, food security and conservation: Insights into the ecological and social impacts of the bushmeat trade in African savannahs. FAO/Panthera/Zoological Society of London/SULi Report, Harare. 58 pages. <http://www.fao.org/publications/card/en/c/8ab57c73-582f-475e-a4e8-a06032158750>

<sup>178</sup> Covey R and WS McGraw. 2014. Monkeys in a West African Bushmeat Market: Implications for Cercopithecoid Conservation in Eastern Liberia. *Tropical Conservation Science*. 7(1): 115-125. <https://doi.org/10.1177/194008291400700103>

<sup>179</sup> Bouché P, et al. 2011. Will Elephants Soon Disappear from West African Savannahs? *PLoS One* 6(6): e20619 <https://doi.org/10.1371/journal.pone.0020619>

<sup>180</sup> Chase MJ, et al. 2016. Continent-wide survey reveals massive decline in African savannah elephants. *PeerJ* 4:e2354 <https://doi.org/10.7717/peerj.2354>

<sup>181</sup> Mallon DP, et al., 2015. An IUCN situation analysis of terrestrial and freshwater fauna in West and Central Africa. Occasional Paper of the IUCN Species Survival Commission No. 54. Gland, Switzerland and Cambridge, UK: IUCN. x + 162pp.

ranged the Sudanian-Guinea Savanna and is rated Critically Endangered by IUCN due to the sharp decline in populations largely resulting from poaching.<sup>182</sup> However, the Black Rhino is largely considered regionally extinct.<sup>183</sup> The lion in West Africa has undergone a catastrophic collapse with less than 250 adults estimated to remain in the entire West African region. One of the primary drivers of their population decline is the depletion of their prey base through unsustainable hunting practices.<sup>184</sup>

Ecological effects of unsustainable hunting are broad-reaching and extend beyond the immediate and obvious effects of a reduction in the abundance of species being hunted. Animals contribute to plant regeneration, the health of food webs, and plant diversity, and hunting can cause indirect effects on the ecosystem through alterations of these processes. “Large, low-density, slow-reproducing and specialist species, such as elephants, large primates and large carnivores...tend to be more vulnerable to increases in predation pressure than smaller, fast-reproducing and high-density generalist species, such as rodents and small duikers”. Elephants are considered “large forest architects” as they are critical to effective and wide-ranging seed dispersal for many plant species, and the loss of elephant populations can result in significant ecosystem changes.<sup>185</sup>

## **AGRICULTURE**

Agriculture expansion is the primary cause of deforestation in West Africa. Approximately 80% of the original forested landscape has been converted to forest-agriculture mosaics. Increasing human population density and/or immigration have correlated with increases in crop land. In Côte d’Ivoire, for example, “the road infrastructure left by the timber concessionaires facilitated, at least partly, an influx of agricultural migrants from the savanna regions of Côte d’Ivoire and neighboring Burkina Faso and Mali which led to expansion of cocoa and coffee”. Agriculture expansion and deforestation have resulted in extensive habitat loss and fragmentation in West African forests. Habitat loss and fragmentation is one of the primary threats to amphibians in West Africa, which also threatens many species of birds and mammals.<sup>186</sup>

Primary crops of concern in West Africa are oil palm, cocoa, and cotton. Each are described below in more detail.

**Oil Palm:**<sup>187</sup> It is difficult to determine the extent to which cultivation of oil palm is responsible for past deforestation in West Africa, but it poses an enormous threat to the future of forested areas in the region. “Nigeria is the world’s third largest producer of palm oil after Indonesia and Malaysia, and the last decade has already seen a huge increase in production throughout West Africa to supply export markets”. More concerning is the fact that several developments over the past decade point to the expansion of oil palm production in West Africa. Cameroon has plans to nearly double its palm oil production from 2010 to 2020 by way of increasing the area under production rather than yields of

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<sup>182</sup> Emslie R. 2012. *Diceros bicornis*. The IUCN Red List of Threatened Species 2012: e.T6557A16980917. <http://dx.doi.org/10.2305/IUCN.UK.2012.RLTS.T6557A16980917.en>. Downloaded on 11 April 2018.

<sup>183</sup> Mallon DP, et al. 2015. An IUCN situation analysis of terrestrial and freshwater fauna in West and Central Africa. Occasional Paper of the IUCN Species Survival Commission No. 54. Gland, Switzerland and Cambridge, UK: IUCN. x + 162pp.

<sup>184</sup> Henschel P, et al. 2014. The Lion in West Africa Is Critically Endangered. PLoS ONE 9(1): e83500. <https://doi.org/10.1371/journal.pone.0083500>

<sup>185</sup> Mallon DP, et al. 2015. An IUCN situation analysis of terrestrial and freshwater fauna in West and Central Africa. Occasional Paper of the IUCN Species Survival Commission No. 54. Gland, Switzerland and Cambridge, UK: IUCN. x + 162pp.

<sup>186</sup> Ibid.

<sup>187</sup> Ibid.

existing palm oil fields. Additionally, a US-based firm (Herakles Farms) has acquired approximately 1,000 km<sup>2</sup> of land for palm oil production in south-western Cameroon, an area surrounded by several areas of biodiversity importance: Korup National Park, Rumpi Hills Forest Reserve, Bakossi National Park, and Banyang-Mbo Wildlife Sanctuary. Similarly, Sifca Group announced in 2013 that it would invest more than \$400 million to expand oil palm operations in Ghana, Nigeria, and Liberia. Global demand for palm oil is expected to continue to increase, and “most of the remaining areas suitable for planting are forested.”

**Cocoa:** The West African cocoa belt stretches from Sierra Leone to southern Cameroon and supplies more than two-thirds of global cocoa, led by West African countries Côte d’Ivoire and Ghana.<sup>188</sup> Cameroon and Nigeria, while producing significantly less cocoa than Côte d’Ivoire and Ghana, are also major contributors to global cocoa production. Cocoa is identified as the source of significant deforestation in biodiversity hotspots, particularly in the Upper Guinea Tropical Rainforest. From 1988 to 2007, it is estimated that 2.3 million ha of forest loss is attributable to a 3.3% annual increase in cocoa areas in Côte d’Ivoire, Ghana, Nigeria, and Cameroon.<sup>189</sup> From 2000 to 2016, it is estimated that West African countries of focus in this assessment experienced a collective increase of 26% in land area used for cocoa bean production (See Table 11).

**TABLE 11 AREA HARVESTED FOR COCOA BEAN PRODUCTION IN SELECT COUNTRIES IN WEST AFRICA, 2000 TO 2016 (HA)**

COUNTRY	2000	2016	TOTAL CHANGE (HA)	TOTAL CHANGE (%)
COTE D'IVOIRE	2,000,000	2,851,084	851,084	+43%
GHANA	1,500,000	1,683,765	183,765	+12%
NIGERIA	966,000	838,046	(127,954)	-13%
CAMEROON	371,401	723,853	352,452	+95%
TOGO	16,285	54,143	37,858	+232%
LIBERIA	24,000	43,000	19,000	+79%
SIERRA LEONE	40,000	40,630	630	+2%
GUINEA	8,000	25,529	17,529	+219%
BENIN	NO DATA	NO DATA	N/A	N/A
<b>TOTAL</b>	<b>4,925,686</b>	<b>6,260,050</b>	<b>1,334,364</b>	<b>+27%</b>

Source: FAOSTAT (<http://www.fao.org/faostat/en/#data/QC>)

The outlook of the cocoa industry in West Africa suggests that there will be greater pressure to convert forest area to cocoa plantations. Growing global demand for chocolate and decreasing productivity due to ageing trees and poor tree and soil management incentivize the conversion of forest land into cocoa plantations.<sup>190</sup> Furthermore, in the absence of cocoa adaptation strategies, changing

<sup>188</sup> The World Bank Group. 2017. Eliminating Deforestation from the Cocoa Supply Chain. March 2017.

Schroth G et al. 2016. Vulnerability to climate change of cocoa in West Africa: Patterns, opportunities and limits to adaptation. *Science of The Total Environment*, 556:231-241. <https://doi.org/10.1016/j.scitotenv.2016.03.024>

<sup>189</sup> The World Bank Group. 2017. Eliminating Deforestation from the Cocoa Supply Chain. March 2017.

<sup>190</sup> The World Bank Group. 2017. Eliminating Deforestation from the Cocoa Supply Chain. March 2017.

climate conditions in the region may force existing cocoa production, particularly plantations in the forest-savanna regions of Nigeria and eastern Côte d'Ivoire, into areas that are currently forested, leading to new deforestation.<sup>191</sup>

Recent collaboration between governments and cocoa companies in West Africa is intended, in part, to protect forests in Côte d'Ivoire and Ghana, the largest cocoa producers in the world. As of December 2017, the governments of Côte d'Ivoire and Ghana, along with 22 cocoa companies, signed the Frameworks for Action “under which they commit to promoting sustainable cocoa production, social inclusion, and forest protection”.<sup>192</sup> Nevertheless, the cocoa industry continues to be a main threat to forests and wildlife in West Africa.

**Cotton:**<sup>193</sup> West Africa is the third largest cotton exporter in the world. Cotton-producing zones tend to be transboundary areas, straddling the borders of coastal and land-locked countries. While cotton production in West Africa has greatly increased since the 1960s, government subsidies to cotton sectors in the United States have undercut the production and exports from West African countries.

#### **ENERGY PRODUCTION AND MINING**<sup>194</sup>

Energy production and mining are expanding industries in West Africa. Significant foreign investment in the extractive industries from countries, such as China and India, is causing a “mineral boom” in the region. Gold is the largest mineral resource in West Africa, providing income for several hundred thousand people in West African countries including Côte d'Ivoire and Ghana. Mining for gold is typically unregulated, can affect expansive swaths of land, and contributes to water pollution in both protected and unprotected areas. Other commonly mined minerals include diamonds, iron ore, bauxite, phosphate, and uranium. Open-cast mining techniques used in places like Mount Nimba and Mount Putu in Liberia, Simandou in Guinea, and Tonkololi in Sierra Leone are highly destructive, and areas using this technique are difficult to rehabilitate. Mining companies frequently operate without regard to sustainability requirements, and mining remains a threat to many existing protected areas and key sites for biodiversity.

Oil extraction is important to some economies in West Africa, particularly to Nigeria, the top oil-producing country in Africa, due to the oil reserves in and around the Niger Delta. Ghana, Liberia, and Sierra Leone are among the West African countries that have discovered large oil reserves and have begun taking steps to extract the resource. The location of oil and gas concessions in West Africa has been problematic. It is estimated that 27% of documented oil and gas concessions overlap with previously-designated World Heritage sites in Sub-Saharan Africa, suggesting that oil and gas extraction may be a potentially significant threat to habitats and wildlife in important areas of biodiversity. The Niger Delta Mangroves are particularly vulnerable because of the completion of more than 53 wells in the delta.

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Kroeger A, et al. 2018. Forest- and Climate-Smart Cocoa in Côte d'Ivoire and Ghana, Aligning Stakeholders to Support Smallholders in Deforestation-Free Cocoa. World Bank, Washington, DC.

<sup>191</sup> Schroth G, et al. 2016. Vulnerability to climate change of cocoa in West Africa: Patterns, opportunities and limits to adaptation. *Science of The Total Environment*, 556:231-241. <https://doi.org/10.1016/j.scitotenv.2016.03.024>

<sup>192</sup> Kroeger A, et al. 2018. Forest- and Climate-Smart Cocoa in Côte d'Ivoire and Ghana, Aligning Stakeholders to Support Smallholders in Deforestation-Free Cocoa. World Bank, Washington, DC.

<sup>193</sup> Mallon DP, et al. 2015. An IUCN situation analysis of terrestrial and freshwater fauna in West and Central Africa. Occasional Paper of the IUCN Species Survival Commission No. 54. Gland, Switzerland and Cambridge, UK: IUCN. x + 162pp.

<sup>194</sup> Ibid.

## 6.10 MARINE AND FRESHWATER SPECIES

In the countries covered by this assessment (Benin, Côte d'Ivoire, Ghana, Guinea, Liberia, Mali, Nigeria, Sierra Leone, and Togo) there are 22 marine and freshwater fauna on IUCN's red list with statuses ranging from LR/nt (near threatened) to CR (critically endangered). For a full list of IUCN red list species in all countries, please refer to Annex D. Two species are critically endangered, three are endangered, five are vulnerable and 12 are near threatened (see Table 12). Further, there are several species of turtles (which IUCN classifies as terrestrial AND marine) found on West African beaches that range from endangered to critically endangered: green, hawksbill, loggerhead, leatherback and olive ridley turtles.<sup>195</sup> Many of the species listed are found in almost every West African country assessed, such as the African Clawless Otter (seven countries); the Red Knot (seven countries); Curlew Sandpiper (all); Hippopotamus (seven countries); Black-tailed Godwit (all); Eurasian Curlew (all); African Skimmer (all); African Manatee (all); and the African Softshell Turtle (seven countries). This emphasizes the importance of transboundary biodiversity conservation.

TABLE 12. WEST AFRICAN MARINE AND FRESHWATER SPECIES ON IUCN'S RED LIST. SOURCE: IUCN<sup>196</sup>

COMMON NAME(S)	SCIENTIFIC NAME	LOCATION (WEST AFRICA ONLY)	IUCN STATUS, POPULATION TREND	YEAR ASSESSED
African Clawless Otter, Cape Clawless Otter	<i>Aonyx capensis</i>	Benin, Côte d'Ivoire, Ghana, Guinea, Liberia, Nigeria, Sierra Leone	NT, decreasing	2015
Giant Sea Catfish	<i>Arius gigas</i>	Benin, Côte d'Ivoire, Ghana, Mali, Nigeria	NT, decreasing	2010
Common Pochard, Northern Pochard, Pochard	<i>Aythya ferina</i>	Mali, Nigeria	VU, decreasing	2017
Ferruginous Duck, Ferruginous Pochard, White-eyed Pochard	<i>Aythya nyroca</i>	Benin, Mali, Nigeria	NT, decreasing	2017
Red Knot, Knot, Lesser Knot	<i>Calidris canutus</i>	Benin, Côte d'Ivoire, Ghana, Guinea, Liberia, Nigeria, Sierra Leone, Togo	NT, decreasing	2017

<sup>195</sup> WWF. 2009. Marine Turtle Conservation in West Africa. 2009.

[http://wwf.panda.org/what\\_we\\_do/endangered\\_species/marine\\_turtles/african\\_marine\\_turtles/projects/index.cfm?uProjectID=9F0764](http://wwf.panda.org/what_we_do/endangered_species/marine_turtles/african_marine_turtles/projects/index.cfm?uProjectID=9F0764)

<sup>196</sup> To develop this table, the following search criteria was used on IUCNredlist.org: Taxa-species; Location (native)- Benin, Côte d'Ivoire, Ghana, Guinea, Liberia, Mali, Nigeria, Sierra Leone; Systems- Freshwater, Marine; Habitat- wetlands (inland), Marine Neritic, Marine Oceanic, Marine Deep Benthic, Marine Intertidal, Marine Coastal/Supratidal, Artificial/Aquatic & Marine; Assessment: EW, CR, EN, VU, NT, OR/nt

TABLE 12. WEST AFRICAN MARINE AND FRESHWATER SPECIES ON IUCN'S RED LIST. SOURCE: IUCN<sup>196</sup>

COMMON NAME(S)	SCIENTIFIC NAME	LOCATION (WEST AFRICA ONLY)	IUCN STATUS, POPULATION TREND	YEAR ASSESSED
Curlew Sandpiper	<i>Calidris ferruginea</i>	Benin, Côte d'Ivoire, Ghana, Guinea, Liberia, Mali, Nigeria, Sierra Leone, Togo	NT, decreasing	2017
Bull Shark	<i>Carcharhinus leucas</i>	Guinea	NT, unknown	2009
Saker Falcon, Saker	<i>Falco cherrug</i>	Mali	EN, decreasing	2017
Pincushion Ray, Thorny Freshwater Stingray	<i>Fontitrygon ukpam</i>	Nigeria	EN, unknown	2016
Eurasian Oystercatcher, Pied Oystercatcher	<i>Haematopus ostralegus</i>	Côte d'Ivoire, Ghana, Guinea, Nigeria, Sierra Leone	NT, decreasing	2017
Hippopotamus, Large Hippo	<i>Hippopotamus amphibius</i>	Benin, Côte d'Ivoire, Ghana, Guinea, Mali, Nigeria, Sierra Leone, Togo	VU, stable	2017
Bar-tailed Godwit	<i>Limosa lapponica</i>	Benin, Côte d'Ivoire, Ghana, Guinea, Nigeria, Sierra Leone, Togo	NT, decreasing	2017
Black-tailed Godwit	<i>Limosa limosa</i>	Benin, Côte d'Ivoire, Ghana, Guinea, Liberia, Mali, Nigeria, Sierra Leone, Togo	NT, decreasing	2017
Marbled Teal, Marbled Duck	<i>Marmaronetta angustirostris</i>	Mali, Nigeria	VU, decreasing	2017
n/a	<i>Notoglanidium maculatum</i>	Sierra Leone	EN, unknown	2010
Eurasian Curlew, Curlew	<i>Numenius arquata</i>	Benin, Côte d'Ivoire, Ghana, Guinea, Liberia, Mali, Nigeria, Sierra Leone, Togo	NT, decreasing	2017



**TABLE 12. WEST AFRICAN MARINE AND FRESHWATER SPECIES ON IUCN'S RED LIST. SOURCE: IUCN<sup>196</sup>**

COMMON NAME(S)	SCIENTIFIC NAME	LOCATION (WEST AFRICA ONLY)	IUCN STATUS, POPULATION TREND	YEAR ASSESSED
Lesser Flamingo	<i>Phoeniconaias minor</i>	Guinea, Sierra Leone	NT, decreasing	2016
Largetooth Sawfish	<i>Pristis pristis</i>	Sierra Leone	CR, decreasing	2013
African Skimmer	<i>Rynchops flavirostris</i>	Benin, Côte d'Ivoire, Ghana, Guinea, Liberia, Mali, Nigeria, Sierra Leone	NT, decreasing	2016
Atlantic Hump-backed Dolphin, Cameroon Dolphin, Cameroon River Dolphin, Teusz's Dolphin	<i>Sousa teuszii</i>	Benin, Guinea, Togo	CR, decreasing	2017
African Manatee, Seacow, West African Manatee	<i>Trichechus senegalensis</i>	Benin, Côte d'Ivoire, Ghana, Guinea, Liberia, Mali, Nigeria, Sierra Leone, Togo	VU, unknown	2015
African Softshell Turtle, Nile Softshell Turtle	<i>Trionyx triunguis</i>	Benin, Côte d'Ivoire, Ghana, Guinea, Liberia, Nigeria, Sierra Leone, Togo	VU, decreasing	2017

Note: Please refer to Annex D for a comprehensive list of IUCN red list species.

### 6.10.1 THREATS TO MARINE AND FRESHWATER SPECIES

The main threats to marine and freshwater species are overfishing (mentioned in the Marine and Freshwater fisheries section above) fishing bycatch, growing demand for aquatic bushmeat, and habitat degradation.

*Fishing bycatch.* Many of West Africa's non-fish marine species are nonetheless threatened by the fishing industry due to bycatch, or incidental capture. Turtles are accidentally captured by gillnets, trawlers, and other fishing gear,<sup>197</sup> seabirds are killed by collisions or drown after being hooked by longlines,<sup>198</sup> and

<sup>197</sup> WWF. 2009. Marine Turtle Conservation in West Africa.

[http://wwf.panda.org/what\\_we\\_do/endangered\\_species/marine\\_turtles/african\\_marine\\_turtles/projects/index.cfm?uProjectID=9F0764](http://wwf.panda.org/what_we_do/endangered_species/marine_turtles/african_marine_turtles/projects/index.cfm?uProjectID=9F0764)

<sup>198</sup> Gremillet D, et al. 2015. Adult and Juvenile European seabirds at risk from marine plundering off West Africa. 2015

dolphins are susceptible to entanglement.<sup>199</sup> The West African Sawfish, one of the world's most endangered marine fish, are particularly threatened by entanglement due to their distinctive "tooth" which extends far in front of its body.<sup>200</sup>

*Aquatic bushmeat.* Larger marine species, like dolphins, manatees, sea turtles and birds, which some are now calling "aquatic bushmeat", are now increasingly killed by direct hunting. This is the result of decreasing fishery stocks and demand for human consumption or bait. Twenty countries across West and Central Africa have recorded trade in manatees, dolphins, and small whales. In West African countries, manatees, dolphins, and marine turtles are the main targets of aquatic bushmeat hunting, while in Nigeria, crocodiles are also hunted.<sup>201</sup> Ghana is a hotspot for aquatic bushmeat, where at least 16 species of cetaceans, some endangered or vulnerable, are hunted regularly.<sup>202</sup> Further, the West African Sawfish is hunted for the trade in its saws, fins (popular in shark fin soup) and teeth.<sup>203</sup>

*Habitat degradation.* Marine and freshwater species are seriously threatened by the degradation of their habitats, explained above for the ecosystems in question (mangroves, rivers/lakes, coastal areas, and wetlands). This habitat degradation is driven by a growing population, coastal and river/lake development, pollution, and climate change.

## 6.11 STATUS AND MANAGEMENT OF PROTECTED AREAS

Approximately 692,000 km<sup>2</sup> fall within designated national protected areas in the focus countries of this assessment<sup>204</sup>(See Figure 16). There are over 2,000 nationally designated protected areas in the focus West African countries and include national parks (79); wildlife reserves, refuges, or sanctuaries (131); classified forests, forest reserves, or community forests (1,825); hunting zones (15); game production reserves (6); marine protected areas (10); wetland reserves or complexes (2); and reforestation areas (7). There are also 84 proposed sites for protection in the region, including 31 national parks. In addition to the nationally-designated protection areas, there are 121 Ramsar sites and 25 UNESCO Biosphere Reserves. A complete list of Ramsar sites by country is included in Annex C.

The role of protected areas is to conserve biodiversity. It is difficult to evaluate the effectiveness of protected areas in meeting this goal because little data are available to assess the change in biodiversity in West Africa's protected areas. However, a few site-specific studies estimated continued and significant declines in populations of select species in protected areas in Côte d'Ivoire and Cameroon,

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<sup>199</sup> Wildlife Conservation Society. 2017. West African dolphin now listed as one of Africa's rarest mammals. <https://www.sciencedaily.com/releases/2017/12/171222090329.htm>

<sup>200</sup> Interafrican Bureau for Animal Resources. 2017. The Dramatic Decline of West Africa Sawfish Populations. <http://www.au-ibar.org/2012-10-01-13-08-42/press-releases/421-en/media/features/series/know-your-animals/1170-the-dramatic-decline-of-west-africa-sawfish-populations-pristis-pristis-and-p-pectinata>

<sup>201</sup> Oceancare. 2017. Aquatic Bushmeat in West Africa. [https://web.kamihq.com/web/viewer.html?source=extension\\_pdfhandler&file=https%3A%2F%2Fwww.oceancare.org%2Fwp-content%2Fuploads%2F2016%2F07%2Fstatement\\_Aquatic-Bush-Meat\\_EN\\_2017.pdf](https://web.kamihq.com/web/viewer.html?source=extension_pdfhandler&file=https%3A%2F%2Fwww.oceancare.org%2Fwp-content%2Fuploads%2F2016%2F07%2Fstatement_Aquatic-Bush-Meat_EN_2017.pdf)

<sup>202</sup> Zweifel S. 2018. International Fishing Trawlers are Driving up Demand for Ocean Bushmeat in West Africa.

[http://www.earthisland.org/journal/index.php/elist/eListRead/international\\_fishing\\_trawlers\\_are\\_driving\\_up\\_demand\\_for\\_ocean\\_bushmeat\\_in/](http://www.earthisland.org/journal/index.php/elist/eListRead/international_fishing_trawlers_are_driving_up_demand_for_ocean_bushmeat_in/)

<sup>203</sup> Interafrican Bureau for Animal Resources. 2017. The Dramatic Decline of the West Africa Sawfish Populations. <http://www.au-ibar.org/2012-10-01-13-08-42/press-releases/421-en/media/features/series/know-your-animals/1170-the-dramatic-decline-of-west-africa-sawfish-populations-pristis-pristis-and-p-pectinata>

<sup>204</sup> Data on protected areas for Benin, Burkina Faso, Cameroon, Cape Verde, Chad, Cote d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, and Togo were compiled from Protected Planet's World Database on Protected Areas. <https://www.protectedplanet.net/c/world-database-on-protected-areas>

and an increase in some populations in the Haut Niger National Park (Guinea). A 2005 study analyzed the effectiveness of five protected areas in West Africa (Taï and Marahoué National Parks in Côte d'Ivoire; and Ankasa Resource Reserve and Bia and Kakum National Parks in Ghana) and concluded that these protected areas had lower conservation success than sites studied in Central Africa.<sup>205</sup>

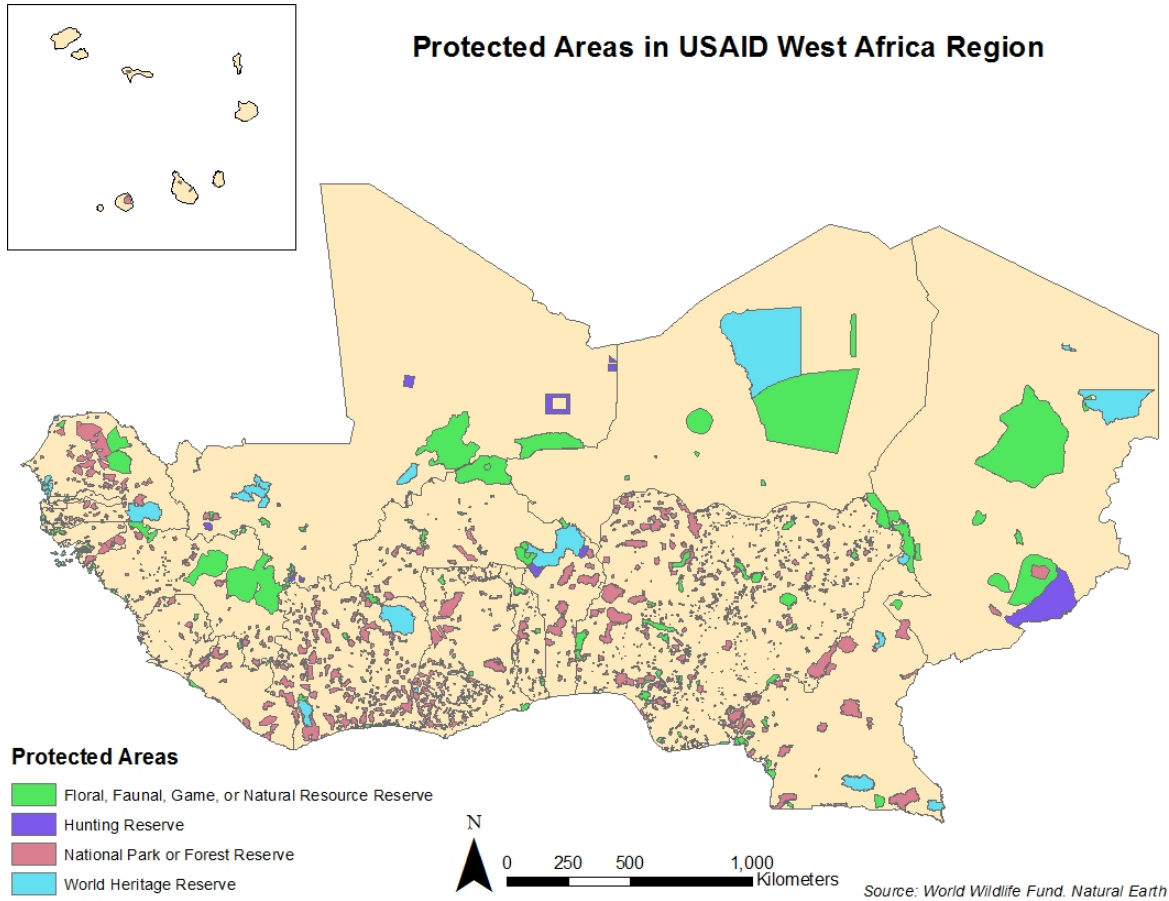


Figure 16. Protected Areas

Significant threats persist in the protected areas in West Africa. Poaching is identified as one of the primary problems in protected areas across the region. In the savannas of West Africa, a survey of experts affiliated with protected areas identified bushmeat hunting as the top threat facing wildlife in protected areas.<sup>206</sup> Other threats include exploitation of resources, bushfires, land conversion to farming or grazing, invasive species, encroachment of human settlements, fishing, and extractive industry (logging, mining, oil, and gas).

There is little information available on the effectiveness of management of protected areas in Benin, Liberia, Nigeria, Sierra Leone, and Togo. Evaluations of management effectiveness in Cameroon, Côte

<sup>205</sup> Mallon DP, et al. 2015. An IUCN situation analysis of terrestrial and freshwater fauna in West and Central Africa. Occasional Paper of the IUCN Species Survival Commission No. 54. Gland, Switzerland and Cambridge, UK: IUCN. x + 162pp.

<sup>206</sup> Lindsey P, et al. 2015. Bushmeat, wildlife-based economies, food security and conservation: Insights into the ecological and social impacts of the bushmeat trade in African savannas. FAO/Panthera/Zoological Society of London/SULi Report, Harare. 58 pages. <http://www.fao.org/publications/card/en/c/8ab57c73-582f-475e-a4e8-a06032158750>

d'Ivoire, Ghana, and Guinea indicate that barriers to effective management include a general lack of resources and capacity to run the protected areas in a way that measurably improves conservation. Additionally, continued pressure to exploit protected area resources for both cultural and economic purposes, combined with corruption and weak enforcement, make it difficult for park managers to effectively manage these areas.

In Côte d'Ivoire, protected areas have been under immense pressure from political instability since 1999. This, along with a lack of support from local communities, and problems with corruption and weak enforcement, has resulted in poor management of protected areas in Côte d'Ivoire, with the exception of the Tai National Park, which is considered to have relatively strong management.<sup>207</sup> A 2015 study of 23 protected areas in Côte d'Ivoire suggests that poor enforcement of anti-hunting laws and the expansion of the cocoa plantations near protected areas likely contribute to the decline in primate populations in Côte d'Ivoire's protected areas.<sup>208</sup>

The table below includes a select list of the most important protected areas in the region based on their relationship with landscapes with recognized biodiversity importance. A more comprehensive list of protected areas is in Annex D: Nationally Protected Areas in West Africa.

COUNTRY	PROTECTED AREA	SIZE IN KM <sup>2</sup>	LANDSCAPE
Cameroon	Boumba-Bek NP	3,093	
Cameroon	Nki NP	2,383	Dja-Odzala-Minkebe (Tridom)
Cameroon	Dja Faunal Reserve	5,260	
Cameroon	Lobéké NP	430	Sangha Tri-National
Cameroon	Korup NP	1,260	
Nigeria	Cross River NP (Oban Hills Division)	1,906	Korup-Cross River
Cameroon	Takamanda NP	676	
Cameroon	Kagwene Gorilla Sanctuary	20	
Cameroon	Mone Forest Reserve	538	
Nigeria	Cross River NP (Okwangwo Division)	8,000	Takamanda-Cross River
Nigeria	Afi Mountains Sanctuary	100	
Nigeria	Mbe Mountains Community Reserve	86	
Guinea	Badiar NP	382	
Guinea	Ndama Classified Forest	670	Niokolo-Badiar
Guinea	Badiar Sud Classified Forest	73	

<sup>207</sup> Mallon DP, et al. 2015. An IUCN situation analysis of terrestrial and freshwater fauna in West and Central Africa. Occasional Paper of the IUCN Species Survival Commission No. 54. Gland, Switzerland and Cambridge, UK: IUCN. x + 162pp.

<sup>208</sup> Bitty EA, et al. 2015. Cocoa Farming and Primate Extirpation Inside Cote d'Ivoire's Protected Areas. *Tropical Conservation Science*. 8(1): 95-113. <https://doi.org/10.1177/194008291500800110>

**TABLE 13 PROTECTED AREAS COVERING SIGNIFICANT LANDSCAPES IN WEST AFRICAN COUNTRIES**

COUNTRY	PROTECTED AREA	SIZE IN KM <sup>2</sup>	LANDSCAPE
Benin	W NP	n/a	
Benin	Pendjari NP and adjoining hunting zones	n/a	
Burkina Faso	W NP	n/a	
Burkina Faso	Arly NP, Including Arly Faunal Reserve	n/a	
Burkina Faso	Kourtiagou Partial Faunal Reserve	n/a	
Burkina Faso	Madjoari Faunal Reserve	n/a	WAPOK complex
Burkina Faso	Pama Partial Faunal Reserve	n/a	
Burkina Faso	Singou Faunal Reserve	n/a	
Niger	W NP	n/a	
Niger	Tamou Total Faunal Reserve	n/a	
Togo	Oti-Mandouri FR	n/a	
Togo	Kéran NP	n/a	
Liberia	Gola National Forest, proposed NP	884	
Liberia	Foya Forest Reserve	1,646	
Liberia	Kpelle National Forest	1,748	Greater Gola landscape
Sierra Leone	Gola Rainforest NP	710	
Sierra Leone	Tiwai Island Wildlife Sanctuary	12	
Côte d'Ivoire	Mont Nimba Strict Nature Reserve	50	
Guinea	Mont Nimba Strict Nature Reserve	125	Mount Nimba
Liberia	East Nimba Nature Reserve	135	
Guinea	Ziama Classified Forest	1,190	
Liberia	Wonegizi National Forest	1,374	Ziama-Wonegizi
Liberia	North Lorma National Forest	712	
Côte d'Ivoire	Tai NP	3,300	
Côte d'Ivoire	N'Zo Partial Faunal Reserve	950	
Côte d'Ivoire	Cavally & Goin-Débé Classified Forests	2,119	
Côte d'Ivoire	Haute-Dodo Classified Forest	n/a	Sapo-Tai
Liberia	Sapo NP	1,504	
Liberia	Grebo Forest, proposed NP	971	
Liberia	Zwedru, proposed NP	637	
Liberia	Grand Kru-River Gee proposed NP	1,351	

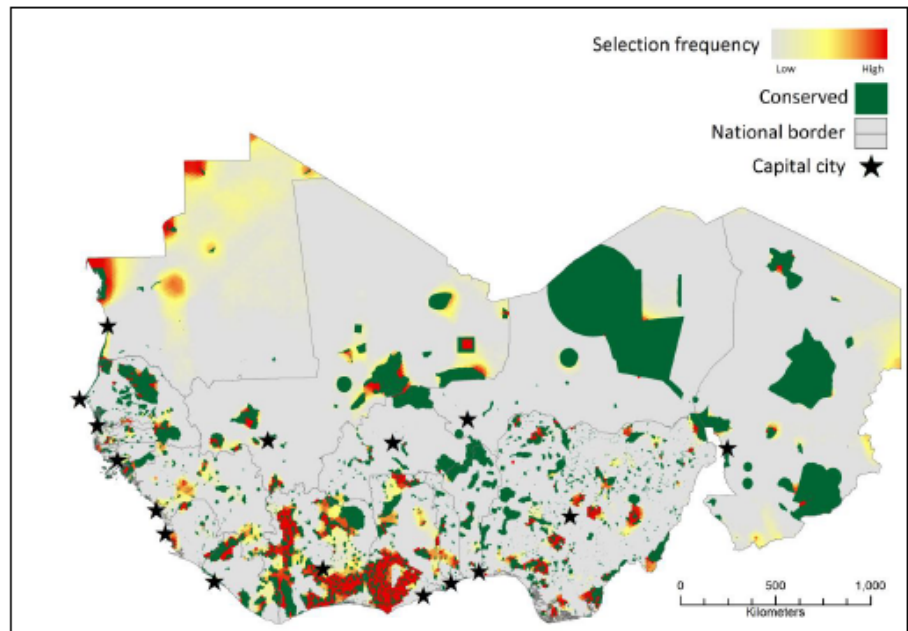
**TABLE 13 PROTECTED AREAS COVERING SIGNIFICANT LANDSCAPES IN WEST AFRICAN COUNTRIES**

COUNTRY	PROTECTED AREA	SIZE IN KM <sup>2</sup>	LANDSCAPE
Cameroon	Benoué NP	1,800	Benoué-Faro-Bouba Njida Ecosystem
Cameroon	Faro NP	3,300	
Cameroon	Bouba Njida NP	2,200	
Cameroon	hunting zones	n/a	
Nigeria	Gashaka-Gumti NP	6,730	
Senegal	Oiseaux de Djoudj NP	160	Senegal River Delta
Senegal	Niokolo-Koba NP	900	Niokolo-Badiar
Senegal	Falémé Hunting Zone	n/a	
Chad	Sena Oura NP	750	Benoué-Faro-Bouba Njida Ecosystem
Chad	Binder Léré Faunal Reserve	1,350	Ecosystem

Source: Adapted from An IUCN situation analysis of terrestrial and freshwater fauna in West and Central Africa (2015). Protected areas for which size was not available are indicated by “n/a.”

## 6.12 STATUS AND MANAGEMENT OF KEY NATURAL RESOURCES OUTSIDE PROTECTED AREAS

The Protected Areas Resilient to Climate Change (PARCC) project in West Africa developed a Gap Analysis and Spatial Conservation Prioritization report which provide some useful high-level information on unprotected areas in West Africa. According to this report, an additional 384,765 km<sup>2</sup> (21.6% of the region) need to be added to West Africa’s protected area network to meet parameters set by the Aichi biodiversity targets (established by the Convention on Biological Diversity). Most of priority areas that are not protected



*Figure 17. Level of Protection of Priority Conservation areas in West Africa.*  
Source: PARCC West Africa

(see Figure 17) are found in Côte d'Ivoire, Ghana and Mauritania. <sup>209</sup> IUCN also reports that in West and Central Africa, 37% of Zero Extinction sites, 38% of Important Bird and Biodiversity Areas, and 60% of Ramsar sites are unprotected.<sup>210</sup>

The PARCC report also analyzed the percentage of amphibians, birds, and mammals that are found in protected areas (see Figure 18) and found that 0.81% of birds and 0.25% of mammals are completely unprotected. Further, 12.5% of threatened species are unprotected. <sup>211</sup> Many species depend on unprotected areas; one study found that over 80% of pygmy hippopotamus (endangered species) signs were recorded outside of protected areas in West Africa's Upper Guinea Forests, which has only 15% of its territory protected. However, the potential for community conservation outside of protected areas is strong.<sup>212</sup> For example, in Ghana's Upper West Region, part of the Guinean Forests, community-based conservation has resulted in over 15 years of successful wildlife management and revenue generation from eco-tourism.<sup>213</sup>

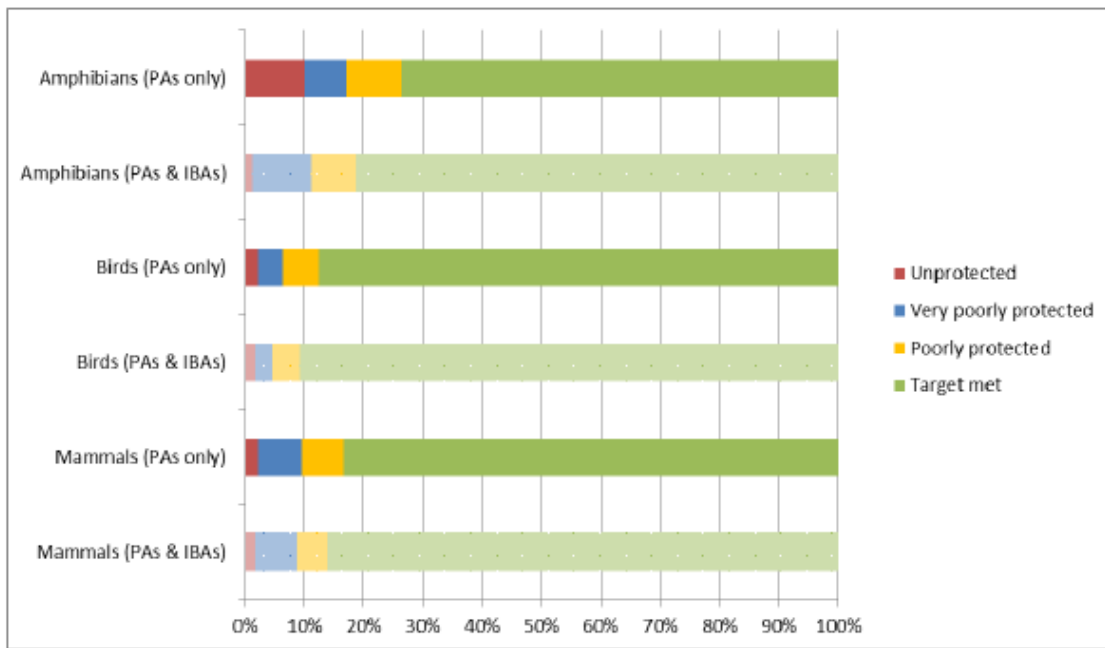


Figure 18. Percentage of amphibian, bird, and mammal species for which the set target (i.e. proportion of their current distribution range to be protected) is met by the existing Protected Area (PA) network and Important Bird and Biodiversity Areas (IBAs). Source: PARCC West

<sup>209</sup> Smith R. 2015. West Africa Gap Analysis and Spatial Conservation Prioritisation. Protected Areas Resilient to Climate Change (PARCC) West Africa.

<sup>210</sup> Mallon DP, et al. 2015. An IUCN Situation Analysis of Terrestrial and Freshwater Fauna in West and Central Africa. IUCN.

<sup>211</sup> Smith R. 2015. West Africa Gap Analysis and Spatial Conservation Prioritisation. Protected Areas Resilient to Climate Change (PARCC) West Africa.

<sup>212</sup> Hillers A, et al. 2016. A mix of community-based conservation and protected forests is needed for the survival of the endangered pygmy hippopotamus *Choeropsis liberiensis*.

<sup>213</sup> Asare RA, et al. 2013. The community resource management area mechanism: a strategy to manage African forest resources for REDD+.

## **7. KEY DRIVERS AND THREATS TO BIODIVERSITY AND TROPICAL FORESTS IN WEST AFRICA**

### **7.1 DIRECT THREATS TO BIODIVERSITY**

### **7.2 DRIVERS OF THREATS**



## 8. ANNEXES

### ANNEX A: REFERENCES

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## **ANNEX B: BIOGRAPHICAL SKETCHES OF TEAM MEMBERS**

## ANNEX C: RAMSAR SITES IN WEST AFRICA

COUNTRY (No. SITES)	SITE	SIZE (ha)
Benin (4)	Basse Vallée du Couffo, Lagune Côtière, Chenal Aho, Lac Ahémé	47,500
	Basse Vallée de l'Ouémé, Lagune de Porto-Novo, Lac Nokoué	91,600
	Zone Humide de la Rivière Pendjari	144,774
	Site Ramsar du Complexe W	895,480
Burkina Faso (20)	Barrage de Bagre	36,793
	Barrage de la Komienga	17,545
	Barrage de la Tapoa	3,479
	Barrage de Tougouri	1,221
	Barrage de Yalgo	4,522
	Bassin du Nakanbé-Mané	19,477
	Cône d'épandage de Banh	10,003
	Corridor forestier de la Boucle du Mouhoun	134,553
	Forêt Galerie de Léra	542
	La Forêt Classée et Réserve Partielle de Faune Comoé-Léraba	124,510
	La Mare aux hippopotames	19,200
	La Mare d'Oursi	35,000
	La Vallée du Sourou	21,157
	Lac Bam	5,300
	Lac de Tingrela	580
	Lac Dem	1,354
	Lac Higa	1,514
	Parc National d'Arly	219,485
	Parc National du W	235,000
Zone de confluence Mouhoun-Sourou	23,300	
Cameroon (7)	Partie Camerounaise du Lac Tchad	12,500
	Waza Logone Floodplain	600,000
	Partie Camerounaise du Fleuve Sangha	6,200
	Estuaire du Rio Del Rey	165,000
	Barombi Mbo Crater Lake	415
	Zone Humide d'Ebogo	3,097
	Partie Camerounaise du Fleuve Ntem	39,848

COUNTRY (No. SITES)	SITE	SIZE (ha)
Cape Verde (Cabo Verde) (4)	Curral Velho	986
	Lagoa de Pedra Badejo	666
	Lagoa de Rabil	113
	Salinas of the English Port	535
Chad (6)	Lac Fitri	195,000
	Partie tchadienne du lac Tchad	1,648,168
	Plaine de Massenya	2,526,000
	Plaines d'inondation des Bahr Aouk et Salamat	4,922,000
	Plaines d'inondation du Logone et les dépressions Toupouri	2,978,900
	Réserve de faune de Binder-Léré	135,000
Côte d'Ivoire (6)	Complexe Sassandra - Dagbego	10,551
	Fresco	15,507
	Parc national d'Azagny	19,400
	Grand Bassam	40,210
	N'Ganda	14,402
	Îles Ehotilé	27,274
The Gambia (3)	Baobolon Wetland Reserve	20,000
	Niumi National Park	4,940
	Tanbi Wetlands Complex	6,304
Ghana (6)	Owabi Wildlife Sanctuary	7,260
	Muni-Pomadze	9,461
	Densu Delta	5,893
	Sakumo	1,364
	Songor	51,133
	Keta Lagoon Complex	101,023
Guinea (16)	Gambie-Koulountou	368,193
	Ile Alcatraz	1
	Iles Tristao	85,000
	Rio Kapatchez	679,280
	Rio Pongo	600,571
	Gambie-Oundou-Liti	527,400
	Bafing-Falémé	517,300
	Bafing-Source	317,200
	Tinkisso	1,228,995

COUNTRY (No. SITES)	SITE	SIZE (ha)
	Niger-Tinkisso	400,600
	Niger-Niandan-Milo	1,399,046
	Sankarani-Fié	1,656,000
	Niger-Mafou	1,015,450
	Niger Source	180,400
	Konkouré	90,000
	Ile Blanche	10
Guinea-Bissau (4)	Archipel Bolama-Bijagós	1,046,950
	Lagoa de Cufada	39,098
	Lagune de Wendu Tcham	14,970
	Parc Naturel des Mangroves du Fleuve Cacheu (PNTC)	88,615
Liberia (5)	Lake Piso	76,091
	Mesurado Wetlands	6,760
	Marshall Wetlands	12,168
	Kpatawee Wetlands	835
	Gbedin Wetlands	25
Mali (4)	Lac Magui	24,740
	Lac Wegnia	3,900
	Delta Intérieur du Niger	4,119,500
	Plaine Inondable du Sourou	56,500
Niger (12)	Complexe Kokorou-Namga	66,829
	Dallol Bosso	892,122
	Dallol Maouri	317,520
	Gueltas et Oasis de l'Air	4,924,100
	La Mare de Dan Doutchi	38,250
	La Mare de Lassouri	34,000
	La Mare de Tabalak	107,100
	Lac Tchad	338,550
	Oasis du Kawar	339,220
	Parc national du W	385,000
	Zone humide du moyen Niger	52,180
	Zone Humide du Moyen Niger II	38,555
Nigeria (11)	Foge Islands	4,229
	Lower Kaduna-Middle Niger Floodplain	229,054

COUNTRY (No. SITES)	SITE	SIZE (ha)
	Dagona Sanctuary Lake	344
	Baturiya Wetland	101,095
	Maladumba Lake	1,860
	Lake Chad Wetlands	607,354
	Nguru Lake (and Marma Channel)	58,100
	Pandam and Wase Lakes	19,742
	Oguta Lake	572
	Upper Orashi Forests	25,165
	Apoi Creek Forests	29,213
Senegal (8)	Kalissaye	30,014
	Parc National des Oiseaux du Djoudj	16,000
	Parc National du Delta du Saloum	73,000
	Réserve Naturelle Communautaire de Palmarin	10,430
	Réserve Naturelle Communautaire de Tocc Tocc	273
	Réserve Naturelle d'Intérêt Communautaire de la Somone	700
	Réserve Spéciale de Faune de Gueumbeul	720
	Réserve Spéciale de Faune de Ndiaël	10,000
Sierra Leone (1)	Sierra Leone River Estuary	295,000
Togo (4)	Bassin versant Oti-Mandouri	425,000
	Parc national de la Keran	163,400
	Reserve de faune de Togodo	31,000
	Zones Humides du Littoral du Togo	591,000

## ANNEX D: NATIONALLY PROTECTED AREAS IN WEST AFRICA

PROTECTED AREA NAME	TYPE	SIZE (KM2)*
<b>BENIN</b>		
W (Benin)	National Park	5,020
Boucle de la Pendjari	National Park	2,755
Djona	Hunting Zone	1,880
Pendjari	Hunting Zone	1,750
Atakora	Hunting Zone	1,220
Kouandé	Reforestation Area	46
Taneka	Reforestation Area	11
Barage de Natitingou	Reforestation Area	3
Parakou	Reforestation Area	3
Kandi	Reforestation Area	3
Natitingou	Reforestation Area	2
Abomey	Reforestation Area	2
	Classified Forests (37)	13,394
<b>BURKINA FASO</b>		
Kabore-Tambi	National Park	2,427
W du Burkina Faso	National Park	2,350
Deux Bales	National Park	566
Mare aux Hippopotames	Bird Reserve	192
Singou	Faunal Reserve	1,920
Arly	Faunal Reserve	760
Madjoari	Faunal Reserve	170
Bontioli	Faunal Reserve	127
Sahel	Partial Faunal Reserve	16,000
Pama	Partial Faunal Reserve	2,230
Arly	Partial Faunal Reserve	1,300
Kourtiagou	Partial Faunal Reserve	510
	Classified Forests (60)	9,674
<b>CAMEROON</b>		
Mbam et Djerem	National Park	4,291
Faro	National Park	3,500
Nki	National Park	3,130
Campo-Ma'an	National Park	2,609

PROTECTED AREA NAME	TYPE	SIZE (KM2)*
Boumba Bek	National Park	2,362
Lobéké	National Park	2,153
Bouba Ndjida	National Park	2,114
Bénoué	National Park	1,979
Waza	National Park	1,406
Korup	National Park	1,261
Kimbi-Fungom	National Park	990
Mpem et Djim	National Park	975
Vallée du Mbéré	National Park	741
Deng Deng	National Park	687
Takamanda	National Park	627
Mont Cameroun	National Park	581
Bakossi	National Park	293
Dja	Faunal Reserve	5,266
Ngoyla-Mintom	Faunal Reserve	1,566
Santchou	Faunal Reserve	95
Lac Ossa	Faunal Reserve	45
Tofala	Wildlife Sanctuary	1,566
Bayang-Mbo	Wildlife Sanctuary	663
Mengame	Wildlife Sanctuary	267
Kagwene	Wildlife Sanctuary	19
Kilum Ijim	Wildlife Sanctuary	10
<b>CAPE VERDE</b>		
Bordeira, Chã das Caldeiras e Pico Novo	Natural Park	85
Monte Gordo	Natural Park	10
Serra da Malagueta	Natural Park	8
<b>CHAD</b>		
Zakouma	National Park	3,000
Manda	National Park	1,140
Sena Oura	National Park	751
Ouadi-Rimé-Ouadi Achim	Faunal Reserve	80,000
Bahr Salamat	Faunal Reserve	20,600
Siniaka-Minia	Faunal Reserve	4,260
Fada Archei	Faunal Reserve	2,110
Mandelia	Faunal Reserve	1,380



PROTECTED AREA NAME	TYPE	SIZE (KM2)*
Binder-Léré	Faunal Reserve	1,350
Abou Telfane	Faunal Reserve	1,100
Aouk	Hunting Reserve	28,741
<b>CÔTE D'IVOIRE</b>		
Comoe National Park	National Park	11,492
Taï National Park	National Park	3,300
Marahoue National Park	National Park	1,010
Mont Sangbe National Park	National Park	950
Mont Peko National Park	National Park	340
Azagny National Park	National Park	194
Banco National Park	National Park	30
Iles Ehotile National Park	National Park	6
Yapo	Botanical Reserve	373
Bouafle	Botanical Reserve	324
Divo	Botanical Reserve	74
Haut Bandama Fauna and Flora Reserve	Faunal Reserve	1,230
Mount Nimba Integral Reserve	Integral National Reserve	50
Abokouamekro National Park	National Faunal Reserve	204
N'Zo Fauna Reserve	Partial Faunal Reserve	927
Dahliafleur Natural Reserve	Partial Natural Reserve	1
Lamto Scientific Reserve	Scientific Reserve	25
	Classified Forests (226)	18,593
<b>THE GAMBIA</b>		
Kiang West	National Park	191
Niumi National Park	National Park	78
River Gambia	National Park	6
Tanji	Bird Reserve	6
Gunjur (Bolonfenyo)	Community Wildlife Reserve	3
Abuko (Buffer)	Nature Reserve	3
Abuko	Nature Reserve	1
Baobolon Wetland Reserve	Wetland Reserve	220
Tanbi Wetland National Park	Wetlands Complex	60
<b>GHANA</b>		
Mole	National Park	4,840
Digya	National Park	3,478
Bui	National Park	1,821

PROTECTED AREA NAME	TYPE	SIZE (KM2)*
Kyabobo	National Park	360
Nini-Suhien	National Park	343
Kakum	National Park	207
Nini-Suhien	National Park	160
Bia	National Park	78
Gbele	Game Production Reserve	565
Kalakpa	Game Production Reserve	320
Assin-Attandanso	Game Production Reserve	140
Shai Hills	Game Production Reserve	49
Bunkunaw	Game Production Reserve	4
Bia	Resource Reserve	278
Kogyae	Strict Nature Reserve	386
Bomfobiri	Wildlife Sanctuary	53
Owabi	Wildlife Sanctuary	13
Boabeng-Fiema	Wildlife Sanctuary	4
	Forest Reserves (284)	23,565
<b>GUINEA</b>		
Haut Niger National Park - Kouya Core Area	National Park	6,740
Previously called Mafou Classified Forest	National Park	524
Badiar	National Park	382
Mount Nimba	Strict Nature Reserve	130
	Classified Forests (98)	8,386
<b>GUINEA BISSAU</b>		
Orango	National Park	1,582
Bijagos Archipelago Biosphere Reserve	Biosphere Reserve	10,279
Boé	Hunting Reserve	1,315
Cantanhez Forest	Hunting Reserve	680
Rio Geba/Rio Mansoa	Hunting Reserve	n/a
Ilhas Formosa, Nago & Tchediã (Urok)	Marine Community Protected Area	619
João Vieira and Poilão Marine National Park	Marine National Park	495
Lagoas de Cufada	Natural Park	890
Rio Cacheu Mangroves	Natural Park	886
<b>LIBERIA</b>		
Sapo National Park	National Park	1,804
Gola Forest National Park	National Park	980

PROTECTED AREA NAME	TYPE	SIZE (KM2)*
Lake Piso Multiple Sustainable Use Reserve	Multiple Sustainable Use Reserve	339
East Nimba Nature Reserve	Nature Reserve	135
MALI		
Parc National Kouroufing	National Park	558
Parc National de Wongo	National Park	535
Sanctuaire des Chimpanzés du Bafing	Chimpanzee Sanctuary	672
Zone d'Intérêt Cynégétique d'Azaouad Nord-Ouest dite Salam	Hunting Area	12,160
Zone d'Intérêt Cynégétique de Tidermene-Alata	Hunting Area	3,124
Zone d'Intérêt Cynégétique d'Inekar	Hunting Area	1,806
Zone d'Intérêt Cynégétique de Flawa	Hunting Area	739
Zone d'Intérêt Cynégétique de Nienendougou	Hunting Area	504
Zone d'Intérêt Cynégétique de Banzana	Hunting Area	444
Zone d'Intérêt Cynégétique de Faragama	Hunting Area	327
Zone d'Intérêt Cynégétique de Tin Achara	Hunting Area	286
Réserve partielle de faune d'Ansongo-Ménaka	Partial Wildlife Reserve	17,500
Réserve partielle de faune dite des Eléphants du Gourma	Partial Wildlife Reserve	12,500
Réserve partielle de faune du Banifing-Baoulé	Partial Wildlife Reserve	139
Réserve partielle de faune de Siankadougou	Partial Wildlife Reserve	60
Réserve totale de faune de Kéniébaoulé	Total Wildlife Reserve	675
Réserve totale de faune de Djangoumerila	Total Wildlife Reserve	577
Réserve totale de faune de Néma Wula	Total Wildlife Reserve	447
Réserve totale de faune de Nienendougou	Total Wildlife Reserve	406
Réserve totale de faune de Mandé Wula	Total Wildlife Reserve	391
Réserve totale de faune de Sounsan	Total Wildlife Reserve	370
Réserve totale de faune de Dialakoro	Total Wildlife Reserve	299
Réserve totale de faune de Talikourou	Total Wildlife Reserve	130
Réserve totale de faune Djinétoumanina	Total Wildlife Reserve	161
NIGER		
Parc W Niger	National Park	2,200
Réserve de faune de Gadabedji	Faunal Reserve	760
Réserve totale de faune de Tamou	Faunal Reserve	756
Réserve Naturelle et Culturelle de Termit-Tintoumma	National Nature Reserve	97,000
Réserve Nationale Naturelle de l'Air et du Ténééré	National Nature Reserve	64,560
Réserve totale de faune de Tadres	Nature Reserve	8
Réserve partielle de faune de Dosso	Partial Faunal Reserve	3,065

PROTECTED AREA NAME	TYPE	SIZE (KM2)*
Addax Sanctuary	Strict Nature Reserve	12,800
<b>NIGERIA</b>		
Cross River	National Park	8,000
Gashaka-Gumti	National Park	6,730
Kainji Lake	National Park	5,380
Old Oyo	National Park	2,530
Chad Basin	National Park	2,300
Cross River (Oban Division)	National Park	1,906
Kamuku	National Park	1,211
Mbe Mountains	Community Forest	87
Omo	Strict Nature Reserve	5
Bam Ngelzarma	Strict Nature Reserve	1
Lekki	Strict Nature Reserve	1
Urhonigbe	Strict Nature Reserve	1
Akure	Strict Nature Reserve	0
Okomu	Wildlife Sanctuary	1,124
Afi Mountain	Wildlife Sanctuary	105
	Game Reserves (25)	23,663
	Forest Reserves (932)	12,990
<b>SENEGAL</b>		
Niokolo Koba	National Park	9,130
Delta du Saloum	National Park	599
Oiseaux de Djoudj	National Park	160
Basse-Casamance	National Park	50
Langue de Barbarie	National Park	20
Magdalen Islands (Iles de la Madeleine)	National Park	0
Reserve ornithologique de Kalissaye	Bird Reserve	0
Samba Dia	Classified Forest	7
Saint-Louis	Marine Protected Area	496
Joal	Marine Protected Area	174
Kayar	Marine Protected Area	170
Abéné	Marine Protected Area	118
Poponguine	Nature Reserve	10
Réserve spéciale de faune de Guembeul	Special Reserve	7

PROTECTED AREA NAME	TYPE	SIZE (KM2)*
Ferlo-Sud	Wildlife Reserve	6,337
Ferlo-Nord	Wildlife Reserve	6,000
Ndiael	Wildlife Reserve	489
	Habitat/Species Management Areas (17)	15,889
	Forest Reserves (79)	10,911
<b>SIERRA LEONE</b>		
Outamba	National Park	738
Gola Rainforest National Park	National Park	711
Kilimi	National Park	389
Loma Mountains	National Park	332
Western Area Peninsula Forest	National Park	183
Tiwai Island Sanctuary	Game Sanctuary / Non-hunting Forest Reserve	12
Sherbro River Estuary	Marine Protected Area	284
Sierra Leone River Estuary	Marine Protected Area	249
Yawri Bay	Marine Protected Area	196
Scarcies River Estuary	Marine Protected Area	102
Loma Mountains	No or Non - Hunting Forest Reserve	332
Western Area	No or Non - Hunting Forest Reserve	177
Sankan Biriwa (Tingi Hills)	No or Non - Hunting Forest Reserve	119
	Forest Reserves (29)	1,068
<b>TOGO</b>		
Oti-Keran	National Park	1,636
Fazao-Malfakassa	National Park	690
Fosse aux Lions	National Park	17
Parc National de Togodo	Faunal Reserve	310
Galangashie	Faunal Reserve	75
Abdoulaye	Faunal Reserve	300
Djamde	Faunal Reserve	81
Alédjo	Faunal Reserve	8
Sirka	Faunal Reserve	10
	Forest Reserves (78)	1,737

PROTECTED AREA NAME	TYPE	SIZE (KM2)*
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Source: UNEP-WCMC (2018). Protected Area Profile for Africa from the World Database of Protected Areas, June 2018. Available at: [www.protectedplanet.net](http://www.protectedplanet.net)

\*Note: This table includes area estimates from the World Database on Protected Areas (WDPA) used by Protected Planet, a collaborative effort between UNEP World Conservation Monitoring Centre (UNEP-WCMC) and the IUCN World Commission on Protected Areas (WCPA). In some cases, there was no area provided by the data source, in which case the table reflects an area assigned by UNEP-WCMC. The note “n/a” means that the area was not available from either source. The area estimates (in square kilometers, as km<sup>2</sup>) from Protected Planet may differ from data from official government sources due to differences in methodologies and datasets to estimate protected area coverage and differences in the base maps used to measure terrestrial and marine area of a country or territory.

## ANNEX E: LIST OF INTERNATIONAL AND REGIONAL TREATIES AND AGREEMENTS IN WEST AFRICA

**TABLE 14 REGIONAL AND INTERNATIONAL TREATIES RELEVANT TO BIODIVERSITY AND TROPICAL FORESTRY**

TYPE	NAME	YEAR (IN FORCE)	SUMMARY/KEY OBJECTIVES	WEST AFRICAN COUNTRIES THAT ARE PARTY TO THE AGREEMENT
<b>INTERNATIONAL</b>				
Biodiversity	Cartagena Protocol on Biosafety	2003	<ul style="list-style-type: none"> <li>• Formulate of a harmonized regional biotechnology and biosafety policy to inform decision making on genetically modified organisms</li> <li>• Establish a regional biotechnology and biosafety unit at the EAC</li> <li>• Mobilize resources to support capacity building - human, infrastructure and institutional</li> <li>• Create strategies for public education, participation, awareness on biotechnology and biosafety</li> <li>• Develop a framework for a harmonized regional approach to global negotiations in biotechnology and biosafety</li> <li>• Establish a panel of experts to guide biosafety decision making and give risk assessment opinions</li> <li>• Establish EAC Centres of Excellence in biotechnology and biosafety</li> </ul>	Benin, Burkina Faso, Cameroon, Cape Verde, Chad, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Togo
Biodiversity	United Nations Convention on Combating Desertification (UNCCD) UNCCD Africa Regional Action Programme (RAP)	1994	<ul style="list-style-type: none"> <li>• Identify measures and arrangements, including the nature and processes of assistance provided by developed country parties, in accordance with the relevant provisions of the convention;</li> <li>• Provide for the efficient and practical implementation of the convention to address conditions specific to Africa; and</li> <li>• Promote processes and activities relating to combating desertification and/or mitigating the effects of drought within the arid, semi-arid and dry sub-humid areas of Africa.</li> </ul>	Benin, Burkina Faso, Cameroon, Cape Verde, Chad, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo
Biodiversity	Convention on Biological Diversity (CBD)	1993	<ul style="list-style-type: none"> <li>• Conservation of biodiversity</li> <li>• Sustainable use of biodiversity</li> <li>• Fair and equitable realization of benefits arising from use/exploitation of genetic resources</li> </ul>	Benin, Burkina Faso, Cameroon, Cape Verde, Chad, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo

**TABLE 14 REGIONAL AND INTERNATIONAL TREATIES RELEVANT TO BIODIVERSITY AND TROPICAL FORESTRY**

TYPE	NAME	YEAR (IN FORCE)	SUMMARY/KEY OBJECTIVES	WEST AFRICAN COUNTRIES THAT ARE PARTY TO THE AGREEMENT
Pollutants/ Toxins	United Nations Framework Convention on Climate Change/Kyoto Protocol/Paris Agreement	1992	<ul style="list-style-type: none"> <li>Stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system</li> <li>Governing body of the Kyoto Protocol and Paris Agreement</li> </ul>	Benin, Burkina Faso, Cameroon, Cape Verde, Chad, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo
Biodiversity	Ramsar Convention on Wetlands of International Importance	1975	<ul style="list-style-type: none"> <li>Conservation and sustainable use of wetlands</li> <li>Every three years, representatives of the contracting parties meet as the Conference of the Contracting Parties (COP), the policy-making organ of the convention which adopts decisions (resolutions and recommendations) to administer the work of the convention and improve the way in which the parties can implement its objectives.</li> </ul>	Benin, Burkina Faso, Cameroon, Cape Verde, Chad, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo
Biodiversity	Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)	1973	<ul style="list-style-type: none"> <li>To ensure that international trade in specimens of wild animals and plants does not threaten their survival.</li> <li>Subjects international trade in specimens of selected species to certain controls. All import, export, re-export, and introduction from the sea of species covered by the convention must be authorized through a licensing system. Each party to the convention must designate one or more management authorities in charge of administering that licensing system and one or more scientific authorities to advise them on the effects of trade on the status of the species.</li> </ul>	Benin, Burkina Faso, Cameroon, Cape Verde, Chad, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo
Biodiversity	Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA)	1996	<ul style="list-style-type: none"> <li>Dedicated to the conservation of migratory waterbirds and their habitats across Africa, Europe, the Middle East, Central Asia, Greenland, and the Canadian Archipelago.</li> <li>To establish coordinated conservation and management of migratory waterbirds throughout their entire migratory range.</li> <li>Covers migratory waterbirds that are ecologically dependent on wetlands for at least a part of their annual life cycle.</li> <li>Establishes measures to be undertaken by</li> </ul>	Benin, Burkina Faso, Chad, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Mali, Niger, Nigeria, Senegal, Togo



**TABLE 14 REGIONAL AND INTERNATIONAL TREATIES RELEVANT TO BIODIVERSITY AND TROPICAL FORESTRY**

TYPE	NAME	YEAR (IN FORCE)	SUMMARY/KEY OBJECTIVES	WEST AFRICAN COUNTRIES THAT ARE PARTY TO THE AGREEMENT
			Contracting Parties to warrant the conservation of migratory waterbirds within their national boundaries.	
Biodiversity	Convention on the Conservation of Migratory Species of Wild Animals		<ul style="list-style-type: none"> <li>As an environmental treaty under the aegis of the United Nations Environment Programme, CMS provides a global platform for the conservation and sustainable use of migratory animals and their habitats.</li> <li>CMS brings together the States through which migratory animals pass, the Range States, and lays the legal foundation for internationally coordinated conservation measures throughout a migratory range.</li> </ul>	Benin, Burkina Faso, Cameroon, Cape Verde, Chad, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Togo
Biodiversity	Memorandum of Understanding on the Conservation of Migratory Sharks	2010	<ul style="list-style-type: none"> <li>Under the auspices of the Convention on the Conservation of Migratory Species of Wild Animals, this MoU aims to conserve migratory sharks throughout their range.</li> <li>Improve the understanding of migratory shark populations through research, monitoring and information exchange</li> <li>Ensure that directed and non-directed fisheries for sharks are sustainable</li> <li>Ensure to the extent practicable the protection of critical habitats and migratory corridors and critical life stages of sharks</li> <li>Increase public awareness of threats to sharks and their habitats, and enhance public participation in conservation activities</li> <li>Enhance national, regional, and international cooperation</li> </ul>	Benin, Cote d'Ivoire, Ghana, Guinea, Liberia, Senegal, Togo
Biodiversity	The United Nations Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to	2001	<ul style="list-style-type: none"> <li>Establishes principles for the conservation and management of straddling and highly migratory fish stocks.</li> <li>Establishes that management must be based on the precautionary approach and the best available scientific information.</li> </ul>	Benin, Burkina Faso, Cameroon, Cape Verde, Chad, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo

**TABLE 14 REGIONAL AND INTERNATIONAL TREATIES RELEVANT TO BIODIVERSITY AND TROPICAL FORESTRY**

TYPE	NAME	YEAR (IN FORCE)	SUMMARY/KEY OBJECTIVES	WEST AFRICAN COUNTRIES THAT ARE PARTY TO THE AGREEMENT
	the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks			
Biodiversity	International Convention for the Regulation of Whaling	1948	<ul style="list-style-type: none"> <li>To protect all whale species from overhunting</li> <li>Governs whaling practices for commercial, scientific, and subsistence purposes.</li> <li>Establishes a schedule of measures to regulate whaling and ensure proper conservation of whale stocks.</li> </ul>	Benin, Cameroon, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Mali, Senegal, Togo
Biodiversity	Convention on Fishing and Conservation of Living Resources of the High Seas	1966	<ul style="list-style-type: none"> <li>Establishes provisions concerning conservation of living resources of the high seas.</li> <li>Establishes expectations that states adopt or cooperate in adopting measures for their respective nations as necessary for the conservation of living resources of the high seas.</li> </ul>	Burkina Faso, Ghana, Liberia, Nigeria, Sierra Leone
Pollutants/ Toxins	International Convention for the Prevention of Pollution from Ships (MARPOL)	1983	<ul style="list-style-type: none"> <li>To prevent and minimize pollution from ships, both accidental pollution and that from routine operations.</li> </ul>	Benin, Cameroon*, Cape Verde*, Cote d'Ivoire*, The Gambia*, Ghana, Guinea*, Guinea Bissau*, Liberia, Nigeria, Senegal*, Sierra Leone, Togo* *These countries have not signed the Protocol of 1997 to amend MARPOL or signed Annexes VI or VII.
Pollutants/ Toxins	1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Protocol)	1996	<ul style="list-style-type: none"> <li>To protect and preserve the marine environment from pollution by taking effective measures to prevent, reduce and eliminate pollution from dumping or incineration at sea.</li> <li>Takes a broad "precautionary" approach by obligating parties to prohibit the dumping of waste or other matter, except for those specified on a "reserve list."</li> </ul>	Nigeria, Sierra Leone
Biodiversity	International Convention for the Conservation of Atlantic Tunas (ICCAT)	1969	<ul style="list-style-type: none"> <li>To conserve tunas and tuna-like species in the Atlantic Ocean and adjacent seas.</li> <li>Conducts work required for the study and management of tuna (biometry, ecology, and oceanography).</li> </ul>	Cape Verde, Cote D'Ivoire, Ghana, Guinea, Nigeria, Senegal, Sierra Leone
Biodiversity	Indian Ocean Tuna Commission	1996	<ul style="list-style-type: none"> <li>To promote cooperation among members and cooperating non-members to conserve and</li> </ul>	Guinea, Sierra Leone

**TABLE 14 REGIONAL AND INTERNATIONAL TREATIES RELEVANT TO BIODIVERSITY AND TROPICAL FORESTRY**

TYPE	NAME	YEAR (IN FORCE)	SUMMARY/KEY OBJECTIVES	WEST AFRICAN COUNTRIES THAT ARE PARTY TO THE AGREEMENT
			<ul style="list-style-type: none"> <li>optimize use of fish stocks.</li> <li>To encourage sustainable development of fisheries.</li> <li>Responsible for the management of tuna and tuna-like species in the Indian Ocean.</li> </ul>	
Economic	International Tropical Timber Agreement	2011	<ul style="list-style-type: none"> <li>To promote the expansion and diversification of international trade in tropical timber from sustainably managed and legally harvested forests and to promote the sustainable management of tropical timber producing forests.</li> </ul>	Benin, Cameroon, Cote d'Ivoire, Ghana, Liberia, Mali, Nigeria, Togo
Biodiversity	International Plant Protection Convention (IPPC)	1952	<ul style="list-style-type: none"> <li>Aims to secure coordinated, effective action to prevent and to control the introduction and spread of pests of plants and plant products.</li> <li>Protects the environment, forests, and biodiversity from plant pests.</li> </ul>	Benin, Burkina Faso, Cameroon, Cape Verde, Chad, Cote d'Ivoire, The Gambia, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo
Biodiversity	Berne Convention on the Conservation of European Wildlife and Natural Habitats	1982	<ul style="list-style-type: none"> <li>Aims to conserve wild flora and fauna species and their habitats.</li> <li>Covers natural heritage in Europe as well as in some African countries.</li> </ul>	Burkina Faso, Senegal
<b>REGIONAL</b>				
Biodiversity	West African Elephant Memorandum of Understanding	2005	<ul style="list-style-type: none"> <li>Under the auspices of the Convention on the Conservation of Migratory Species of Wild Animals, this MoU aims to protect the West African Elephant populations.</li> <li>Provides an international framework for range State governments, scientists, and conservation groups to collaborate in the conservation of the species and its habitat.</li> </ul>	Benin, Burkina Faso, Cote d'Ivoire, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo
Biodiversity	The Memorandum of Understanding (MoU) concerning Conservation Measures for Marine Turtles of the Atlantic Coast of Africa	1999	<ul style="list-style-type: none"> <li>Under the auspices of the Convention on the Conservation of Migratory Species of Wild Animals, this MoU focuses on the protection of six highly migratory marine turtle species that are estimated to have rapidly declined in numbers along the Atlantic Coast of Africa.</li> </ul>	Benin, Cameroon, Cape Verde, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo

**TABLE 14 REGIONAL AND INTERNATIONAL TREATIES RELEVANT TO BIODIVERSITY AND TROPICAL FORESTRY**

TYPE	NAME	YEAR (IN FORCE)	SUMMARY/KEY OBJECTIVES	WEST AFRICAN COUNTRIES THAT ARE PARTY TO THE AGREEMENT
Biodiversity	Memorandum of Understanding (MoU) Concerning the Conservation of the Manatee and Small Cetaceans of Western Africa and Macaronesia	2008	<ul style="list-style-type: none"> <li>Under the auspices of the Convention on the Conservation of Migratory Species of Wild Animals, this MoU aims to conserve manatees and small cetaceans of Western Africa and Macaronesia and their habitats</li> <li>Safeguards the associated values of these species for the people of the region.</li> </ul>	Benin, Cape Verde, Chad, Cote d'Ivoire, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Togo
Pollutants/ Toxins	Convention for Co-Operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region; and Protocol	1981	<ul style="list-style-type: none"> <li>To prevent, reduce, combat and control pollution of the marine environment along the West and Central African region</li> <li>To ensure sound environmental management of natural resources.</li> <li>Allows contracting states to enter into bilateral or multilateral agreements consistent with the Convention and international law.</li> </ul>	Benin, Cameroon, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo
Conservation	Convention for Cooperation in the Protection, Management and Development of the Marine and Coastal Environment of the Atlantic Coast of the West, Central and Southern Africa Region (Abidjan Convention)	1984	<ul style="list-style-type: none"> <li>Establishes an overarching legal framework for all marine-related programs in West, Central and Southern Africa.</li> <li>Mission is to "Protect, Conserve and Develop the Abidjan Convention Area and its Resources for the Benefit and Well-being of its People."</li> <li>Addresses degradation of the world's oceans and coastal areas through the sustainable management and use of the marine and coastal environment.</li> </ul>	Benin, Cameroon, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo
Biodiversity	African Convention on the Conservation of Nature and Natural Resources	1969	<ul style="list-style-type: none"> <li>Enhance environmental protection;</li> <li>Foster the conservation and sustainable use of natural resources;</li> <li>Harmonize and coordinate policies in these fields with a view to achieving ecologically rational, economically sound, and socially acceptable development policies and programs.</li> </ul>	Benin, Burkina Faso, Cameroon, Chad, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo

## ANNEX F: COMPLETE LIST OF THREATENED OR NEAR THREATENED SPECIES (ANIMALIA AND PLANTAE)

\* The IUCN designations for red lists status include the following: Near Threatened (NT); Vulnerable (VU); Endangered (EN); and Critically Endangered (CE)

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Acanthixalus sonjae</i>	Ivory Coast Wart Frog	Côte d'Ivoire, Ghana	NT	2006	decreasing
<i>Acinonyx jubatus</i>	Cheetah, Hunting Leopard	Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Ghana, Guinea, Guinea-Bissau, Mali, Niger, Nigeria, Senegal, Sierra Leone	VU	2015	decreasing
<i>Acrocephalus brevipennis</i>	Cape Verde Swamp-warbler, Cape Verde Cane Warbler, Cape Verde Islands Cane Warbler, Cape Verde Swamp-Warbler, Cape Verde Warbler	Cape Verde	VU	2017	unknown
<i>Acrocephalus paludicola</i>	Aquatic Warbler	Ghana, Senegal	VU	2017	decreasing
<i>Addax nasomaculatus</i>	Addax	Chad, Niger	CR	2016	decreasing
<i>Aetobatus narinari</i>	Spotted Eagle Ray, Bonnetray, Maylan	Benin, Cameroon, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	NT	2006	decreasing
<i>Africocypha centripunctata</i>	Banded Jewel	Cameroon, Nigeria	VU	2010	unknown
<i>Afrithelphusa monodosa</i>	Purple Marsh Crab	Guinea	EN	1996	decreasing
<i>Afrixalus lacteus</i>	Cameroon Banana Frog	Cameroon	EN	2017	decreasing
<i>Afrixalus vibekensis</i>	Nimba Banana Frog	Côte d'Ivoire, Ghana	NT	2004	decreasing
<i>Afropomus balanoidea</i>		Côte d'Ivoire, Liberia, Nigeria, Sierra Leone	NT	2010	unknown
<i>Agelastes meleagrides</i>	White-breasted Guineafowl	Côte d'Ivoire, Ghana, Liberia, Sierra Leone	VU	2016	decreasing
<i>Alauda razae</i>	Raso Lark, Raza Island Lark, Razo Lark	Cape Verde	CR	2017	stable
<i>Alestes bouboni</i>		Niger	EN	2010	unknown

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Alestopetersius smykalai</i>		Nigeria	VU	2009	unknown
<i>Alexteroon jynx</i>		Cameroon	CR	2004	decreasing
<i>Allochrocebus preussi</i>	Preuss's Monkey, Preuss's Guenon	Cameroon, Nigeria	EN	2016	decreasing
<i>Allocnemis vicki</i>		Cameroon, Nigeria	EN	2017	unknown
<i>Alopias superciliosus</i>	Bigeye Thresher Shark, False Thresher, Long-tailed Shark, Whiptail	Guinea, Senegal, Sierra Leone	VU	2009	decreasing
<i>Alopias vulpinus</i>	Common Thresher Shark, Atlantic thresher, Fox Shark, Grayfish, Green Thresher, Sea Fox, Slasher, Swingletail, Swiveltail, Thintail thresher, Thrasher, Whip-tailed shark, Zorro thresher shark	Cameroon, Cape Verde, Côte d'Ivoire, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone	VU	2009	decreasing
<i>Ammotragus lervia</i>	Aoudad, Barbary Sheep, Uaddan	Chad, Mali, Niger	VU	2008	decreasing
<i>Amnirana asperrima</i>	Nkongsamba Frog	Cameroon, Nigeria	EN	2004	decreasing
<i>Amnirana occidentalis</i>	Ivory Coast Frog	Côte d'Ivoire, Ghana, Guinea, Liberia	EN	2004	decreasing
<i>Amphilius kakrimensis</i>		Guinea	VU	2010	unknown
<i>Amphilius korupi</i>		Cameroon	EN	2010	unknown
<i>Amphilius lamani</i>		Cameroon	EN	2010	unknown
<i>Aonyx capensis</i>	African Clawless Otter, Cape Clawless Otter	Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Niger, Nigeria, Senegal, Sierra Leone	NT	2015	decreasing
<i>Aonyx congicus</i>	Congo Clawless Otter, Cameroon Clawless Otter, Small-clawed Otter, Small-toothed Clawless Otter, Zaire Clawless Otter	Cameroon	NT	2015	decreasing
<i>Aparallactus lineatus</i>	Lined Centipede-eater	Ghana, Guinea, Liberia	NT	2013	unknown
<i>Aphyosemion amoenum</i>	Red-finned Killi	Cameroon	EN	2010	unknown

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Aphyosemion bamilekorum</i>	Bamileke Killi	Cameroon	EN	2010	unknown
<i>Aphyosemion bivittatum</i>	Twostripe Lyretail, Red Lyretail, Two-banded Killi	Cameroon, Nigeria	VU	2010	unknown
<i>Aphyosemion bualanum</i>		Cameroon, Nigeria	EN	2010	unknown
<i>Aphyosemion dargei</i>	Mbam Killi	Cameroon	VU	2010	unknown
<i>Aphyosemion edeanum</i>	Edea Killi	Cameroon	VU	2010	unknown
<i>Aphyosemion franzwerneri</i>	Goby Killi	Cameroon	EN	2010	unknown
<i>Aphyosemion lugens</i>		Cameroon	EN	2010	unknown
<i>Aphyosemion poliaki</i>		Cameroon	EN	2010	unknown
<i>Aphyosemion volcanum</i>		Cameroon	EN	2010	unknown
<i>Aphyosemion wildekampi</i>		Cameroon	VU	2010	unknown
<i>Apletodon barbatus</i>		Cape Verde	VU	2015	unknown
<i>Aplocheilichthys keilhacki</i>		Togo	VU	2010	unknown
<i>Ardeotis arabs</i>	Arabian Bustard	Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Ghana, Mali, Niger, Nigeria, Senegal	NT	2016	decreasing
<i>Arius gigas</i>	Giant Sea Catfish	Benin, Burkina Faso, Cameroon, Côte d'Ivoire, Ghana, Mali, Nigeria	NT	2010	decreasing
<i>Arizelocichla montana</i>	Cameroon Mountain Greenbul, Cameroon Greenbul, Cameroon Montane Greenbul	Cameroon, Nigeria	NT	2016	decreasing
<i>Arlequinus krebsi</i>	Mebebeque Frog	Cameroon	EN	2017	decreasing
<i>Arnoldichthys spilopterus</i>	Niger tetra	Nigeria	VU	2010	unknown
<i>Arthroleptis aureoli</i>	Freetown Long-fingered Frog	Sierra Leone	EN	2004	decreasing
<i>Arthroleptis cruscolum</i>	Guinea Screeching Frog	Côte d'Ivoire, Guinea, Liberia, Sierra Leone	NT	2015	decreasing
<i>Arthroleptis krokosua</i>	Krokosua Squeaking Frog	Ghana, Guinea	NT	2015	decreasing

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Arthroleptis nlonakoensis</i>		Cameroon	EN	2017	decreasing
<i>Arthroleptis perreti</i>	Perret's Squeaker Frog	Cameroon	EN	2012	unknown
<i>Astylosternus fallax</i>	Fopouanga Night Frog	Cameroon	VU	2017	decreasing
<i>Astylosternus laticephalus</i>		Côte d'Ivoire, Ghana	NT	2014	unknown
<i>Astylosternus laurenti</i>	Laurent's Night Frog	Cameroon	EN	2017	decreasing
<i>Astylosternus nganhanus</i>	Nganha Night Frog	Cameroon	CR	2004	decreasing
<i>Astylosternus perreti</i>	Perret's Night Frog	Cameroon	EN	2004	decreasing
<i>Astylosternus ranoides</i>	Central Night Frog	Cameroon	EN	2015	decreasing
<i>Astylosternus rheophilus</i>	Cameroon Range Night Frog	Cameroon	NT	2017	decreasing
<i>Astylosternus schioetzi</i>	Apouh Night Frog	Cameroon	EN	2017	decreasing
<i>Atractoscion aequidens</i>	African Weakfish, Cape Salmon, Geelbeck Croaker, Geelbeek, Geelbek, Geelbek Croaker, Teraglin	Benin, Côte d'Ivoire, Ghana, Nigeria, Togo	VU	2015	decreasing
<i>Aythya ferina</i>	Common Pochard, Northern Pochard, Pochard	Gambia, Guinea-Bissau, Mali, Nigeria, Senegal	VU	2017	decreasing
<i>Aythya nyroca</i>	Ferruginous Duck, Ferruginous Pochard, White-eyed Pochard	Benin, Chad, Gambia, Mali, Niger, Nigeria, Senegal	NT	2017	decreasing
<i>Balaenoptera borealis</i>	Sei Whale	Cape Verde	EN	2008	unknown
<i>Balaenoptera musculus</i>	Blue Whale	Benin, Cameroon, Cape Verde, Côte d'Ivoire, Ghana, Nigeria, Senegal, Togo	EN	2008	increasing
<i>Balaenoptera physalus</i>	Fin Whale, Common Rorqual, Finback, Fin-backed Whale, Finner, Herring Whale, Razorback	Cape Verde	EN	2013	unknown
<i>Balearica pavonina</i>	Black Crowned-crane, Black Crowned Crane, Black Crowned-Crane, Northern Crowned Crane	Cameroon, Chad, Gambia, Guinea, Guinea-Bissau, Mali, Niger, Nigeria, Senegal	VU	2016	decreasing



SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Balistes capriscus</i>	Gray Triggerfish, Filefish, Grey Triggerfish, Leatherjacket, Pig-faced, Triggerfish, Trigger Fish, Turbot	Benin, Cameroon, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	VU	2015	decreasing
<i>Balistes punctatus</i>	Bluespotted Triggerfish, Spotted Triggerfish	Benin, Cameroon, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	VU	2015	decreasing
<i>Balistes vetula</i>	Queen Triggerfish, Old Wife, Ol'wife, Triggerfish, Turbot	Benin, Cameroon, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	NT	2015	decreasing
<i>Barboides gracilis</i>		Benin, Cameroon, Nigeria	VU	2010	unknown
<i>Barbus aliciae</i>		Guinea, Liberia	EN	2010	unknown
<i>Barbus anniae</i>		Guinea, Guinea-Bissau	VU	2010	unknown
<i>Barbus bagbwensis</i>		Sierra Leone	VU	2010	unknown
<i>Barbus bawkuensis</i>		Burkina Faso, Ghana, Nigeria	EN	2010	unknown
<i>Barbus bigornei</i>	Carp	Côte d'Ivoire, Guinea, Liberia, Sierra Leone	NT	2010	unknown
<i>Barbus boboi</i>		Liberia	CR	2010	unknown
<i>Barbus bourdariei</i>		Cameroon	EN	2010	unknown
<i>Barbus cadenati</i>		Guinea	VU	2010	unknown
<i>Barbus carcharhinoides</i>		Liberia	CR	2010	unknown
<i>Barbus dialonensis</i>		Guinea, Senegal	VU	2010	unknown
<i>Barbus ditinensis</i>		Guinea	VU	2010	unknown
<i>Barbus eburneensis</i>	carp	Côte d'Ivoire, Guinea, Liberia	VU	2010	unknown

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Barbus foutensis</i>	Carp	Guinea, Sierra Leone	VU	2010	unknown
<i>Barbus gruveli</i>		Guinea	VU	2010	unknown
<i>Barbus huguenyi</i>		Guinea, Liberia	EN	2010	unknown
<i>Barbus kissiensis</i>		Guinea	VU	2010	unknown
<i>Barbus lauzannei</i>		Guinea, Liberia	EN	2010	unknown
<i>Barbus liberiensis</i>	Carp	Liberia, Sierra Leone	EN	2010	unknown
<i>Barbus melanotaenia</i>		Liberia	CR	2010	unknown
<i>Barbus niokoloensis</i>		Guinea, Mali, Senegal	VU	2010	unknown
<i>Barbus parawaldroni</i>	Carp	Côte d'Ivoire, Guinea, Liberia	NT	2010	unknown
<i>Barbus petitjeani</i>		Guinea	VU	2010	increasing
<i>Barbus raimbaulti</i>		Guinea	VU	2010	unknown
<i>Barbus salessei</i>		Guinea, Sierra Leone	VU	2010	unknown
<i>Barbus subinensis</i>		Ghana	EN	2010	decreasing
<i>Barbus sylvaticus</i>		Benin, Nigeria	EN	2010	unknown
<i>Barbus taeniurus</i>		Cameroon	VU	2010	unknown
<i>Barbus thysi</i>		Cameroon	EN	2010	unknown
<i>Barbus traorei</i>		Côte d'Ivoire	EN	2010	unknown
<i>Barbus walkeri</i>		Côte d'Ivoire, Ghana	VU	2010	decreasing
<i>Barbus zalbiensis</i>		Cameroon, Chad	VU	2010	unknown
<i>Bathmocercus cerviniventris</i>	Black-headed Rufous-warbler, Black-capped Rufous Warbler, Black-headed Rufous Warbler	Côte d'Ivoire, Ghana, Guinea, Liberia, Sierra Leone	NT	2017	decreasing
<i>Bathygobius burtoni</i>		Cameroon, Ghana, Nigeria, Togo	EN	2015	unknown
<i>Bellamyia liberiana</i>		Liberia	CR	2009	unknown
<i>Benitochromis batesii</i>		Cameroon	VU	2010	unknown
<i>Benitochromis conjunctus</i>		Cameroon	EN	2010	unknown
<i>Benitochromis finleyi</i>		Cameroon	EN	2010	unknown

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Benitochromis nigrodorsalis</i>		Cameroon	EN	2010	unknown
<i>Benitochromis riomuniensis</i>		Cameroon	EN	2010	unknown
<i>Benitochromis ufermanni</i>		Cameroon	EN	2010	unknown
<i>Biomphalaria tchadiensis</i>		Cameroon, Chad, Nigeria	EN	2010	decreasing
<i>Bleda eximius</i>	Green-tailed Bristlebill	Côte d'Ivoire, Ghana, Guinea, Liberia, Sierra Leone	NT	2016	decreasing
<i>Bodianus scrofa</i>	Barred Hogfish	Cape Verde	VU	2010	decreasing
<i>Brachydeuterus auritus</i>	Bigeye Grunt	Benin, Cameroon, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	NT	2015	unknown
<i>Bradypterus bangwaensis</i>	Bangwa Warbler, Bangwa Forest-warbler, Bangwa Forest Warbler, Cameroon Bracken-warbler	Cameroon, Nigeria	NT	2016	stable
<i>Bradypterus grandis</i>	Dja River Swamp-warbler, Dja River Scrub-warbler, Dja River Warbler, Giant Swamp-warbler, Ja River Scrub Warbler, Ja River Scrub-Warbler	Cameroon	NT	2016	decreasing
<i>Brycinus brevis</i>	Characin	Ghana, Nigeria	VU	2010	unknown
<i>Brycinus carolinae</i>		Guinea	VU	2010	unknown
<i>Brycinus derhami</i>		Côte d'Ivoire	VU	2010	unknown
<i>Brycinus luteus</i>		Burkina Faso	VU	2010	unknown
<i>Brycinus nigricauda</i>		Côte d'Ivoire, Liberia	NT	2010	unknown
<i>Bubo shelleyi</i>	Shelley's Eagle-owl, Shelley's Eagle Owl, Shelley's Eagle-Owl	Cameroon, Côte d'Ivoire, Ghana, Liberia, Sierra Leone	NT	2016	decreasing
<i>Bulinus camerunensis</i>		Cameroon	EN	2010	unknown

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Bulinus obtusus</i>		Chad	VU	2010	unknown
<i>Bycanistes cylindricus</i>	Brown-cheeked Hornbill	Côte d'Ivoire, Ghana, Guinea, Liberia, Sierra Leone, Togo	VU	2016	decreasing
<i>Calidris canutus</i>	Red Knot, Knot, Lesser Knot	Benin, Cameroon, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	NT	2017	decreasing
<i>Calidris ferruginea</i>	Curlew Sandpiper	Benin, Burkina Faso, Cameroon, Cape Verde, Chad, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo	NT	2017	decreasing
<i>Callopanchax monroviae</i>		Liberia	VU	2010	unknown
<i>Callopanchax occidentalis</i>		Liberia, Sierra Leone	NT	2010	unknown
<i>Calonectris edwardsii</i>	Cape Verde Shearwater	Cape Verde, Senegal	NT	2017	decreasing
<i>Caracal aurata</i>	African Golden Cat, Golden Cat	Cameroon, Côte d'Ivoire, Ghana, Guinea, Liberia, Nigeria, Sierra Leone	VU	2015	decreasing
<i>Carcharhinus brevipinna</i>	Spinner Shark	Benin, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	NT	2009	unknown
<i>Carcharhinus falciformis</i>	Silky Shark	Benin, Cameroon, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	VU	2017	decreasing
<i>Carcharhinus leucas</i>	Bull Shark	Gambia, Guinea, Senegal	NT	2009	unknown

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ANIMALIA					
<i>Carcharhinus limbatus</i>	Blacktip Shark	Benin, Cameroon, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	NT	2009	unknown
<i>Carcharhinus longimanus</i>	Oceanic Whitetip Shark, Whitetip Oceanic Shark, White-tipped Shark, Whitetip Shark	Benin, Cameroon, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Niger, Senegal, Sierra Leone, Togo	VU	2015	decreasing
<i>Carcharhinus obscurus</i>	Dusky Shark	Cape Verde, Senegal, Sierra Leone	VU	2009	decreasing
<i>Carcharhinus plumbeus</i>	Sandbar Shark	Benin, Cameroon, Cape Verde, Côte d'Ivoire, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Togo	VU	2009	decreasing
<i>Carcharhinus signatus</i>	Night Shark	Benin, Cameroon, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	VU	2006	decreasing
<i>Carcharias taurus</i>	Sand Tiger Shark, Grey Nurse Shark, Grey Nurse Shark, Sand Tiger Shark, Spotted Ragged-tooth Shark, Spotted Raggedtooth Shark	Cameroon, Cape Verde, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone	VU	2009	unknown
<i>Cardiocondyla zoserka</i>		Nigeria	VU	1996	
<i>Cardioglossa alsco</i>		Cameroon	EN	2017	decreasing
<i>Cardioglossa manengouba</i>		Cameroon	CR	2015	decreasing
<i>Cardioglossa melanogaster</i>	Amiet's Long-fingered Frog	Cameroon, Nigeria	VU	2015	unknown
<i>Cardioglossa oreas</i>	Mount Okou Long-fingered Frog	Cameroon	EN	2015	unknown

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ANIMALIA					
<i>Cardioglossa pulchra</i>	Black Long-fingered Frog	Cameroon, Nigeria	EN	2015	unknown
<i>Cardioglossa schioetzi</i>	Acha Tugi Long-fingered Frog	Cameroon, Nigeria	VU	2017	decreasing
<i>Cardioglossa trifasciata</i>		Cameroon	CR	2014	decreasing
<i>Cardioglossa venusta</i>	Highland Long-fingered Frog	Cameroon	EN	2015	unknown
<i>Caretta</i>	Loggerhead Turtle	Cape Verde, Senegal, Sierra Leone	VU	2017	decreasing
<i>Caridina sodenensis</i>		Cameroon	VU	2013	unknown
<i>Centrochelys sulcata</i>	African Spurred Tortoise, Grooved Tortoise	Chad, Mali, Nigeria, Senegal	VU	1996	
<i>Centrophorus lusitanicus</i>	Lowfin Gulper Shark	Cameroon, Côte d'Ivoire, Ghana, Guinea, Nigeria, Senegal	VU	2009	unknown
<i>Centrophorus squamosus</i>	Leafscale Gulper Shark, Deepwater Spiny Dogfish, Nilson's Deepsea Dogfish	Senegal	VU	2003	decreasing
<i>Centroscymnus coelolepis</i>	Portuguese Dogfish	Benin, Cameroon, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	NT	2003	unknown
<i>Cephalophus dorsalis</i>	Bay Duiker	Cameroon, Côte d'Ivoire, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Sierra Leone, Togo	NT	2016	decreasing
<i>Cephalophus jentinki</i>	Jentink's Duiker	Côte d'Ivoire, Guinea, Liberia, Sierra Leone	EN	2016	decreasing
<i>Cephalophus leucogaster</i>	White-bellied Duiker	Cameroon	NT	2016	decreasing
<i>Cephalophus silvicultor</i>	Yellow-backed Duiker	Benin, Burkina Faso, Cameroon, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	NT	2016	decreasing
<i>Cephalophus zebra</i>	Zebra Duiker, Banded Duiker, Zebra Antelope	Côte d'Ivoire, Guinea, Liberia, Sierra Leone	VU	2016	decreasing

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ANIMALIA					
<i>Ceratogymna elata</i>	Yellow-casqued Hornbill, Yellow-casqued Wattled Hornbill	Cameroon, Côte d'Ivoire, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Nigeria, Senegal, Sierra Leone, Togo	VU	2016	decreasing
<i>Ceratotherium simum</i>	White Rhinoceros, Square-lipped Rhinoceros, White Rhino	Chad	NT	2012	increasing
<i>Cercocebus atys</i>	Sooty Mangabey	Côte d'Ivoire, Guinea, Guinea-Bissau, Liberia, Senegal, Sierra Leone	NT	2016	decreasing
<i>Cercocebus lunulatus</i>	White-naped Mangabey, White-collared Mangabey	Burkina Faso, Côte d'Ivoire, Ghana	EN	2016	decreasing
<i>Cercocebus torquatus</i>	Red-capped Mangabey, Collared Mangabey, Red-crowned Mangabey, Sooty Mangabey, White-collared Mangabey	Cameroon, Nigeria	VU	2008	decreasing
<i>Cercopithecus diana</i>	Diana Monkey, Diana Guenon	Côte d'Ivoire, Guinea, Liberia, Sierra Leone	VU	2016	decreasing
<i>Cercopithecus erythrogaster</i>	Red-bellied Monkey, Red-bellied Guenon, White-throated Guenon, White-throated Monkey	Benin, Nigeria, Togo	VU	2008	decreasing
<i>Cercopithecus erythrotis</i>	Red-eared Monkey, Red-eared Guenon, Russet-eared Guenon	Cameroon, Nigeria	VU	2008	decreasing
<i>Cercopithecus roloway</i>	Roloway Monkey, Roloway Guenon	Côte d'Ivoire, Ghana	EN	2016	decreasing
<i>Cercopithecus sclateri</i>	Sclater's Monkey, Sclater's Guenon, White-throated Guenon	Nigeria	VU	2008	decreasing
<i>Ceriagrion citrinum</i>	Yellow Waxtail	Benin, Nigeria	VU	2010	unknown
<i>Cetorhinus maximus</i>	Basking Shark	Senegal	VU	2005	decreasing
<i>Chalcides armitagei</i>	Armitage's Cylindrical Skink	Gambia, Guinea-Bissau, Senegal	NT	2013	unknown
<i>Chelonia mydas</i>	Green Turtle	Guinea, Guinea-Bissau, Senegal, Sierra Leone	EN	2004	decreasing

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Chiloglanis benuensis</i>		Cameroon, Nigeria	VU	2010	unknown
<i>Chiloglanis disneyi</i>		Cameroon	VU	2010	unknown
<i>Chiloglanis harbinger</i>		Cameroon	VU	2010	unknown
<i>Chiloglanis normani</i>		Côte d'Ivoire	NT	2010	unknown
<i>Chiloglanis polyodon</i>		Sierra Leone	CR	2010	unknown
<i>Chiloglanis polypogon</i>		Cameroon	NT	2010	unknown
<i>Chioninia stangeri</i>	Stanger's Skink	Cape Verde	NT	2013	unknown
<i>Chioninia vaillantii</i>	Vaillant's Mabuya	Cape Verde	EN	2013	decreasing
<i>Chlorocnemis sp. nov. A</i>		Cameroon, Nigeria	EN	2010	unknown
<i>Chlorocypha aurora</i>	Dawn Jewel	Cameroon	CR	2017	unknown
<i>Chlorocypha jejuna</i>	Togo Red Jewel	Togo	CR	2010	unknown
<i>Chlorophoneus kupeensis</i>	Mount Kupe Bush-shrike, Kupé Bushshrike, Mount Kupé Bush-shrike, Mount Kupé Bush Shrike, Serle's Bushshrike	Cameroon, Nigeria	EN	2016	decreasing
<i>Choeropsis liberiensis</i>	Pygmy Hippopotamus	Côte d'Ivoire, Guinea, Liberia, Nigeria, Sierra Leone	EN	2015	decreasing
<i>Chromidotilapia cavalliensis</i>		Côte d'Ivoire	VU	2010	unknown
<i>Chromidotilapia linkei</i>		Cameroon	EN	2010	unknown
<i>Chrysichthys aluuensis</i>		Cameroon, Nigeria	VU	2010	unknown
<i>Chrysichthys longidorsalis</i>		Cameroon	VU	2010	unknown
<i>Chrysichthys nyongensis</i>		Cameroon	VU	2010	unknown
<i>Chrysichthys teugelsi</i>		Côte d'Ivoire, Liberia	EN	2010	unknown
<i>Chrysichthys walkeri</i>		Ghana	EN	2010	decreasing
<i>Circaetus beaudouini</i>	Beaudouin's Snake-eagle, Beaudouin's Snake Eagle	Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Gambia, Ghana, Guinea, Mali, Niger, Nigeria, Senegal	VU	2017	decreasing



SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Circus macrourus</i>	Pallid Harrier, Pale Harrier	Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo	NT	2017	decreasing
<i>Citharinus eburneensis</i>		Côte d'Ivoire, Ghana	NT	2010	decreasing
<i>Clarias lamottei</i>		Côte d'Ivoire	NT	2010	unknown
<i>Clarias maclareni</i>		Cameroon	CR	2010	unknown
<i>Clarias submarginatus</i>	Blotched Catfish	Cameroon	VU	2010	unknown
<i>Cnemaspis occidentalis</i>	Western Gecko	Côte d'Ivoire, Guinea, Liberia, Sierra Leone	EN	2013	unknown
<i>Coelatura lobensis</i>		Cameroon	VU	2010	unknown
<i>Colobus polykomos</i>	King Colobus, Ursine Black-and-White Colobus, Western Black-and-White Colobus, Western Pied Colobus	Côte d'Ivoire, Guinea, Guinea-Bissau, Liberia, Sierra Leone	VU	2008	unknown
<i>Colobus satanas</i>	Black Colobus	Cameroon	VU	2008	decreasing
<i>Colobus vellerosus</i>	White-thighed Colobus, Geoffroy's Black-and-White Colobus, White-thighed Black-and-White Colobus	Benin, Côte d'Ivoire, Ghana, Nigeria, Togo	VU	2008	unknown
<i>Columba albinucha</i>	White-naped Pigeon	Cameroon	NT	2016	unknown
<i>Conraua alleni</i>	Allen's Slippery Frog	Côte d'Ivoire, Guinea, Liberia, Sierra Leone	VU	2004	decreasing
<i>Conraua derooi</i>	Togo Slippery Frog	Ghana, Togo	CR	2004	decreasing
<i>Conraua goliath</i>	Giant Slippery Frog, Goliath Frog	Cameroon	EN	2004	decreasing
<i>Conraua robusta</i>	Cameroon Slippery Frog	Cameroon, Nigeria	VU	2004	decreasing
<i>Conus ateralbus</i>		Cape Verde	EN	2012	stable
<i>Conus atlanticoselvagem</i>		Cape Verde	NT	2012	unknown
<i>Conus belairensis</i>		Senegal	EN	2012	decreasing

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Conus bruguieresi</i>		Senegal	EN	2012	decreasing
<i>Conus cacao</i>		Senegal	VU	2013	decreasing
<i>Conus cloveri</i>		Senegal	EN	2012	stable
<i>Conus crotchii</i>		Cape Verde	EN	2012	stable
<i>Conus cuneolus</i>		Cape Verde	EN	2012	decreasing
<i>Conus curralensis</i>		Cape Verde	NT	2012	stable
<i>Conus decoratus</i>		Cape Verde	VU	2012	decreasing
<i>Conus denizi</i>		Cape Verde	NT	2013	
<i>Conus derrubado</i>		Cape Verde	NT	2013	stable
<i>Conus diminutus</i>		Cape Verde	NT	2012	stable
<i>Conus dorotheae</i>		Senegal	NT	2012	unknown
<i>Conus echinophilus</i>		Senegal	EN	2012	decreasing
<i>Conus evorai</i>		Cape Verde	NT	2013	stable
<i>Conus felitae</i>		Cape Verde	VU	2012	stable
<i>Conus fernandesi</i>		Cape Verde	EN	2012	unknown
<i>Conus fontonae</i>		Cape Verde	VU	2012	stable
<i>Conus guinaicus</i>		Senegal	VU	2012	unknown
<i>Conus hybridus</i>		Senegal	EN	2012	decreasing
<i>Conus josephinae</i>		Cape Verde	NT	2012	decreasing
<i>Conus kersteni</i>		Cape Verde	NT	2012	stable
<i>Conus lugubris</i>		Cape Verde	CR	2012	decreasing
<i>Conus luquei</i>		Cape Verde	NT	2013	stable
<i>Conus mercator</i>		Senegal	EN	2012	unknown
<i>Conus mordeirae</i>		Cape Verde	CR	2012	decreasing
<i>Conus navarroii</i>		Cape Verde	NT	2013	stable
<i>Conus regonae</i>		Cape Verde	VU	2012	stable
<i>Conus salreiensis</i>		Cape Verde	CR	2012	decreasing
<i>Conus saragasae</i>		Cape Verde	NT	2012	unknown

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Conus tacomae</i>		Senegal	VU	2012	unknown
<i>Conus taslei</i>		Guinea, Guinea-Bissau, Senegal	NT	2012	unknown
<i>Conus teodora</i>		Cape Verde	VU	2012	stable
<i>Conus trencarti</i>		Senegal	NT	2012	unknown
<i>Conus trochulus</i>		Cape Verde	NT	2012	unknown
<i>Conus unifasciatus</i>		Senegal	EN	2012	unknown
<i>Coptodon camerunensis</i>		Cameroon	VU	2010	unknown
<i>Coptodon kottae</i>		Cameroon	EN	2017	unknown
<i>Corcyrogobius lubbocki</i>		Cameroon, Ghana, Nigeria	VU	2015	unknown
<i>Criniger olivaceus</i>	Yellow-bearded Greenbul, Yellow-bearded Bulbul	Côte d'Ivoire, Ghana, Guinea, Liberia, Sierra Leone	VU	2017	decreasing
<i>Crocidura buettikoferi</i>	Buettikofer's Shrew	Côte d'Ivoire, Ghana, Guinea, Liberia, Nigeria	NT	2008	decreasing
<i>Crocidura eisentrauti</i>	Eisentraut's Shrew	Cameroon	VU	2016	stable
<i>Crocidura grandiceps</i>	Large-headed Forest Shrew, Large-headed Shrew	Benin, Côte d'Ivoire, Ghana, Guinea, Liberia, Nigeria	NT	2008	unknown
<i>Crocidura manengubae</i>	Manenguba Shrew	Cameroon	VU	2008	decreasing
<i>Crocidura nimbae</i>	Nimba Shrew	Côte d'Ivoire, Guinea, Liberia, Sierra Leone	NT	2008	decreasing
<i>Crocidura picea</i>	Assumbo Shrew, Cameroon Shrew, Pitch Shrew	Cameroon	EN	2008	decreasing
<i>Crocidura wimmeri</i>	Wimmer's Shrew	Côte d'Ivoire	CR	2016	unknown
<i>Ctenopoma nebulosum</i>		Nigeria	VU	2010	unknown
<i>Cyclanorbis elegans</i>	Nubian Flapshell Turtle	Cameroon, Chad, Ghana, Nigeria, Togo	CR	2016	decreasing
<i>Cyclanorbis senegalensis</i>	Senegal Flapshell Turtle, Sahelian Flapshell Turtle	Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Gambia, Ghana, Guinea-Bissau, Liberia,	VU	2016	decreasing

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
		Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo			
<i>Cynisca gansi</i>		Nigeria	CR	2013	unknown
<i>Cynisca kigomensis</i>		Nigeria	CR	2013	unknown
<i>Cynisca leonina</i>	Los Archipelago Worm Lizard	Guinea	VU	2013	unknown
<i>Cynisca nigeriensis</i>		Nigeria	VU	2013	unknown
<i>Cynisca oligopholis</i>	Cassine River Worm Lizard	Guinea, Guinea-Bissau	EN	2013	unknown
<i>Cynoglossus canariensis</i>	Canary Tonguesole	Benin, Cameroon, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	NT	2015	stable
<i>Cynoglossus monodi</i>	Guinean tonguesole	Benin, Cameroon, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	NT	2015	unknown
<i>Cynoglossus senegalensis</i>	Senegalese Tonguesole	Benin, Cameroon, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	NT	2015	stable
<i>Dalatias licha</i>	Kitefin Shark, Black Shark, Seal Shark	Cameroon, Côte d'Ivoire, Senegal	NT	2009	unknown
<i>Dentex angolensis</i>	Angola Dentex	Benin, Cameroon, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	NT	2014	unknown
<i>Denticeps clupeioides</i>		Benin, Cameroon, Nigeria	VU	2010	unknown

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Dermochelys coriacea</i>	Leatherback, Coffin-back, Leatherback Sea Turtle, Leathery Turtle, Luth, Trunkback Turtle, Trunk Turtle	Benin, Cameroon, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	VU	2013	decreasing
<i>Desmocaris bislineata</i>		Nigeria	EN	2013	unknown
<i>Diceros bicornis</i>	Black Rhinoceros, Hook-lipped Rhinoceros	Cameroon, Chad	CR	2012	increasing
<i>Didogobius amicuscaridis</i>		Nigeria	VU	2015	unknown
<i>Didynamipus sjostedti</i>	Four-digit Toad	Cameroon, Nigeria	VU	2017	decreasing
<i>Doumea chappuisi</i>		Côte d'Ivoire, Guinea, Guinea-Bissau, Liberia	VU	2010	unknown
<i>Doumea gracila</i>		Cameroon	VU	2010	unknown
<i>Doumea thysi</i>		Cameroon, Nigeria	VU	2010	unknown
<i>Eidolon helvum</i>	African Straw-coloured Fruit-bat, Pale Xantharpy, Staw-coloured Flying Fox, Straw-coloured Fruit Bat	Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo	NT	2008	decreasing
<i>Elatoneura dorsalis</i>	Yellow-fronted Threadtail	Sierra Leone	VU	2010	unknown
<i>Elatoneura pluotae</i>		Senegal	CR	2010	unknown
<i>Epinephelus aeneus</i>	White Grouper	Benin, Cameroon, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	NT	2008	decreasing
<i>Epinephelus itajara</i>	Atlantic Goliath Grouper, Goliath Grouper	Benin, Cameroon, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	CR	2011	unknown

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Epinephelus marginatus</i>	Dusky Grouper, Yellowbelly Grouper, Yellowbelly Rockcod	Benin, Cameroon, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	EN	2004	decreasing
<i>Epiplatys biafranus</i>		Nigeria	EN	2010	unknown
<i>Epiplatys chaperi</i>	Toothed Carp	Côte d'Ivoire, Ghana, Togo	NT	2010	decreasing
<i>Epiplatys coccinatus</i>		Liberia	CR	2010	unknown
<i>Epiplatys etzeli</i>		Côte d'Ivoire	EN	2010	unknown
<i>Epiplatys guineensis</i>		Guinea	VU	2010	unknown
<i>Epiplatys hildegardae</i>		Guinea	VU	2010	unknown
<i>Epiplatys lamottei</i>	Redspotted panchax	Guinea, Liberia	VU	2010	unknown
<i>Epiplatys lokoensis</i>		Sierra Leone	EN	2010	unknown
<i>Epiplatys longiventralis</i>		Nigeria	VU	2010	unknown
<i>Epiplatys njalaensis</i>		Sierra Leone	EN	2010	unknown
<i>Epiplatys roloffii</i>		Guinea, Liberia	EN	2010	decreasing
<i>Epiplatys ruhkopfi</i>		Liberia	CR	2010	unknown
<i>Erpetoichthys calabaricus</i>	Reed, Reedfish, Sailfin, Snakefish, Snake Fish	Benin, Cameroon, Nigeria	NT	2010	unknown
<i>Estrilda poliopareia</i>	Anambra Waxbill	Benin, Nigeria	NT	2017	stable
<i>Eudorcas ruffrons</i>	Red-fronted Gazelle	Burkina Faso, Cameroon, Chad, Ghana, Mali, Niger, Nigeria, Senegal	VU	2017	decreasing
<i>Euryrhynchina edingtonae</i>		Nigeria	EN	2013	unknown
<i>Falco cherrug</i>	Saker Falcon, Saker	Mali	EN	2017	decreasing
<i>Falco concolor</i>	Sooty Falcon	Chad, Niger	VU	2017	decreasing
<i>Falco vespertinus</i>	Red-footed Falcon, Western Red-footed Falcon	Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Gambia, Ghana,	NT	2017	decreasing

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
		Mali, Niger, Nigeria, Senegal, Togo			
<i>Foerschichthys flavipinnis</i>		Benin, Ghana, Nigeria, Togo	NT	2010	unknown
<i>Fontitrygon garouaensis</i>	Smooth Freshwater Stingray, Niger Stingray, Niger Stingray, Smooth Freshwater Stingray	Benin, Cameroon, Guinea, Mali, Niger, Nigeria	VU	2016	decreasing
<i>Fontitrygon geijskesi</i>	Sharpsnout Stingray, Wingfin Stingray	Senegal	NT	2016	unknown
<i>Fontitrygon margarita</i>		Benin, Cameroon, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	EN	2016	decreasing
<i>Fontitrygon ukpam</i>	Pincushion Ray, Thorny Freshwater Stingray	Nigeria	EN	2016	unknown
<i>Fundulopanchax amieti</i>	Amiet's Lyretail	Cameroon	EN	2010	unknown
<i>Fundulopanchax arnoldi</i>		Nigeria	EN	2010	unknown
<i>Fundulopanchax cinnamomeus</i>	Cinnamon Killi	Cameroon	EN	2010	unknown
<i>Fundulopanchax fallax</i>	Kribi Killi	Cameroon	EN	2010	unknown
<i>Fundulopanchax filamentosus</i>	Blue killi, Plumed killi	Benin, Nigeria, Togo	NT	2010	unknown
<i>Fundulopanchax gardneri</i>	Blue Lyretail, Gardner's Killi, Steel-blue Aphyosemion	Cameroon, Nigeria	NT	2010	unknown
<i>Fundulopanchax gularis</i>	Gulare	Benin, Nigeria	NT	2010	unknown
<i>Fundulopanchax marmoratus</i>	Marbled Lyretail, Marbled Killifish	Cameroon	EN	2010	unknown
<i>Fundulopanchax ndianus</i>		Cameroon	NT	2010	unknown
<i>Fundulopanchax powelli</i>		Nigeria	CR	2010	unknown
<i>Fundulopanchax rubrolabialis</i>		Cameroon	EN	2010	unknown
<i>Fundulopanchax scheeli</i>		Nigeria	EN	2010	unknown
<i>Fundulopanchax walkeri</i>		Côte d'Ivoire, Ghana	NT	2010	decreasing

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Gabbiella depressa</i>		Cameroon	CR	2010	unknown
<i>Gabbiella neothaumaeformis</i>		Cameroon, Chad	CR	2010	unknown
<i>Gabbiella tchadiensis</i>		Cameroon, Chad	EN	2010	decreasing
<i>Galeocerdo cuvier</i>	Tiger Shark	Benin, Cameroon, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	NT	2009	unknown
<i>Galeoides decadactylus</i>	Lesser African Threadfin	Benin, Cameroon, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	NT	2015	unknown
<i>Galeorhinus galeus</i>	Tope, Liver-oil Shark, Miller's Dog, Oil Shark, Penny Dog, Rig, School Shark, Snapper Shark, Soupfin, Soupie, Southern Tope, Sweet William, Tiburon, Topper, Tope Shark, Vitamin Shark, Whithound	Cape Verde, Côte d'Ivoire, Gambia, Guinea-Bissau, Nigeria, Senegal	VU	2006	decreasing
<i>Gallinago media</i>	Great Snipe	Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Nigeria, Senegal, Sierra Leone, Togo	NT	2017	decreasing
<i>Garra allostoma</i>		Cameroon	VU	2010	unknown
<i>Gazella dorcas</i>	Dorcas Gazelle	Chad, Mali, Niger, Nigeria, Senegal	VU	2017	decreasing
<i>Genetta burloni</i>	Bourlon's Genet	Côte d'Ivoire, Guinea, Liberia, Sierra Leone	VU	2015	decreasing
<i>Genetta cristata</i>	Crested Genet, Crested Servaline Genet	Cameroon, Nigeria	VU	2015	decreasing



SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Genetta johnstoni</i>	Johnston's Genet	Côte d'Ivoire, Ghana, Guinea, Liberia, Senegal, Sierra Leone	NT	2016	decreasing
<i>Geokichla crossleyi</i>	Crossley's Ground-thrush, Crossley's Ground Thrush, Crossley's Ground-Thrush	Cameroon, Nigeria	NT	2016	decreasing
<i>Geronticus eremita</i>	Northern Bald Ibis, Bald Ibis, Hermit Ibis, Waldrapp	Senegal	CR	2017	decreasing
<i>Giraffa camelopardalis</i>	Giraffe	Cameroon, Chad, Guinea, Mali, Niger, Nigeria, Senegal	VU	2016	decreasing
<i>Girella zonata</i>	Verdean Nibbler	Cape Verde	VU	2015	unknown
<i>Glareola nordmanni</i>	Black-winged Pratincole	Cameroon, Chad, Mali, Niger, Nigeria	NT	2016	decreasing
<i>Glaucostegus cemiculus</i>	Blackchin Guitarfish	Cameroon, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	EN	2016	decreasing
<i>Globonantes macropus</i>	Tree Hole Crab	Guinea, Liberia	EN	2008	decreasing
<i>Gobiocichla ethelwynnae</i>		Cameroon	EN	2010	unknown
<i>Gobiocichla wonderi</i>		Guinea, Mali, Nigeria	NT	2010	unknown
<i>Gobius tetrophthalmus</i>		Cape Verde	VU	2015	unknown
<i>Gorilla gorilla</i>	Western Gorilla, Lowland Gorilla	Cameroon, Nigeria	CR	2016	decreasing
<i>Gymnura altavela</i>	Spiny Butterfly Ray	Benin, Cameroon, Côte d'Ivoire, Gambia, Ghana, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	VU	2007	decreasing
<i>Gyps africanus</i>	White-backed Vulture	Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau,	CR	2017	decreasing

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ANIMALIA					
		Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo			
<i>Gyps rueppelli</i>	Rüppell's Vulture, Rueppell's Griffon, Rüppell's Griffon Vulture, Ruppell's Vulture	Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Mali, Niger, Nigeria, Senegal, Togo	CR	2017	decreasing
<i>Haematopus ostralegus</i>	Eurasian Oystercatcher, Pied Oystercatcher	Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Nigeria, Senegal, Sierra Leone	NT	2017	decreasing
<i>Hemidactylus boavistensis</i>	Boavista Leaf-toed Gecko	Cape Verde	NT	2013	stable
<i>Hemidactylus bouvieri</i>	Bouvier's Leaf-toed Gecko, Cape Verde Leaf-toed Gecko	Cape Verde	CR	2013	unknown
<i>Hemidactylus kundaensis</i>		Guinea	CR	2013	unknown
<i>Heptranchias perlo</i>	Sharpnose Sevengill Shark, One-finned Shark, Perlon Shark, Sevengill Cow Shark, Sharpsnouted Sevengill, Slender Sevengill	Benin, Cameroon, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	NT	2003	unknown
<i>Hippocampus algiricus</i>	West African Seahorse	Benin, Cameroon, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	VU	2017	decreasing
<i>Hippopotamus amphibius</i>	Hippopotamus, Common Hippopotamus, Large Hippo	Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau,	VU	2017	stable

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
		Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo			
ANIMALIA					
<i>Hipposideros curtus</i>	Short-tailed Roundleaf Bat	Cameroon	VU	2008	decreasing
<i>Hipposideros jonesi</i>	Jones' Roundleaf Bat, Jones's Roundleaf Bat	Burkina Faso, Côte d'Ivoire, Ghana, Guinea, Liberia, Mali, Nigeria, Sierra Leone	NT	2008	decreasing
<i>Hipposideros lamottei</i>	Lamotte's Roundleaf Bat	Guinea	CR	2008	decreasing
<i>Hipposideros marisae</i>	Aellen's Roundleaf Bat	Côte d'Ivoire, Guinea, Liberia	VU	2008	decreasing
<i>Hipposideros vittatus</i>	Commerson's Leafnosed Bat, Commerson's Rhinoloph, Commerson's Roundleaf Bat, Giant Leaf-nosed Bat	Guinea, Nigeria	NT	2008	decreasing
<i>Hyaena hyaena</i>	Striped Hyaena	Burkina Faso, Cameroon, Chad, Mali, Niger, Nigeria, Senegal	NT	2015	decreasing
<i>Hybomys badius</i>	Cameroon Highland Hybomys, Eisentraut's Hybomys, Eisentraut's Striped Mouse	Cameroon	EN	2008	decreasing
<i>Hydrictis maculicollis</i>	Spotted-necked Otter, Speckle-throated Otter, Spot-necked Otter	Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Sierra Leone, Togo	NT	2015	decreasing
<i>Hydrobates leucorhous</i>	Leach's Storm-petrel, Leach's Storm Petrel, Leach's Storm-Petrel	Cape Verde, Liberia, Senegal	VU	2017	decreasing
<i>Hydrobia accrensis</i>		Ghana, Togo	NT	2010	unknown
<i>Hydrobia guyenoti</i>		Côte d'Ivoire	EN	2010	unknown
<i>Hydrolagus mirabilis</i>	Large-eyed Rabbitfish	Senegal	NT	2007	decreasing
<i>Hylomyscus baeri</i>	Baer's Wood Mouse, Baer's Hylomyscus	Côte d'Ivoire, Ghana, Guinea, Sierra Leone	EN	2016	decreasing

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ANIMALIA					
<i>Hylomyscus grandis</i>	Mt Oku Hylomyscus	Cameroon	CR	2008	decreasing
<i>Hylopsar cupreocauda</i>	Copper-tailed Starling, Copper-tailed Glossy-starling, Copper-tailed Glossy Starling, Copper-tailed Glossy-Starling	Côte d'Ivoire, Ghana, Guinea, Liberia, Sierra Leone	NT	2016	decreasing
<i>Hyperolius acutirostris</i>	Sharpsnout Reed Frog	Cameroon	NT	2004	decreasing
<i>Hyperolius ademetzi</i>	Bamenda Reed Frog	Cameroon	NT	2004	decreasing
<i>Hyperolius bobirensis</i>	Bobiri Reed Frog	Ghana	EN	2004	decreasing
<i>Hyperolius bopeleti</i>	Dizangue Reed Frog	Cameroon	VU	2017	decreasing
<i>Hyperolius chlorosteus</i>	Sierra Leone Reed Frog	Côte d'Ivoire, Guinea, Liberia, Sierra Leone	NT	2004	decreasing
<i>Hyperolius dintelmanni</i>		Cameroon	EN	2017	decreasing
<i>Hyperolius endjami</i>	Yaounde Reed Frog	Cameroon	VU	2004	decreasing
<i>Hyperolius laurenti</i>	Schiotz's Reed Frog	Côte d'Ivoire, Ghana	VU	2004	decreasing
<i>Hyperolius nienokouensis</i>		Côte d'Ivoire	EN	2004	decreasing
<i>Hyperolius nimbae</i>	Mount Nimba Reed Frog	Côte d'Ivoire	EN	2017	decreasing
<i>Hyperolius riggenbachi</i>	Riggenbach's Reed Frog	Cameroon, Nigeria	VU	2004	decreasing
<i>Hyperolius torrentis</i>	Ukami Reed Frog	Ghana, Togo	EN	2004	decreasing
<i>Hyperolius viridigulosus</i>	Stream Reed Frog	Côte d'Ivoire, Ghana	VU	2004	decreasing
<i>Hyperolius wermuthi</i>	Wermuth's Reed Frog	Côte d'Ivoire, Guinea, Liberia	NT	2004	decreasing
<i>Hyperolius zonatus</i>	Nimba Reed Frog	Côte d'Ivoire, Guinea, Sierra Leone	NT	2004	decreasing
<i>Ichthyborus quadrilineatus</i>		Guinea, Guinea-Bissau, Senegal, Sierra Leone	NT	2010	unknown
<i>Illadopsis rufescens</i>	Rufous-winged Illadopsis	Côte d'Ivoire, Ghana, Guinea, Liberia, Sierra Leone	NT	2016	decreasing
<i>Irvineia voltae</i>	Butterfish	Ghana	EN	2010	decreasing

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Isurus oxyrinchus</i>	Shortfin Mako	Benin, Cameroon, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone	VU	2009	decreasing
<i>Isurus paucus</i>	Longfin Mako	Ghana, Guinea-Bissau, Liberia	VU	2006	decreasing
<i>Ivindomyrus opdenboschi</i>		Cameroon	VU	2010	unknown
<i>Kajikia albida</i>	White Marlin, Marlin, Skilligalee	Benin, Cameroon, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	VU	2011	decreasing
<i>Kassina arboricola</i>	Ivory Coast Running Frog	Côte d'Ivoire, Ghana	VU	2004	decreasing
<i>Kassina cochranæ</i>	Chochran's Running Frog	Côte d'Ivoire, Guinea, Liberia, Sierra Leone	NT	2004	decreasing
<i>Kassina decorata</i>	Decorated Running Frog	Cameroon	VU	2017	decreasing
<i>Kassina lamottei</i>	Rainforest Running Frog	Côte d'Ivoire	VU	2004	decreasing
<i>Kinixys homeana</i>	Home's Hinge-back Tortoise, Home's Hinged-backed Tortoise, Home's Hinged Tortoise	Benin, Cameroon, Côte d'Ivoire, Ghana, Liberia, Nigeria	VU	2006	decreasing
<i>Konia dikume</i>	Dikume	Cameroon	CR	2010	unknown
<i>Konia eisentrauti</i>	Konye	Cameroon	CR	2010	unknown
<i>Kribia leonensis</i>		Sierra Leone	EN	2010	unknown
<i>Kupeornis gilberti</i>	White-throated Mountain-babbler, White-throated Mountain Babbler, White-throated Mountain-Babbler	Cameroon, Nigeria	VU	2017	decreasing
<i>Labeo alluaudi</i>		Côte d'Ivoire, Liberia	EN	2010	unknown
<i>Labeo curriei</i>		Liberia	CR	2010	decreasing
<i>Labeobarbus mbami</i>		Cameroon	EN	2010	unknown

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Labeobarbus mungoensis</i>		Cameroon	EN	2010	unknown
<i>Ladigesia roloffii</i>	Jelly bean tetra	Sierra Leone	EN	2010	unknown
<i>Lamna nasus</i>	Porbeagle	Guinea	VU	2006	decreasing
<i>Lamottemys okuensis</i>	Mount Oku Rat, Mt. Oku Rat	Cameroon	EN	2016	decreasing
<i>Lemniscomys mittendorfi</i>	Mittendorf's Lemniscomys, Mittendorf's Lemniscomys, Mittendorf's Striped Grass Mouse	Cameroon	VU	2008	stable
<i>Lepidarchus adonis</i>	Jellybean tetra	Côte d'Ivoire, Ghana	VU	2010	unknown
<i>Lepidochelys olivacea</i>	Olive Ridley, Pacific Ridley	Benin, Cameroon, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	VU	2008	decreasing
<i>Leptocharias smithii</i>	Barbeled Houndshark, Barbeled Houndshark	Côte d'Ivoire, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal	NT	2005	unknown
<i>Leptocypris crossensis</i>		Cameroon	VU	2010	unknown
<i>Leptocypris guineensis</i>		Guinea, Sierra Leone	NT	2010	unknown
<i>Leptocypris konkourensis</i>		Guinea	VU	2010	unknown
<i>Leptocypris taiaensis</i>		Sierra Leone	VU	2010	unknown
<i>Leptodactylodon albiventris</i>	Whitebelly Egg Frog	Cameroon	EN	2017	decreasing
<i>Leptodactylodon axillaris</i>		Cameroon	CR	2013	unknown
<i>Leptodactylodon bicolor</i>	Mountain Egg Frog	Cameroon, Nigeria	NT	2017	decreasing
<i>Leptodactylodon boulengeri</i>	Boulenger's Egg Frog	Cameroon	NT	2017	decreasing
<i>Leptodactylodon bueanus</i>		Cameroon	EN	2017	decreasing
<i>Leptodactylodon erythrogaster</i>	Redbelly Egg Frog	Cameroon	CR	2015	decreasing

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Leptodactylodon mertensi</i>	Mertens' Egg Frog	Cameroon	EN	2013	unknown
<i>Leptodactylodon ornatus</i>	Ornate Egg Frog	Cameroon	EN	2017	decreasing
<i>Leptodactylodon perreti</i>	Perret's Egg Frog	Cameroon	EN	2004	decreasing
<i>Leptodactylodon polyacanthus</i>	African Egg Frog	Cameroon, Nigeria	VU	2017	decreasing
<i>Leptodactylodon ventrimarmoratus</i>	Speckled Egg Frog	Cameroon	VU	2017	decreasing
<i>Leptodactylodon wildi</i>		Cameroon	CR	2017	decreasing
<i>Leptopelis macrotis</i>	Big-eyed Forest Treefrog	Côte d'Ivoire, Ghana, Guinea, Liberia, Sierra Leone	NT	2014	decreasing
<i>Leptopelis occidentalis</i>	Tai Forest Treefrog	Côte d'Ivoire, Ghana, Liberia	NT	2014	decreasing
<i>Leptopelis zebra</i>		Cameroon	NT	2004	decreasing
<i>Leptosiaphos pauliani</i>	Five-toed Skink	Cameroon	EN	2010	unknown
<i>Liberiictis kuhni</i>	Liberian Mongoose	Côte d'Ivoire, Liberia	VU	2016	decreasing
<i>Liberonautes grandbassa</i>	Grandbassa River Crab	Liberia	CR	2008	unknown
<i>Liberonautes lugbe</i>	Lugbe River Crab	Liberia	CR	2008	unknown
<i>Liberonautes nanoides</i>	Dwarf River Crab	Liberia	EN	2008	unknown
<i>Liberonautes nimba</i>	Nimba Stream Crab	Guinea, Liberia	VU	2008	unknown
<i>Liberonautes rubigimanus</i>	Lobster Claw Crab	Guinea, Liberia	EN	2008	unknown
<i>Limbochromis robertsi</i>		Ghana	EN	2010	decreasing
<i>Limosa lapponica</i>	Bar-tailed Godwit	Benin, Cameroon, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Nigeria, Senegal, Sierra Leone, Togo	NT	2017	decreasing

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Limosa</i>	Black-tailed Godwit	Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo	NT	2017	decreasing
<i>Liptena tiassale</i>	Tiassale Liptena	Ghana	VU	2011	stable
<i>Lobotos lobatus</i>	Western Wattled Cuckooshrike, Ghana Cuckoo-shrike, Western Wattled Cuckoo-shrike	Côte d'Ivoire, Ghana, Guinea, Liberia, Sierra Leone	VU	2016	decreasing
<i>Lophuromys dieterleni</i>	Dieterlen's Brush-furred Mouse, Mount Oku Brush-furred Rat, Mt Oku Brush-furred Mouse	Cameroon	EN	2016	decreasing
<i>Lophuromys eisentrauti</i>		Cameroon	CR	2016	decreasing
<i>Louisea balssi</i>		Cameroon	EN	2008	unknown
<i>Louisea edeaensis</i>		Cameroon	EN	2008	unknown
<i>Loxodonta africana</i>	African Elephant	Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo	VU	2008	increasing
<i>Lycaon pictus</i>	African Wild Dog, Cape Hunting Dog, Painted Hunting Dog	Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Gambia, Ghana, Guinea-Bissau, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo	EN	2012	decreasing
<i>Makaira nigricans</i>	Blue Marlin	Cameroon, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Nigeria, Senegal, Sierra Leone	VU	2011	decreasing



SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Malaconotus gladiator</i>	Green-breasted Bush-shrike, Cameroon Mountain Bushshrike, Green-breasted Bushshrike, Green-breasted Bush Shrike	Cameroon, Nigeria	VU	2016	decreasing
<i>Malaconotus lagdeni</i>	Lagden's Bush-shrike, Lagden's Bushshrike, Lagden's Bush Shrike	Côte d'Ivoire, Ghana, Liberia, Sierra Leone	NT	2016	decreasing
<i>Malaconotus monteiri</i>	Monteiro's Bush-shrike, Monteiro's Bushshrike, Monteiro's Bush Shrike	Cameroon	NT	2016	decreasing
<i>Malapterurus barbatus</i>		Guinea, Liberia, Sierra Leone	NT	2010	unknown
<i>Malapterurus occidentalis</i>		Gambia, Guinea-Bissau	NT	2010	unknown
<i>Malapterurus punctatus</i>		Côte d'Ivoire, Guinea, Liberia, Sierra Leone	NT	2010	unknown
<i>Malapterurus stiassnyae</i>		Guinea, Liberia, Sierra Leone	NT	2010	unknown
<i>Malapterurus teugelsi</i>		Guinea	NT	2010	unknown
<i>Malapterurus thysi</i>		Côte d'Ivoire	NT	2010	unknown
<i>Malimbus ballmanni</i>	Gola Malimbe, Ballmann's Malimbe	Côte d'Ivoire, Guinea, Liberia, Sierra Leone	EN	2016	decreasing
<i>Malimbus ibadanensis</i>	Ibadan Malimbe	Nigeria	EN	2016	decreasing
<i>Mandrillus leucophaeus</i>	Drill	Cameroon, Nigeria	EN	2008	unknown
<i>Mandrillus sphinx</i>	Mandrill	Cameroon	VU	2008	unknown
<i>Manta alfredi</i>	Reef Manta Ray, Coastal Manta Ray, Inshore Manta Ray, Prince Alfred's Ray, Resident Manta Ray	Cape Verde, Senegal	VU	2011	decreasing
<i>Manta birostris</i>	Giant Manta Ray, Chevron Manta Ray, Oceanic Manta Ray, Pacific Manta Ray, Pelagic Manta Ray	Nigeria, Senegal	VU	2011	decreasing
<i>Marcusenius abadii</i>		Burkina Faso, Ghana, Niger, Togo	NT	2010	decreasing
<i>Marcusenius brucei</i>		Nigeria, Togo	VU	2010	unknown

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Marcusenius furcidents</i>		Côte d'Ivoire, Ghana	NT	2010	decreasing
<i>Marcusenius meronai</i>		Sierra Leone	EN	2010	unknown
<i>Marcusenius ntemensis</i>		Cameroon	VU	2010	unknown
<i>Marcusenius sanagaensis</i>		Cameroon	VU	2010	unknown
<i>Marmaronetta angustirostris</i>	Marbled Teal, Marbled Duck	Cameroon, Cape Verde, Chad, Gambia, Mali, Nigeria, Senegal	VU	2017	decreasing
<i>Mastacembelus sexdecimspinus</i>		Cameroon	NT	2010	unknown
<i>Mastacembelus taiaensis</i>		Guinea, Sierra Leone	VU	2010	unknown
<i>Mecistops cataphractus</i>	Slender-snouted Crocodile, African Slender-snouted Crocodile	Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Gambia, Ghana, Guinea-Bissau, Liberia, Mali, Senegal, Sierra Leone	CR	2014	decreasing
<i>Megalops atlanticus</i>	Tarpon	Benin, Cameroon, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	VU	2012	decreasing
<i>Melaenornis annamarulae</i>	Nimba Flycatcher, Liberian Black-flycatcher, West African Black-Flycatcher	Côte d'Ivoire, Ghana, Guinea, Liberia, Sierra Leone	VU	2016	decreasing
<i>Meligonomon eisentrauti</i>	Yellow-footed Honeyguide	Cameroon, Côte d'Ivoire, Ghana, Guinea, Liberia, Sierra Leone	NT	2017	decreasing
<i>Merluccius senegalensis</i>	Senegalese Hake	Gambia, Senegal	EN	2015	decreasing
<i>Merops mentalis</i>	Blue-moustached Bee-eater	Cameroon, Côte d'Ivoire, Ghana, Guinea, Liberia, Nigeria, Sierra Leone	NT	2016	decreasing
<i>Mesocnemis dupuyi</i>	Gambia Riverjack	Gambia, Senegal	NT	2010	unknown
<i>Mesocnemis tisi</i>	Liberian Riverjack	Liberia	EN	2010	unknown

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Micralestes comoensis</i>		Burkina Faso, Côte d'Ivoire	VU	2010	unknown
<i>Micralestes eburneensis</i>		Côte d'Ivoire	NT	2010	unknown
<i>Micropanchax bracheti</i>		Togo	VU	2010	unknown
<i>Micropanchax ehrichi</i>		Mali	NT	2010	unknown
<i>Micropotamogale lamottei</i>	Nimba Otter Shrew, Pygmy Otter-shrew	Côte d'Ivoire, Guinea, Liberia	NT	2016	decreasing
<i>Milvus</i>	Red Kite	Cape Verde	NT	2017	decreasing
<i>Miniopterus schreibersii</i>	Schreiber's Bent-winged Bat, Common Bentwing Bat, Schreiber's Long-fingered Bat	Cameroon, Guinea, Liberia, Nigeria, Sierra Leone	NT	2008	decreasing
<i>Mobula japonica</i>	Spinetail Devil Ray, Devilray, Japanese Devilray, Spinetail Devilray, Spinetail Mobula	Côte d'Ivoire	NT	2006	unknown
<i>Mobula rochebrunei</i>	Lesser Guinean Devil Ray	Guinea, Guinea-Bissau, Senegal	VU	2009	unknown
<i>Mobula tarapacana</i>	Sicklefin Devil Ray, Box Ray, Chilean Devil Ray, Devil Ray, Greater Guinean Mobula, Spiny Mobula	Cape Verde, Côte d'Ivoire, Liberia, Senegal	VU	2016	decreasing
<i>Mobula thurstoni</i>	Bentfin Devil Ray, Lesser Devil Ray, Smoothtail Devil Ray, Smoothtail Mobula, Thurston's Devil Ray	Côte d'Ivoire, Senegal	NT	2016	decreasing
<i>Mola mola</i>	Ocean Sunfish, Giant Sunfish, Headfish, Mola Ocean Sunfish, Moonfish, Sunfish, Sun-fish	Benin, Cameroon, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	VU	2015	decreasing
<i>Mops petersoni</i>	Peterson's Mops Bat, Peterson's Free-tailed Bat	Cameroon, Ghana	NT	2010	unknown
<i>Morerella cyanophthalma</i>		Côte d'Ivoire	VU	2011	unknown
<i>Mormyrus subundulatus</i>		Côte d'Ivoire, Ghana	EN	2010	decreasing

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Mustelus mustelus</i>	Common Smoothhound	Benin, Cameroon, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	VU	2009	decreasing
<i>Mutela franci</i>		Burkina Faso, Niger	VU	2010	unknown
<i>Myaka myaka</i>	Myaka Myaka, Myaka	Cameroon	CR	2010	unknown
<i>Mycteroperca fusca</i>	Island Grouper, Comb Grouper	Cape Verde	EN	2008	decreasing
<i>Mylothris atewa</i>	Atewa Dotted Border	Ghana	VU	2012	unknown
<i>Myosorex okuensis</i>	Oku Mouse Shrew	Cameroon	VU	2016	decreasing
<i>Myosorex rumpii</i>	Rumpi Mouse Shrew	Cameroon	EN	2016	decreasing
<i>Nanger dama</i>	Dama Gazelle, Addra Gazelle, Mhorh Gazelle	Chad, Mali, Niger, Senegal	CR	2016	decreasing
<i>Nannocharax latifasciatus</i>		Cameroon, Nigeria	VU	2010	unknown
<i>Nannocharax rubrolabiatus</i>		Cameroon	VU	2010	unknown
<i>Necrosyrtes monachus</i>	Hooded Vulture	Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo	CR	2017	decreasing
<i>Neodythemis takamandensis</i>	Bizarre Junglewatcher	Cameroon	CR	2010	unknown
<i>Neolebias axelrodi</i>		Benin, Nigeria	EN	2010	unknown
<i>Neolebias powelli</i>		Nigeria	CR	2010	unknown
<i>Neophron percnopterus</i>	Egyptian Vulture, Egyptian Eagle	Benin, Burkina Faso, Cameroon, Cape Verde, Chad, Ghana, Guinea, Mali, Niger, Nigeria, Senegal, Togo	EN	2017	decreasing

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Neoromicia brunnea</i>	Dark-brown Serotine, Brown Pipistrelle Bat, Dark-brown Pipistrelle Bat	Cameroon, Côte d'Ivoire, Ghana, Liberia, Nigeria, Sierra Leone	NT	2008	decreasing
<i>Neoromicia roseveari</i>	Rosevear's Serotine	Guinea, Liberia	EN	2017	unknown
<i>Neotis denhami</i>	Denham's Bustard, Stanley Bustard	Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Gambia, Ghana, Guinea, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo	NT	2016	decreasing
<i>Neotis nuba</i>	Nubian Bustard	Burkina Faso, Chad, Mali, Niger	NT	2016	decreasing
<i>Neritina rubricata</i>		Benin, Cameroon, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Sierra Leone, Togo	NT	2010	unknown
<i>Neritina tiassalensis</i>		Côte d'Ivoire	CR	2010	unknown
<i>Neurolestes nigeriensis</i>	Gamble's Flatwing	Cameroon, Nigeria	CR	2017	unknown
<i>Nimbapanchax jeanpoli</i>	Jeanpol's Killi	Guinea, Liberia	EN	2010	unknown
<i>Nimbapanchax petersi</i>		Côte d'Ivoire, Ghana	VU	2010	unknown
<i>Nimbapanchax viridis</i>		Guinea, Liberia	VU	2010	unknown
<i>Nimbaphrynoides occidentalis</i>	Mount Nimba Viviparous Toad	Côte d'Ivoire, Guinea, Liberia	CR	2014	stable
<i>Notoglanidium akiri</i>		Nigeria	EN	2010	unknown
<i>Notoglanidium maculatum</i>		Sierra Leone	EN	2010	unknown
<i>Notoglanidium thomasi</i>		Sierra Leone	EN	2010	unknown
<i>Notoglanidium walkeri</i>		Côte d'Ivoire, Ghana	VU	2010	unknown
<i>Numenius arquata</i>	Eurasian Curlew, Curlew	Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger,	NT	2017	decreasing

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
		Nigeria, Senegal, Sierra Leone, Togo			
<i>Odontaspis ferox</i>	Smalltooth Sand Tiger, Herbst's Nurse Shark, Ragged-tooth Shark, Sand Shark, Smalltooth Sand Tiger Shark	Cape Verde	VU	2016	decreasing
<i>Odontobatrachus natator</i>	Sierra Leone Water Frog	Côte d'Ivoire, Guinea, Liberia, Sierra Leone	NT	2004	decreasing
<i>Opisthoteuthis calypso</i>		Benin, Cameroon, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	VU	2014	unknown
<i>Opisthoteuthis massyae</i>		Benin, Cameroon, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	VU	2014	decreasing
<i>Osteolaemus tetraspis</i>	African Dwarf Crocodile, West African Dwarf Crocodile	Benin, Burkina Faso, Cameroon, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	VU	1996	
<i>Otomops martiensseni</i>	Large-eared Free-tailed Bat, Giant Mastiff Bat, Large-eared Giant Mastiff Bat, Martienssen's Free-tailed Bat, Martienssen Bat, Martienssen's Big-eared Bulldog Bat	Côte d'Ivoire, Ghana	NT	2017	decreasing
<i>Otomys burtoni</i>	Burton's Vlei Rat	Cameroon	EN	2008	decreasing
<i>Otomys occidentalis</i>	Western Vlei Rat	Cameroon, Nigeria	VU	2008	decreasing
<i>Oxynotus centrina</i>	Angular Rough Shark	Guinea, Liberia, Nigeria, Senegal	VU	2007	unknown

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ANIMALIA					
<i>Palinurus charlestoni</i>	Cape Verde Spiny Lobster	Cape Verde	NT	2011	unknown
<i>Pan troglodytes</i>	Chimpanzee, Common Chimpanzee, Robust Chimpanzee	Benin, Burkina Faso, Cameroon, Côte d'Ivoire, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Nigeria, Senegal, Sierra Leone, Togo	EN	2016	decreasing
<i>Panthera leo</i>	Lion, African Lion	Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo	VU	2016	decreasing
<i>Panthera pardus</i>	Leopard	Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo	VU	2016	decreasing
<i>Papio papio</i>	Guinea Baboon	Gambia, Guinea, Guinea-Bissau, Mali, Senegal	NT	2008	unknown
<i>Paragomphus sinaiticus</i>	Sinai Hooktail, Sinai Lobetail	Niger	NT	2013	unknown
<i>Paramormyrops eburneensis</i>		Côte d'Ivoire	VU	2010	unknown
<i>Paramormyrops gabonensis</i>		Cameroon	VU	2010	unknown
<i>Paramormyrops hopkinsi</i>		Cameroon	VU	2010	unknown
<i>Paramphilius firestonei</i>		Liberia	EN	2010	unknown
<i>Paramphilius teugelsi</i>		Guinea, Sierra Leone	VU	2010	unknown
<i>Paramphilius trichomycteroides</i>		Guinea, Liberia, Sierra Leone	NT	2010	unknown
<i>Parananochromis brevis</i>		Cameroon	VU	2010	unknown

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Parauchenoglanis longiceps</i>		Cameroon	EN	2010	unknown
<i>Parauchenoglanis pantherinus</i>		Cameroon	VU	2010	unknown
<i>Parmoptila rubrifrons</i>	Red-fronted Antpecker	Côte d'Ivoire, Ghana, Guinea, Liberia, Sierra Leone	NT	2016	decreasing
<i>Pelvicachromis roloffii</i>		Guinea, Liberia, Sierra Leone	NT	2010	unknown
<i>Pentanemus quinquarius</i>	Royal Threadfin	Benin, Cameroon, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	VU	2015	decreasing
<i>Pentaplebia gamblesi</i>	Gambles's Relic	Nigeria	CR	2010	unknown
<i>Pentaplebia stahli</i>	Red Relic	Cameroon, Nigeria	VU	2010	unknown
<i>Pentheroscion mbizi</i>	Blackmouth Croaker	Benin, Cameroon, Côte d'Ivoire, Ghana, Guinea, Liberia, Nigeria, Sierra Leone, Togo	NT	2015	decreasing
<i>Petrocephalus levequei</i>	Elephantfish	Guinea, Guinea-Bissau, Sierra Leone	NT	2010	unknown
<i>Petropedetes johnstoni</i>	Johnston's Water Frog, Newton's Water Frog	Cameroon	NT	2004	unknown
<i>Petropedetes palmipes</i>	Efulen Water Frog	Cameroon	EN	2004	decreasing
<i>Petropedetes perreti</i>	Perret's Water Frog	Cameroon	EN	2004	decreasing
<i>Phataginus tetradactyla</i>	Black-bellied Pangolin, Long-tailed Pangolin	Cameroon, Côte d'Ivoire, Ghana, Liberia, Nigeria, Sierra Leone	VU	2014	decreasing
<i>Phataginus tricuspis</i>	White-bellied Pangolin, African White-bellied Pangolin, Three-cusped Pangolin, Tree Pangolin	Benin, Cameroon, Côte d'Ivoire, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Sierra Leone, Togo	VU	2014	decreasing



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ANIMALIA					
<i>Philochortus zolii</i>		Mali, Niger	EN	2013	decreasing
<i>Phoeniconaias minor</i>	Lesser Flamingo	Cameroon, Gambia, Guinea, Guinea-Bissau, Senegal, Sierra Leone	NT	2016	decreasing
<i>Phrynobatrachus alleni</i>	Allen's River Frog	Côte d'Ivoire, Ghana, Guinea, Liberia, Nigeria, Sierra Leone	NT	2004	decreasing
<i>Phrynobatrachus annulatus</i>	Ringed River Frog	Côte d'Ivoire, Ghana, Guinea, Liberia	EN	2004	decreasing
<i>Phrynobatrachus chukuchuku</i>	Spiny Puddle Frog	Cameroon	CR	2011	unknown
<i>Phrynobatrachus cricogaster</i>	Nkongsamba River Frog	Cameroon, Nigeria	NT	2017	decreasing
<i>Phrynobatrachus ghanensis</i>	Ghana River Frog	Côte d'Ivoire, Ghana	EN	2004	decreasing
<i>Phrynobatrachus guineensis</i>	Guinea River Frog	Côte d'Ivoire, Guinea, Liberia, Sierra Leone	NT	2004	decreasing
<i>Phrynobatrachus intermedius</i>		Ghana	CR	2011	unknown
<i>Phrynobatrachus liberiensis</i>	Liberia River Frog	Côte d'Ivoire, Ghana, Guinea, Liberia, Sierra Leone	NT	2004	decreasing
<i>Phrynobatrachus phyllophilus</i>		Côte d'Ivoire, Guinea, Liberia, Sierra Leone	NT	2004	decreasing
<i>Phrynobatrachus pintoii</i>		Guinea	EN	2014	unknown
<i>Phrynobatrachus steindachneri</i>		Cameroon, Nigeria	VU	2004	decreasing
<i>Phrynobatrachus villiersi</i>	Yapo River Frog	Côte d'Ivoire, Ghana	VU	2004	decreasing
<i>Phyllanthus atripennis</i>	Grey-hooded Capuchin Babbler	Gambia, Guinea, Guinea-Bissau, Liberia, Senegal, Sierra Leone	NT	2016	decreasing
<i>Phyllanthus rubiginosus</i>	Black-crowned Capuchin Babbler	Benin, Cameroon, Côte d'Ivoire, Ghana, Nigeria, Togo	NT	2016	decreasing
<i>Phyllastrephus poliocephalus</i>	Grey-headed Greenbul	Cameroon, Nigeria	NT	2016	decreasing

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Phyllomacromia funicularioides</i>		Guinea, Liberia	NT	2010	unknown
<i>Physeter macrocephalus</i>	Sperm Whale, Cachelot, Pot Whale, Spermacet Whale	Benin, Cameroon, Cape Verde, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	VU	2008	unknown
<i>Picathartes gymnocephalus</i>	White-necked Rockfowl, Bare-headed Rockfowl, White-necked Picathartes, Yellow-headed Rockfowl	Côte d'Ivoire, Ghana, Guinea, Liberia, Sierra Leone	VU	2016	decreasing
<i>Picathartes oreas</i>	Grey-necked Rockfowl, Grey-necked Picathartes, Red-headed Rockfowl	Cameroon, Nigeria	VU	2016	decreasing
<i>Piliocolobus badius</i>	Upper Guinea Red Colobus, Bay Colobus, Upper Guinea Bay Colobus, Western Red Colobus	Côte d'Ivoire, Guinea, Liberia, Sierra Leone	EN	2016	decreasing
<i>Piliocolobus epieni</i>	Niger Delta Red Colobus	Nigeria	CR	2016	decreasing
<i>Piliocolobus preussi</i>	Preuss's Red Colobus	Cameroon, Nigeria	CR	2016	decreasing
<i>Piliocolobus temminckii</i>	Temminck's Red Colobus, Temminck's Bay Colobus	Gambia, Guinea, Guinea-Bissau, Senegal	EN	2016	decreasing
<i>Piliocolobus waldroneae</i>	Miss Waldron's Red Colobus, Miss Waldron's Bay Colobus	Côte d'Ivoire, Ghana	CR	2016	decreasing
<i>Platysteira laticincta</i>	Banded Wattle-eye	Cameroon	EN	2016	decreasing
<i>Ploceus bannermani</i>	Bannerman's Weaver	Cameroon, Nigeria	VU	2016	decreasing
<i>Ploceus batesi</i>	Bates's Weaver	Cameroon	EN	2016	decreasing
<i>Poiana leightoni</i>	West African Oyan, Leighton's Linsang, West African Linsang	Côte d'Ivoire, Liberia	VU	2015	decreasing
<i>Polemaetus bellicosus</i>	Martial Eagle	Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Mali, Niger, Nigeria,	VU	2017	decreasing

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
		Senegal, Sierra Leone, Togo			
<i>Poliolais lopezi</i>	White-tailed Warbler	Cameroon, Nigeria	NT	2016	decreasing
<i>Potatomus saltatrix</i>	Bluefish, Ancho, Blue Fish, Choppers, Elf, Fatback, Greenfish, Horsemackerel, Horse Mackerel, Jumbos, Marine Piranha, Razorbacks, Salmon Bluefish, Shad, Skipjack, Skipmackerel, Skip Mackerel, Snap Mackerel, Snapping Mackerel, Tailor, Tailor Run	Cape Verde, Gambia, Senegal	VU	2015	decreasing
<i>Potadoma angulata</i>		Cameroon	EN	2010	unknown
<i>Potadoma kadeii</i>		Cameroon	CR	2010	unknown
<i>Potadoma nyongensis</i>		Cameroon	EN	2010	unknown
<i>Potadoma trochiformis</i>		Cameroon	EN	2010	unknown
<i>Potadoma vogeli</i>		Côte d'Ivoire	VU	2010	unknown
<i>Potadoma zenkeri</i>		Cameroon	EN	2010	unknown
<i>Potamalpheops haugi</i>		Nigeria	EN	2013	unknown
<i>Potamonautes reidi</i>	Reid's River Crab	Nigeria	VU	2008	unknown
<i>Potamonautes triangulus</i>		Ghana	VU	2008	unknown
<i>Potamonemus sachtsi</i>	Sachs's Stream Crab	Cameroon, Nigeria	VU	2008	unknown
<i>Praomys hartwigi</i>	Hartwig's Soft-furred Mouse, Hartwig's Praomys	Cameroon	VU	2016	decreasing
<i>Praomys morio</i>	Cameroon Soft-furred Mouse, Cameroon Praomys	Cameroon	EN	2016	decreasing
<i>Praomys obscurus</i>		Nigeria	EN	2016	decreasing
<i>Prionace glauca</i>	Blue Shark	Benin, Cameroon, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia,	NT	2009	unknown

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
		Nigeria, Senegal, Sierra Leone, Togo			
<i>Pristis pectinata</i>	Smalltooth Sawfish, Wide Sawfish	Benin, Cameroon, Côte d'Ivoire, Gambia, Ghana, Guinea, Liberia, Nigeria, Senegal, Sierra Leone, Togo	CR	2013	decreasing
<i>Pristis</i>	Largetooth Sawfish	Benin, Cameroon, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	CR	2013	decreasing
<i>Procatopus nimbaensis</i>		Guinea, Liberia	VU	2010	unknown
<i>Procolobus verus</i>	Olive Colobus, Van Beneden's Colobus	Benin, Côte d'Ivoire, Ghana, Guinea, Liberia, Nigeria, Sierra Leone, Togo	NT	2008	unknown
<i>Pronothobranchius kiyawensis</i>		Burkina Faso, Chad, Côte d'Ivoire, Gambia, Ghana, Niger, Nigeria, Senegal, Togo	NT	2010	unknown
<i>Pseudagrion mascagnii</i>		Sierra Leone	CR	2010	unknown
<i>Pseudocarcharias kamoharai</i>	Crocodile Shark	Cape Verde, Guinea, Guinea-Bissau	NT	2005	unknown
<i>Pseudotolithus senegalensis</i>	Cassava Croaker, Bar, Capitan, Captainfish, Croaker, Ladyfish	Benin, Cameroon, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	EN	2015	decreasing
<i>Pseudotolithus senegallus</i>	Law Croaker, Whiting	Benin, Cameroon, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia,	VU	2015	decreasing

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
		Nigeria, Senegal, Sierra Leone, Togo			
<i>Pseudupeneus prayensis</i>	West African Goatfish	Benin, Cameroon, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	VU	2015	decreasing
<i>Psittacus erithacus</i>	Grey Parrot	Cameroon, Côte d'Ivoire, Ghana, Nigeria	EN	2017	decreasing
<i>Psittacus timneh</i>	Timneh Parrot	Côte d'Ivoire, Guinea, Guinea-Bissau, Liberia, Sierra Leone	EN	2017	decreasing
<i>Pternistis camerunensis</i>	Mount Cameroon Francolin, Cameroon Francolin	Cameroon	EN	2016	decreasing
<i>Pterodroma feae</i>	Cape Verde Petrel	Cape Verde, Senegal	NT	2017	unknown
<i>Ptychadena superciliaris</i>	Sierra Leone Grassland Frog, Savanna Ridged Frog	Côte d'Ivoire, Ghana, Guinea, Liberia, Sierra Leone	NT	2004	decreasing
<i>Pungu maclareni</i>	Pungu	Cameroon	CR	2009	decreasing
<i>Raiamas nigeriensis</i>		Cameroon, Côte d'Ivoire, Ghana, Guinea, Mali, Niger, Nigeria, Sierra Leone	NT	2010	unknown
<i>Raja clavata</i>	Thornback Skate	Senegal	NT	2016	decreasing
<i>Raja undulata</i>	Undulate Skate, Undulate Ray	Benin, Cameroon, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Senegal, Sierra Leone, Togo	EN	2009	decreasing
<i>Redunca fulvorufula</i>	Mountain Reedbuck	Cameroon, Nigeria	EN	2017	decreasing
<i>Rhexipanchax kabae</i>		Guinea	VU	2010	unknown
<i>Rhexipanchax lamberti</i>	Lambert's Lampeye	Guinea	VU	2010	unknown

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Rhincodon typus</i>	Whale Shark	Benin, Cameroon, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	EN	2016	decreasing
<i>Rhinobatos albomaculatus</i>	White-spotted Guitarfish	Benin, Côte d'Ivoire, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	VU	2009	decreasing
<i>Rhinobatos irvinei</i>	Spineback Guitarfish	Benin, Cameroon, Côte d'Ivoire, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	VU	2009	decreasing
<i>Rhinobatos</i>	Common Guitarfish, Violinfish	Benin, Cameroon, Cape Verde, Côte d'Ivoire, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	EN	2007	decreasing
<i>Rhinolophus guineensis</i>	Guinean Horseshoe Bat	Côte d'Ivoire, Guinea, Liberia, Senegal, Sierra Leone	VU	2008	unknown
<i>Rhinolophus hillorum</i>	Upland Horseshoe Bat, Hill's Horseshoe Bat	Cameroon, Guinea, Liberia, Nigeria	NT	2010	decreasing
<i>Rhinolophus maclaudi</i>	Maclaud's Horseshoe Bat	Guinea	EN	2008	decreasing
<i>Rhinolophus ziama</i>	Ziama Horseshoe Bat	Guinea, Liberia	EN	2008	decreasing
<i>Rhinoptera marginata</i>	Lusitanian Cownose Ray	Gambia, Guinea, Guinea-Bissau, Senegal	NT	2009	unknown
<i>Rhynchobatus luebberti</i>	African Wedgefish, Guitarra, Lubbert's Guitarfish, Spikenose Wedgefish	Benin, Cameroon, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	EN	2006	decreasing

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Rissa tridactyla</i>	Black-legged Kittiwake, Kittiwake	Cape Verde	VU	2017	decreasing
<i>Rostroraja alba</i>	White Skate, Bottlenose Skate, Spearnose Skate	Benin, Cameroon, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	EN	2006	decreasing
<i>Rynchops flavirostris</i>	African Skimmer	Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone	NT	2016	decreasing
<i>Sagittarius serpentarius</i>	Secretarybird, Secretary Bird	Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Gambia, Ghana, Mali, Niger, Nigeria, Senegal, Togo	VU	2016	decreasing
<i>Sanagia velifera</i>		Cameroon	NT	2009	decreasing
<i>Sapho infumosa</i>		Côte d'Ivoire, Guinea, Liberia, Senegal	NT	2010	unknown
<i>Sapho puella</i>	Clearwing	Cameroon, Nigeria	EN	2010	unknown
<i>Sardinella maderensis</i>	Madeiran Sardinella, Herring, Madeiran Sardinella, Madeiran Sardinelle, Pilchard, Sardine, Short-bodied Sardine	Benin, Cameroon, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	VU	2015	unknown
<i>Sarotherodon caroli</i>	Fissi	Cameroon	CR	2010	unknown
<i>Sarotherodon linnellii</i>	Blackbelly Tilapia, Blackfin Tilapia, Unga	Cameroon	CR	2010	unknown
<i>Sarotherodon lohbergeri</i>	Keppi, Leka Keppe	Cameroon	CR	2010	unknown
<i>Sarotherodon occidentalis</i>		Guinea, Guinea-Bissau, Liberia, Senegal, Sierra Leone	NT	2010	unknown
<i>Sarotherodon steinbachi</i>	Kululu	Cameroon	CR	2010	unknown

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ANIMALIA					
<i>Schistolais leontica</i>	Sierra Leone Prinia, White-eyed Prinia	Côte d'Ivoire, Guinea, Liberia, Sierra Leone	EN	2017	decreasing
<i>Sciaena umbra</i>	Brown Meagre, Corb	Senegal	NT	2015	decreasing
<i>Sclerophrys djohongensis</i>		Cameroon	EN	2016	decreasing
<i>Sclerophrys perreti</i>	Perret's Toad	Nigeria	CR	2017	decreasing
<i>Sclerophrys taiensis</i>	Tai Toad	Côte d'Ivoire, Sierra Leone	EN	2016	decreasing
<i>Sclerophrys togoensis</i>	Togo Toad	Côte d'Ivoire, Ghana, Guinea, Liberia, Sierra Leone, Togo	NT	2016	decreasing
<i>Sclerophrys villiersi</i>	Villiers' Toad	Cameroon	EN	2016	decreasing
<i>Scleroptila streptophora</i>	Ring-necked Francolin	Cameroon	NT	2016	decreasing
<i>Scotoxycteris ophiodon</i>	Pohle's Fruit Bat	Cameroon, Côte d'Ivoire, Ghana, Liberia	NT	2010	decreasing
<i>Scotopelia ussheri</i>	Rufous Fishing-owl, Rufous Fishing Owl, Rufous Fishing-Owl, Ussher's Fishing Owl	Côte d'Ivoire, Ghana, Guinea, Liberia, Sierra Leone	VU	2016	decreasing
<i>Scriptaphyosemion bertholdi</i>	Berthold's killi	Sierra Leone	EN	2010	unknown
<i>Scriptaphyosemion brueningi</i>	Bruening's killi	Liberia, Sierra Leone	EN	2010	unknown
<i>Scriptaphyosemion cauveti</i>	Kindia Killi	Guinea	CR	2010	unknown
<i>Scriptaphyosemion etzeli</i>		Sierra Leone	CR	2010	unknown
<i>Scriptaphyosemion liberiense</i>		Liberia, Sierra Leone	NT	2010	unknown
<i>Scriptaphyosemion roloffii</i>		Liberia, Sierra Leone	NT	2010	unknown
<i>Scriptaphyosemion schmitti</i>		Liberia	VU	2010	unknown
<i>Scyliorhinus stellaris</i>	Nursehound	Senegal	NT	2009	unknown
<i>Sierraia expansilabrum</i>		Sierra Leone	VU	2010	unknown
<i>Sierraia leonensis</i>		Sierra Leone	VU	2010	unknown



SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Sierraia outambensis</i>		Sierra Leone	CR	2010	unknown
<i>Smutsia gigantea</i>	Giant Ground Pangolin, Giant Pangolin	Cameroon, Côte d'Ivoire, Ghana, Guinea, Guinea-Bissau, Liberia, Senegal, Sierra Leone	VU	2014	decreasing
<i>Smutsia temminckii</i>	Temminck's Ground Pangolin, Cape Pangolin, Ground Pangolin, Scaly Anteater, South African Pangolin, Steppe Pangolin	Chad	VU	2014	decreasing
<i>Soapitia dageti</i>		Guinea	CR	2010	unknown
<i>Sousa teuszii</i>	Atlantic Humpbacked Dolphin, Atlantic Hump-backed Dolphin, Cameroon Dolphin, Cameroon River Dolphin, Teusz's Dolphin	Benin, Cameroon, Gambia, Ghana, Guinea, Guinea-Bissau, Senegal, Togo	CR	2017	decreasing
<i>Sphyrna lewini</i>	Scalloped Hammerhead	Benin, Cameroon, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	EN	2007	unknown
<i>Sphyrna mokarran</i>	Great Hammerhead, Hammerhead Shark, Squat-headed Hammerhead Shark	Cape Verde, Senegal	EN	2007	decreasing
<i>Squalus acanthias</i>	Spiny Dogfish, Cape Shark, Piked Dogfish, Spurdog	Senegal	VU	2016	decreasing
<i>Squatina aculeata</i>	Sawback Angelshark, Monkfish, Spiny Angelshark	Guinea, Niger, Senegal	CR	2007	decreasing
<i>Squatina oculata</i>	Smoothback Angelshark, Monkfish	Guinea, Nigeria, Senegal	CR	2007	decreasing
<i>Steatocranus irvinei</i>	Cichlid	Burkina Faso, Ghana	NT	2010	unknown
<i>Stephanoaetus coronatus</i>	Crowned Eagle, Crowned Eagle, Crowned Hawk-Eagle	Cameroon, Côte d'Ivoire, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	NT	2016	decreasing

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ANIMALIA					
<i>Sternula balaenarum</i>	Damara Tern	Benin, Cameroon, Côte d'Ivoire, Ghana, Nigeria, Togo	VU	2016	decreasing
<i>Stomatepia mariae</i>	Alkali Cichlid, Nsess	Cameroon	CR	2010	unknown
<i>Stomatepia mongo</i>	Mongo	Cameroon	CR	2010	unknown
<i>Stomatepia pindu</i>	Pindu	Cameroon	CR	2010	unknown
<i>Stomatorhinus microps</i>		Cameroon	VU	2010	unknown
<i>Streptopelia turtur</i>	European Turtle-dove, European Turtle Dove, European Turtle-Dove, Turtle Dove	Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Mali, Niger, Nigeria, Senegal, Togo	VU	2017	decreasing
<i>Sylvisorex camerunensis</i>		Cameroon, Nigeria	VU	2016	decreasing
<i>Sylvisorex morio</i>	Arrogant Shrew, Mt. Cameroon Forest Shrew	Cameroon	EN	2016	decreasing
<i>Synodontis arnoulti</i>		Burkina Faso, Ghana	VU	2010	unknown
<i>Synodontis comoensis</i>		Côte d'Ivoire	NT	2010	unknown
<i>Synodontis dekimpei</i>		Guinea	CR	2010	unknown
<i>Synodontis guttatus</i>		Nigeria	EN	2010	unknown
<i>Synodontis koensis</i>		Côte d'Ivoire	NT	2010	unknown
<i>Synodontis levequei</i>		Guinea	NT	2010	unknown
<i>Synodontis macrophthalmus</i>		Benin, Ghana	VU	2010	unknown
<i>Synodontis melanopterus</i>		Benin, Nigeria, Togo	NT	2010	unknown
<i>Synodontis pardalis</i>		Cameroon	EN	2010	unknown
<i>Synodontis robbianus</i>		Nigeria	VU	2010	unknown
<i>Synodontis tourei</i>		Guinea	NT	2010	unknown
<i>Tarentola boavistensis</i>	Boavista Wall Gecko	Cape Verde	VU	2013	decreasing
<i>Tarentola gigas</i>	Giant Wall Gecko	Cape Verde	EN	2013	stable
<i>Tarentola raziana</i>		Cape Verde	NT	2013	unknown

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Tauraco bannermani</i>	Bannerman's Turaco	Cameroon	EN	2016	decreasing
<i>Terathopius ecaudatus</i>	Bateleur	Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo	NT	2016	decreasing
<i>Tetraodon pustulatus</i>	Puffer fish	Cameroon, Nigeria	VU	2010	unknown
<i>Thunnus alalunga</i>	Albacore Tuna, Aáhi Taria, Albacore, Albacore Fish, Bastard Albacore, Bonito, Langyin Tuna, Long-finned Tuna, Longfin Tuna, Long-fin Tunny, Longfin Tunny, Tuna	Benin, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	NT	2011	decreasing
<i>Thunnus albacares</i>	Yellowfin Tuna, Allison's Tuna, Pacific Long-tailed Tuna, Yellowfinned Albacore	Benin, Cameroon, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	NT	2011	decreasing
<i>Thunnus obesus</i>	Bigeye Tuna	Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone	VU	2011	decreasing
<i>Thunnus thynnus</i>	Atlantic Bluefin Tuna	Cape Verde	EN	2011	decreasing
<i>Tilapia bakossiorum</i>		Cameroon	CR	2010	unknown
<i>Tilapia bemini</i>		Cameroon	CR	2010	unknown
<i>Tilapia busumana</i>		Côte d'Ivoire, Ghana	VU	2010	decreasing
<i>Tilapia bythobates</i>		Cameroon	CR	2010	unknown
<i>Tilapia cessiiana</i>		Côte d'Ivoire	CR	2010	unknown
<i>Tilapia coffea</i>		Liberia	CR	2010	unknown
<i>Tilapia deckerti</i>		Cameroon	CR	2010	unknown

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Tilapia discolor</i>		Côte d'Ivoire, Ghana	VU	2010	unknown
<i>Tilapia flava</i>		Cameroon	CR	2010	unknown
<i>Tilapia gutturosa</i>		Cameroon	CR	2010	unknown
<i>Tilapia imbriferina</i>		Cameroon	CR	2010	unknown
<i>Tilapia joka</i>		Liberia, Sierra Leone	VU	2010	unknown
<i>Tilapia snyderae</i>		Cameroon	CR	2010	unknown
<i>Tilapia spongotroktis</i>		Cameroon	CR	2010	unknown
<i>Tilapia thysi</i>		Cameroon	CR	2010	unknown
<i>Tilapia walteri</i>		Côte d'Ivoire, Liberia	NT	2010	unknown
<i>Torgos tracheliotos</i>	Lappet-faced Vulture	Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Gambia, Mali, Niger, Senegal	EN	2017	decreasing
<i>Trachurus</i>	Atlantic Horse Mackerel, Common Scad, European Horse Mackerel, Horse-mackerel, Horse Mackerel, Pollock, Scad, Western Horse Mackerel	Benin, Cameroon, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo	VU	2015	decreasing
<i>Tragelaphus derbianus</i>	Giant Eland, Derby's Eland, Lord Derby's Eland	Cameroon, Chad, Côte d'Ivoire, Gambia, Ghana, Guinea, Mali, Senegal, Togo	VU	2017	decreasing
<i>Tragelaphus eurycerus</i>	Bongo	Benin, Cameroon, Côte d'Ivoire, Ghana, Guinea, Liberia, Niger, Sierra Leone, Togo	NT	2016	decreasing
<i>Trichechus senegalensis</i>	African Manatee, Seacow, West African Manatee	Benin, Cameroon, Chad, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo	VU	2015	unknown

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Trigonoceps occipitalis</i>	White-headed Vulture	Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Mali, Niger, Senegal, Togo	CR	2017	decreasing
<i>Trioceros montium</i>	Cameroon Two-horned Mountain Chameleo, Cameroon Sailfin Chameleon	Cameroon	NT	2011	decreasing
<i>Trioceros perreti</i>	Perret's Montane Chameleon, Perret's Chameleon, Southern Peacock Chameleon	Cameroon	EN	2015	decreasing
<i>Trioceros pfefferi</i>	Bakossi Two-horned Chameleon, Pfeffer's Chameleon, Pfeffer's Two-horned Chameleon	Cameroon	EN	2015	decreasing
<i>Trioceros quadricornis</i>	Four-horned Chameleon, Eisentraut's Chameleon, Northern Four-horned Chameleon, Rumpi Hills Chameleon, Southern Four-horned Chameleon	Cameroon, Nigeria	VU	2015	decreasing
<i>Trioceros serratus</i>		Cameroon, Nigeria	VU	2015	decreasing
<i>Trionyx triunguis</i>	African Softshell Turtle, Nile Softshell Turtle	Benin, Cameroon, Chad, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Niger, Nigeria, Senegal, Sierra Leone, Togo	VU	2017	decreasing
<i>Umma mesumbei</i>	Cameroon Sparklewing	Cameroon	EN	2009	unknown
<i>Umma purpurea</i>	Purple Sparklewing	Cameroon	VU	2010	unknown
<i>Vanellus gregarius</i>	Sociable Lapwing, Sociable Plover	Cameroon, Chad	CR	2017	decreasing
<i>Werneria bambutensis</i>	Bamboutos Smalltongue Toad	Cameroon	EN	2004	decreasing
<i>Werneria mertensiana</i>	Mertens' Smalltongue Toad	Cameroon	EN	2004	decreasing
<i>Werneria preussi</i>	Buea Smalltongue Toad	Cameroon	EN	2009	unknown
<i>Werneria submontana</i>		Cameroon	EN	2006	decreasing
<i>Werneria tandyi</i>	Tandy's Smalltongue Toad	Cameroon	EN	2004	decreasing

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Wolterstorffina chirioi</i>		Cameroon	CR	2015	decreasing
<i>Wolterstorffina mirei</i>	Mount Okou Wolterstorff Toad	Cameroon	EN	2015	decreasing
<i>Wolterstorffina parvipalmata</i>	Cameroon Wolterstorff Toad	Cameroon, Nigeria	VU	2004	decreasing
<i>Xenopus amieti</i>	Volcano Clawed Frog	Cameroon	NT	2004	decreasing
<i>Xenopus longipes</i>	Lake Oku Clawed Frog, Savanna Clawed Frog	Cameroon	CR	2017	decreasing
<i>Zosterops melanocephalus</i>	Mount Cameroon Speirops, Cameroon Speirops	Cameroon	VU	2016	stable
<i>Zygonychidium gracile</i>	Streamertail	Côte d'Ivoire	CR	2010	unknown
PLANTAE					
<i>Acalypha guineensis</i>		Guinea, Sierra Leone	VU	2017	decreasing
<i>Acanthopale decempedalis</i>		Cameroon, Nigeria	VU	2014	decreasing
<i>Achyranthes talbotii</i>		Cameroon, Nigeria	NT	2014	decreasing
<i>Acridocarpus monodii</i>		Mali	EN	2011	unknown
<i>Aeollanthus trifidus</i>		Cameroon, Nigeria	VU	2017	decreasing
<i>Aeonium gorgoneum</i>		Cape Verde	EN	2017	stable
<i>Afrofittonia silvestris</i>		Cameroon, Nigeria	VU	2014	decreasing
<i>Afrostryrax lepidophyllus</i>		Cameroon, Ghana	VU	1998	
<i>Afrothismia korupensis</i>		Cameroon	CR	2017	unknown
<i>Afrothismia pachyantha</i>		Cameroon	CR	2004	decreasing
<i>Afrothismia saingei</i>		Cameroon	EN	2017	unknown
<i>Afrothismia winkleri</i>		Cameroon	CR	2013	decreasing
<i>Afzelia africana</i>	Afzelia	Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Ghana, Guinea, Guinea-Bissau, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo	VU	1998	
<i>Afzelia bipindensis</i>		Cameroon, Nigeria	VU	1998	

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Afzelia pachyloba</i>	White Afzelia	Cameroon, Nigeria	VU	1998	
<i>Agrostis mannii</i>		Cameroon	LR/nt	2000	
<i>Alafia whytei</i>		Cameroon, Côte d'Ivoire, Ghana, Liberia	VU	2014	decreasing
<i>Albertisia capituliflora</i>		Cameroon	VU	2015	decreasing
<i>Albertisia glabra</i>		Cameroon	VU	2015	decreasing
<i>Albizia ferruginea</i>	Albizia	Benin, Cameroon, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Nigeria, Senegal, Sierra Leone, Togo	VU	1998	
<i>Aldrovanda vesiculosa</i>	Waterwheel, Common Aldrovanda	Cameroon, Chad, Ghana, Togo	EN	2012	decreasing
<i>Allanblackia gabonensis</i>		Cameroon	VU	2004	decreasing
<i>Allexis cauliflora</i>		Ghana, Nigeria	VU	1998	
<i>Allexis obanensis</i>		Cameroon, Nigeria	VU	1998	
<i>Allophylus bullatus</i>		Cameroon, Nigeria	VU	2004	decreasing
<i>Amanoa bracteosa</i>		Côte d'Ivoire, Ghana, Liberia, Sierra Leone	VU	1998	
<i>Amanoa strobilacea</i>		Cameroon, Ghana, Liberia	VU	1998	
<i>Amorphophallus preussii</i>		Cameroon	VU	2004	decreasing
<i>Amphiblemma amoenum</i>		Cameroon	VU	2015	decreasing
<i>Amphiblemma lanceatum</i>		Cameroon	VU	2015	decreasing
<i>Amphiblemma letouzeyi</i>		Cameroon	VU	2015	decreasing
<i>Amphiblemma monticola</i>		Cameroon	VU	2015	decreasing
<i>Amphiblemma soyauxii</i>		Cameroon	VU	2015	decreasing
<i>Ancistrocladus grandiflorus</i>		Cameroon	VU	2014	decreasing

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Ancistrocladus korupensis</i>		Cameroon, Nigeria	EN	2014	decreasing
<i>Ancistrocladus letestui</i>		Cameroon	VU	2000	
<i>Aneilema silvaticum</i>		Cameroon, Nigeria	VU	2004	decreasing
<i>Angraecopsis cryptantha</i>		Cameroon	VU	2000	
<i>Angraecopsis tridens</i>		Cameroon	VU	2004	
<i>Angraecum pungens</i>		Cameroon, Nigeria	VU	2014	decreasing
<i>Angraecum pyriforme</i>		Cameroon, Côte d'Ivoire, Nigeria	VU	2004	
<i>Angraecum sanfordii</i>		Cameroon	EN	2004	
<i>Angylocalyx talbotii</i>		Cameroon, Nigeria	VU	2004	decreasing
<i>Anisotes guineensis</i>		Guinea	EN	2017	decreasing
<i>Anisotes zenkeri</i>		Cameroon	EN	2014	decreasing
<i>Anopyxis klaineana</i>		Cameroon, Côte d'Ivoire, Ghana, Liberia, Nigeria, Sierra Leone	VU	1998	
<i>Ansellia africana</i>	Leopard Orchid, African Ansellia, Monkey Sugarcane, Mopane Orchid, Tree Orchid	Benin, Cameroon, Chad, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Niger, Nigeria, Senegal, Sierra Leone, Togo	VU	2013	decreasing
<i>Antherotoma clandestina</i>		Cameroon	EN	2015	decreasing
<i>Anthocleista microphylla</i>		Cameroon, Ghana, Nigeria	VU	2004	decreasing
<i>Anthocleista scandens</i>		Cameroon, Nigeria	VU	2004	decreasing
<i>Anthonotha leptorrhachis</i>		Cameroon	CR	2000	
<i>Anthonotha nigerica</i>		Nigeria	VU	1998	
<i>Anthonotha obanensis</i>		Nigeria	VU	1998	
<i>Anthonotha vignei</i>		Côte d'Ivoire, Ghana, Liberia, Sierra Leone	VU	1998	



SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Anthospermum asperuloides</i>		Cameroon	LR/nt	2000	
<i>Antrocaryon micraster</i>	Antrocaryon	Cameroon, Côte d'Ivoire, Ghana, Nigeria, Sierra Leone	VU	1998	
<i>Aporrhiza multijuga</i>		Cameroon	CR	2017	unknown
<i>Ardisia alabastro-alata</i>		Cameroon	VU	2017	unknown
<i>Ardisia dom</i>		Cameroon	CR	2017	decreasing
<i>Ardisia etindensis</i>		Cameroon	CR	2000	
<i>Ardisia koupensis</i>		Cameroon	EN	2004	decreasing
<i>Ardisia oligantha</i>		Cameroon	CR	2000	
<i>Ardisia schlechteri</i>		Cameroon	CR	2000	
<i>Argocoffeopsis fosimondi</i>		Cameroon	CR	2017	unknown
<i>Argocoffeopsis spathulata</i>		Cameroon	VU	2017	unknown
<i>Artemisia gorgonum</i>		Cape Verde	VU	2017	unknown
<i>Asclepias kamerunensis</i>		Cameroon, Ghana, Nigeria	CR	2014	decreasing
<i>Asteriscus daltonii</i>		Cape Verde	NT	2017	unknown
<i>Asteriscus smithii</i>		Cape Verde	CR	2017	unknown
<i>Asystasia glandulifera</i>		Cameroon, Nigeria	VU	2014	decreasing
<i>Asystasia lindauiana</i>		Cameroon	VU	2010	unknown
<i>Aubreginia taiensis</i>		Côte d'Ivoire, Ghana	CR	1998	
<i>Aucoumea klaineana</i>		Cameroon	VU	1998	
<i>Aulacocalyx camerooniana</i>		Cameroon	CR	2017	unknown
<i>Autranella congolensis</i>		Cameroon, Nigeria	CR	1998	
<i>Bafodeya benna</i>		Guinea, Sierra Leone	VU	2011	unknown
<i>Bafutia tenuicaulis</i>		Cameroon, Nigeria	LR/nt	2000	

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Baillonella toxisperma</i>	African Pearwood, Djave Nut, Moabi	Cameroon, Nigeria	VU	1998	
<i>Baissea ochrantha</i>		Cameroon	EN	2014	decreasing
<i>Baphia breteleriana</i>		Cameroon	VU	2015	decreasing
<i>Baphia dewildeana</i>		Benin, Cameroon, Nigeria	VU	2015	decreasing
<i>Baphia heudelotiana</i>		Guinea, Senegal	VU	1998	
<i>Baphia latiloi</i>		Cameroon, Nigeria	VU	2015	decreasing
<i>Baphia obanensis</i>		Cameroon, Nigeria	EN	2015	decreasing
<i>Barleria asterotricha</i>		Guinea	CR	2017	unknown
<i>Barleria bornuensis</i>		Cameroon, Nigeria	VU	2014	decreasing
<i>Barleria maclaudii</i>		Guinea, Mali, Senegal	EN	2017	unknown
<i>Barombia gracillima</i>		Cameroon	LR/nt	2000	
<i>Begonia adpressa</i>		Cameroon	VU	2014	decreasing
<i>Begonia bonus-henricus</i>		Cameroon	EN	2014	decreasing
<i>Begonia duncan-thomasii</i>		Cameroon	VU	2014	decreasing
<i>Begonia furfuracea</i>		Cameroon	EN	2014	decreasing
<i>Begonia heterochroma</i>		Cameroon	VU	2015	decreasing
<i>Begonia mbangaensis</i>		Cameroon	VU	2015	decreasing
<i>Begonia microsperma</i>		Cameroon	VU	2015	decreasing
<i>Begonia minuta</i>		Cameroon	CR	2015	decreasing
<i>Begonia montis-elephantis</i>		Cameroon	CR	2015	decreasing
<i>Begonia oxyanthera</i>		Cameroon, Nigeria	VU	2015	decreasing
<i>Begonia pelargoniflora</i>		Cameroon	EN	2015	decreasing
<i>Begonia preussii</i>		Cameroon, Nigeria	VU	2015	decreasing
<i>Begonia pseudoviola</i>		Cameroon	EN	2015	decreasing
<i>Begonia rubromarginata</i>		Cameroon, Nigeria	EN	2015	decreasing
<i>Begonia schaeferi</i>		Cameroon, Nigeria	NT	2015	decreasing

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Begonia stellata</i>		Cameroon	CR	2015	decreasing
<i>Begonia zenkeriana</i>		Cameroon	VU	2015	decreasing
<i>Beilschmiedia preussii</i>		Cameroon	CR	2000	
<i>Belonophora ongensis</i>		Cameroon	CR	2000	
<i>Belonophora talbotii</i>		Nigeria	VU	1998	
<i>Berlinia hollandii</i>		Nigeria	CR	2017	decreasing
<i>Berlinia immaculata</i>		Cameroon	NT	2017	unknown
<i>Berlinia korupensis</i>		Cameroon	CR	2017	stable
<i>Berlinia occidentalis</i>		Côte d'Ivoire, Ghana, Liberia, Sierra Leone	VU	1998	
<i>Bidens mannii</i>		Cameroon	VU	2004	decreasing
<i>Bidens occidentalis</i>		Guinea	VU	2017	unknown
<i>Bolboschoenus grandispicus</i>		Cape Verde, Senegal	VU	2010	decreasing
<i>Boutiquea platypetala</i>		Cameroon	VU	2014	decreasing
<i>Brachystegia kennedyi</i>		Cameroon, Nigeria	VU	1998	
<i>Brachystegia nigerica</i>		Cameroon, Nigeria	VU	1998	
<i>Brachystelma exile</i>		Cameroon, Nigeria	EN	2014	decreasing
<i>Brachystelma omissum</i>		Cameroon, Nigeria	VU	2014	decreasing
<i>Brachystephanus giganteus</i>		Cameroon	VU	2014	decreasing
<i>Brachystephanus kupeensis</i>		Cameroon	CR	2014	decreasing
<i>Brachystephanus longiflorus</i>		Cameroon, Nigeria	VU	2014	decreasing
<i>Brachystephanus oreacanthus</i>		Cameroon, Guinea	VU	2014	decreasing
<i>Breviea sericea</i>		Côte d'Ivoire, Ghana	LR/nt	1998	
<i>Brillantaisia lancifolia</i>		Cameroon, Nigeria	VU	2014	decreasing
<i>Bulbophyllum bifarium</i>		Cameroon	VU	2004	

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Bulbophyllum filiforme</i>		Cameroon, Nigeria	CR	2000	
<i>Bulbophyllum gravidum</i>		Cameroon	VU	2000	
<i>Bulbophyllum jaapii</i>		Cameroon	VU	2004	
<i>Bulbophyllum kupense</i>		Cameroon	CR	2004	
<i>Bulbophyllum modicum</i>		Cameroon	EN	2000	
<i>Bulbophyllum nigericum</i>		Cameroon, Nigeria	VU	2004	
<i>Bulbophyllum pandanetorum</i>		Cameroon	EN	2004	
<i>Bulbophyllum porphyrostachys</i>		Cameroon, Nigeria	LR/nt	2000	
<i>Bulbostylis bodardii</i>		Guinea, Senegal	EN	2016	unknown
<i>Bulbostylis clarkeana</i>		Guinea	NT	2017	unknown
<i>Bulbostylis guineensis</i>		Guinea	EN	2016	decreasing
<i>Callichilia monopodialis</i>		Cameroon	VU	2014	decreasing
<i>Calochone acuminata</i>		Cameroon	VU	2004	
<i>Calophyllum africanum</i>		Mali	CR	2017	decreasing
<i>Calpocalyx atlanticus</i>		Cameroon	VU	1998	
<i>Calpocalyx cauliflorus</i>		Cameroon, Nigeria	VU	1998	
<i>Calpocalyx heitzii</i>		Cameroon	VU	1998	
<i>Calpocalyx klainei</i>		Cameroon	VU	1998	
<i>Calpocalyx ngouiensis</i>		Cameroon	VU	1998	
<i>Calvoa calliantha</i>		Cameroon	NT	2015	unknown
<i>Calvoa stenophylla</i>		Cameroon	EN	2015	unknown
<i>Calycobolus micranthus</i>		Cameroon	VU	2017	unknown
<i>Calycosiphonia macrochlamys</i>		Cameroon, Ghana	VU	2004	decreasing
<i>Campanula bravensis</i>		Cape Verde	EN	2017	decreasing
<i>Campanula jacobaea</i>		Cape Verde	VU	2017	unknown
<i>Campylanthus glaber</i>		Cape Verde	EN	2017	unknown

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Campylospermum amplectens</i>		Ghana, Liberia	VU	2017	
<i>Campylospermum letouzeyi</i>		Cameroon	VU	2004	decreasing
<i>Campylostemon mitophorus</i>		Cameroon	VU	2015	decreasing
<i>Carex antoniensis</i>		Cape Verde	CR	2017	decreasing
<i>Carex preussii</i>		Cameroon	LR/nt	2000	
<i>Cassia aubrevillei</i>		Côte d'Ivoire	VU	1998	
<i>Cassia fikifiki</i>		Côte d'Ivoire	EN	1998	
<i>Cassipourea acuminata</i>		Cameroon	EN	2004	decreasing
<i>Cassipourea alternifolia</i>		Cameroon	EN	2017	decreasing
<i>Cassipourea eketensis</i>		Nigeria	CR	1998	
<i>Cassipourea hiotou</i>		Côte d'Ivoire, Ghana	VU	1998	
<i>Cassipourea korupensis</i>		Cameroon	CR	2017	unknown
<i>Ceropegia ledermannii</i>		Benin, Cameroon, Nigeria	EN	2014	decreasing
<i>Ceropegia rhynchantha</i>		Cameroon, Ghana, Guinea, Mali, Nigeria, Senegal	VU	2014	decreasing
<i>Chassalia laikomensis</i>		Cameroon, Nigeria	CR	2004	decreasing
<i>Chazaliella obanensis</i>		Cameroon, Nigeria	VU	2004	
<i>Chlamydocardia subrhomboidea</i>		Cameroon	EN	2014	decreasing
<i>Chlorophytum petrophilum</i>		Cameroon	CR	2000	
<i>Chrysophyllum azagueianum</i>		Côte d'Ivoire, Ghana	EN	1998	
<i>Cinnobotrys letouzeyi</i>		Cameroon	EN	2015	decreasing
<i>Citropsis gabunensis</i>		Ghana	VU	1998	
<i>Cleistopholis staudtii</i>		Cameroon, Nigeria	VU	2004	
<i>Clerodendrum anomalum</i>		Cameroon	VU	2004	decreasing

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Coffea anthonyi</i>		Cameroon	VU	2017	unknown
<i>Coffea bakossii</i>		Cameroon	EN	2017	decreasing
<i>Coffea charrieriana</i>		Cameroon	CR	2017	decreasing
<i>Coffea fotsoana</i>		Cameroon	CR	2017	unknown
<i>Coffea humilis</i>		Côte d'Ivoire, Liberia	NT	2017	decreasing
<i>Coffea leonimontana</i>		Cameroon	CR	2017	decreasing
<i>Coffea mapiana</i>		Cameroon	VU	2017	decreasing
<i>Coffea montekupensis</i>		Cameroon	NT	2017	decreasing
<i>Coffea stenophylla</i>	Highland coffee, narrow-leaf coffee, Sierra Leone coffee, stenophylla coffee	Côte d'Ivoire, Guinea, Sierra Leone	VU	2017	decreasing
<i>Coffea togoensis</i>		Benin, Ghana, Togo	EN	2017	decreasing
<i>Cola attiensis</i>		Côte d'Ivoire	EN	1998	
<i>Cola boxiana</i>		Ghana	EN	1998	
<i>Cola cecidiifolia</i>		Cameroon	CR	2003	decreasing
<i>Cola gigas</i>		Nigeria	VU	1998	
<i>Cola glabra</i>		Nigeria	VU	1998	
<i>Cola hypochrysea</i>		Cameroon, Nigeria	VU	1998	
<i>Cola lourougnonis</i>		Cameroon, Côte d'Ivoire	EN	1998	
<i>Cola metallica</i>		Cameroon	CR	2003	decreasing
<i>Cola nigerica</i>		Cameroon, Nigeria	CR	2000	
<i>Cola philipi-jonesii</i>		Nigeria	EN	1998	
<i>Cola praeacuta</i>		Cameroon	CR	2004	
<i>Cola reticulata</i>		Côte d'Ivoire, Ghana, Guinea	VU	1998	
<i>Cola suboppositifolia</i>		Cameroon	VU	2003	decreasing
<i>Cola umbratilis</i>		Côte d'Ivoire, Ghana	VU	1998	

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Coleochloa domensis</i>		Cameroon	CR	2017	unknown
<i>Conyza feae</i>		Cape Verde	EN	2017	unknown
<i>Conyza pannosa</i>		Cape Verde	EN	2017	unknown
<i>Conyza schlechtendalii</i>		Cape Verde	CR	2017	unknown
<i>Conyza varia</i>		Cape Verde	EN	2017	decreasing
<i>Copaifera salikounda</i>		Côte d'Ivoire, Ghana, Guinea, Liberia, Sierra Leone	VU	1998	
<i>Cordia platythyrsa</i>	West African Cordia	Cameroon, Côte d'Ivoire, Ghana, Liberia, Nigeria, Sierra Leone	VU	1998	
<i>Craibia atlantica</i>		Cameroon, Côte d'Ivoire, Ghana, Nigeria	VU	1998	
<i>Crassocephalum bauchiense</i>		Cameroon, Nigeria	VU	2004	
<i>Crassocephalum boughyanum</i>		Cameroon	LR/nt	2000	
<i>Crateranthus talbotii</i>		Cameroon, Nigeria	VU	2004	decreasing
<i>Crossandra obanensis</i>		Cameroon, Nigeria	EN	2014	decreasing
<i>Crotalaria ledermannii</i>		Cameroon, Nigeria	VU	2015	decreasing
<i>Crotalaria mentiens</i>		Cameroon	EN	2015	decreasing
<i>Croton aubrevillei</i>		Cameroon, Côte d'Ivoire, Ghana	VU	2004	decreasing
<i>Crotonogyne impedita</i>		Cameroon	CR	2004	decreasing
<i>Crotonogyne manniana</i>		Cameroon, Ghana, Nigeria	LR/nt	1998	
<i>Crotonogyne strigosa</i>		Cameroon, Nigeria	VU	2004	decreasing
<i>Crotonogyne zenkeri</i>		Cameroon	VU	2004	decreasing
<i>Crudia bibundina</i>		Cameroon	CR	2000	
<i>Cryptosepalum diphyllum</i>		Nigeria	EN	1998	

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Cryptosepalum tetraphyllum</i>		Côte d'Ivoire, Ghana, Guinea, Liberia, Sierra Leone	VU	1998	
<i>Culcasia sanagensis</i>		Cameroon	VU	2013	decreasing
<i>Cussonia bancoensis</i>		Ghana	VU	1998	
<i>Cuviera talbotii</i>		Cameroon, Nigeria	VU	2004	decreasing
<i>Cyanotis ake-assii</i>		Côte d'Ivoire, Mali	NT	2011	unknown
<i>Cyathula fernando-poensis</i>		Cameroon	EN	2014	decreasing
<i>Cylicomorpha solmsii</i>		Cameroon	NT	2015	decreasing
<i>Cyperus felicis</i>		Guinea	EN	2016	decreasing
<i>Cyperus lateriticus</i>		Senegal	EN	2016	decreasing
<i>Cyperus microcristatus</i>		Cameroon	CR	2004	
<i>Cyperus rheophyticus</i>		Cameroon	VU	2017	unknown
<i>Cyperus rheophytorum</i>		Cameroon	VU	2004	
<i>Dacryodes igaganga</i>		Cameroon	VU	1998	
<i>Dactyladenia cinerea</i>		Cameroon	EN	2015	decreasing
<i>Dactyladenia dichotoma</i>		Nigeria	CR	1998	
<i>Dactyladenia dinklagei</i>		Côte d'Ivoire, Ghana, Liberia	VU	1998	
<i>Dactyladenia eketensis</i>		Nigeria	CR	1998	
<i>Dactyladenia hirsuta</i>		Côte d'Ivoire, Ghana	EN	1998	
<i>Dactyladenia johnstonei</i>		Cameroon	CR	2004	decreasing
<i>Dactyladenia mannii</i>		Cameroon	EN	2015	decreasing
<i>Dalbergia melanoxydon</i>	African Blackwood, Mozambique Ebony	Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Mali, Nigeria, Senegal	LR/nt	1998	
<i>Dalbergia setifera</i>		Ghana	EN	1998	
<i>Daniellia klainei</i>		Cameroon	LR/nt	1998	
<i>Daniellia oblonga</i>		Benin, Cameroon, Nigeria	VU	1998	



SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Deinbollia angustifolia</i>		Cameroon	VU	2017	unknown
<i>Deinbollia insignis</i>		Cameroon, Nigeria	VU	2004	decreasing
<i>Deinbollia macrantha</i>		Cameroon	CR	2017	unknown
<i>Deinbollia maxima</i>		Cameroon, Nigeria, Sierra Leone	VU	2004	decreasing
<i>Deinbollia molliuscula</i>		Ghana	VU	1998	
<i>Deinbollia saligna</i>		Cameroon, Ghana, Nigeria	VU	1998	
<i>Desmostachys vogelii</i>		Cameroon, Ghana, Nigeria	VU	1998	
<i>Dialium bipindense</i>		Cameroon	LR/nt	1998	
<i>Diaphananthe bueae</i>		Cameroon	EN	2000	
<i>Diaphananthe polydactyla</i>		Cameroon	VU	2004	
<i>Dichapetalum korupinum</i>		Cameroon	CR	2015	unknown
<i>Dichapetalum letouzeyi</i>		Cameroon	CR	2015	unknown
<i>Dichapetalum oliganthum</i>		Cameroon	VU	2015	decreasing
<i>Dichapetalum potamophilum</i>		Cameroon	EN	2015	unknown
<i>Dichapetalum reticulatum</i>		Cameroon, Nigeria	VU	2015	decreasing
<i>Dichapetalum witianum</i>		Cameroon	NT	2015	decreasing
<i>Dicliptera alternans</i>		Cameroon	VU	2014	decreasing
<i>Dicliptera silvestris</i>		Cameroon	VU	2004	
<i>Dicraeanthus zehnderi</i>		Cameroon	CR	2010	stable
<i>Dicranolepis polygaloides</i>		Cameroon	VU	2004	decreasing
<i>Dictyophleba setosa</i>		Cameroon	VU	2014	decreasing
<i>Didelotia idae</i>		Benin, Cameroon, Côte d'Ivoire, Ghana, Liberia,	LR/nt	1998	

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
		Nigeria, Sierra Leone, Togo			
<i>Didelotia unifoliolata</i>		Cameroon, Ghana	LR/nt	1998	
<i>Dielsantha galeopsoides</i>		Cameroon, Nigeria	NT	2015	decreasing
<i>Diospyros alboflavescens</i>		Cameroon	EN	2015	decreasing
<i>Diospyros barteri</i>		Cameroon, Ghana, Nigeria	VU	1998	
<i>Diospyros crassiflora</i>	Ebony	Cameroon, Nigeria	EN	1998	
<i>Diospyros feliciana</i>		Guinea	EN	2017	decreasing
<i>Diospyros korupensis</i>		Cameroon	EN	2015	decreasing
<i>Diospyros kupensis</i>		Cameroon	VU	2015	decreasing
<i>Diospyros longiflora</i>		Cameroon	NT	2015	decreasing
<i>Diospyros onanae</i>		Cameroon	EN	2015	unknown
<i>Diospyros platanoides</i>		Cameroon, Nigeria	VU	2015	decreasing
<i>Diospyros soyauxii</i>		Cameroon	NT	2015	stable
<i>Diplotaxis antoniensis</i>		Cape Verde	VU	2017	unknown
<i>Diplotaxis glauca</i>		Cape Verde	CR	2017	unknown
<i>Diplotaxis gorgadensis</i>		Cape Verde	EN	2017	unknown
<i>Diplotaxis gracilis</i>		Cape Verde	EN	2017	unknown
<i>Diplotaxis hirta</i>		Cape Verde	EN	2017	unknown
<i>Diplotaxis sundingii</i>		Cape Verde	CR	2017	unknown
<i>Diplotaxis varia</i>		Cape Verde	EN	2017	unknown
<i>Diplotaxis vogelii</i>		Cape Verde	CR	2017	unknown
<i>Dipsacus narcisseanus</i>		Cameroon	VU	2015	decreasing
<i>Dischistocalyx champluvieranus</i>		Cameroon	EN	2014	decreasing
<i>Dischistocalyx rivularis</i>		Cameroon	CR	2014	decreasing
<i>Disperis aphylla</i>		Cameroon	VU	2013	unknown
<i>Disperis kamerunensis</i>		Cameroon	EN	2000	

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Disperis mildbraedii</i>		Cameroon, Nigeria	VU	2004	
<i>Disperis nitida</i>		Cameroon	EN	2004	decreasing
<i>Dissotis bambutorum</i>		Cameroon, Nigeria	NT	2015	decreasing
<i>Dissotis bamendae</i>		Cameroon, Nigeria	VU	2015	decreasing
<i>Dissotis longisetosa</i>		Cameroon, Nigeria	NT	2015	unknown
<i>Dissotis pobeguinii</i>	Oueleba Rose	Guinea, Sierra Leone	VU	2014	stable
<i>Dolichos reptans</i>		Cameroon, Nigeria	EN	2015	decreasing
<i>Dombeya ledermannii</i>		Cameroon, Nigeria	CR	2000	decreasing
<i>Dorstenia astyanactis</i>		Cameroon, Côte d'Ivoire, Guinea	VU	2017	decreasing
<i>Dorstenia prorepens</i>		Cameroon, Nigeria	VU	2004	decreasing
<i>Dovyalis cameroonensis</i>		Cameroon, Nigeria	CR	2017	decreasing
<i>Dracaena draco</i>	Canary Island Dragon Tree, Dragon Tree	Cape Verde	VU	1998	
<i>Dracaena viridiflora</i>		Cameroon, Nigeria	VU	2004	
<i>Droogmansia scaettaiana</i>		Côte d'Ivoire, Guinea, Liberia, Sierra Leone	NT	2016	decreasing
<i>Drypetes afzelii</i>		Côte d'Ivoire, Ghana, Liberia, Sierra Leone	VU	1998	
<i>Drypetes laciniata</i>		Cameroon, Côte d'Ivoire	LR/nt	1998	
<i>Drypetes magnistipula</i>		Cameroon	EN	2004	
<i>Drypetes molundana</i>		Cameroon, Nigeria	VU	2004	decreasing
<i>Drypetes obanensis</i>		Nigeria	VU	1998	
<i>Drypetes pellegrinii</i>		Côte d'Ivoire, Ghana	VU	1998	
<i>Drypetes preussii</i>		Cameroon, Nigeria	VU	2004	decreasing
<i>Drypetes singroboensis</i>		Côte d'Ivoire, Ghana	VU	1998	
<i>Drypetes staudtii</i>		Cameroon, Nigeria	VU	2004	decreasing
<i>Drypetes tessmanniana</i>		Cameroon	CR	2000	
<i>Duguetia barteri</i>		Cameroon, Nigeria	VU	1998	

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Echium hypertropicum</i>		Cape Verde	EN	2017	unknown
<i>Echium stenosiphon</i>		Cape Verde	EN	2017	unknown
<i>Echium vulcanorum</i>		Cape Verde	EN	2017	unknown
<i>Embelia mildbraedii</i>		Cameroon	LR/nt	2000	
<i>Empogona talbotii</i>		Cameroon, Nigeria	VU	2004	decreasing
<i>Encephalartos barteri</i>		Benin, Ghana, Nigeria, Togo	VU	2010	decreasing
<i>Entandrophragma angolense</i>		Cameroon, Côte d'Ivoire, Ghana, Guinea, Liberia, Nigeria, Sierra Leone	VU	1998	
<i>Entandrophragma candollei</i>	Cedar Kokoti	Cameroon, Côte d'Ivoire, Ghana, Guinea, Liberia, Nigeria	VU	1998	
<i>Entandrophragma cylindricum</i>	Sapele	Cameroon, Côte d'Ivoire, Ghana, Nigeria, Sierra Leone, Togo	VU	1998	
<i>Entandrophragma utile</i>		Cameroon, Côte d'Ivoire, Ghana, Liberia, Nigeria, Sierra Leone	VU	1998	
<i>Epistemma decurrens</i>		Cameroon	EN	2014	decreasing
<i>Epistemma rupestre</i>		Cameroon	NT	2014	decreasing
<i>Eremospatha barendii</i>	Rattan, Rattan Palm	Cameroon	CR	2016	unknown
<i>Eremospatha dransfieldii</i>	Rattan	Côte d'Ivoire, Ghana, Sierra Leone	EN	2016	decreasing
<i>Eriocaulon asteroides</i>		Cameroon, Nigeria	VU	2000	
<i>Eriocaulon bamendae</i>		Cameroon, Nigeria	VU	2000	
<i>Eriocaulon parvulum</i>		Cameroon	VU	2000	
<i>Eriocaulon petraeum</i>		Sierra Leone	CR	2015	decreasing
<i>Eriocaulon stipantepalum</i>		Cameroon	EN	2010	decreasing
<i>Eriocaulon sulanum</i>		Sierra Leone	CR	2015	decreasing
<i>Eriosema adamaouense</i>		Cameroon	CR	2015	decreasing

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Eriosema letouzeyi</i>		Cameroon, Chad	VU	2015	decreasing
<i>Eriosema triformum</i>		Guinea	CR	2017	decreasing
<i>Erysimum caboverdeanum</i>		Cape Verde	CR	2017	unknown
<i>Eugenia fernandopoana</i>		Cameroon	VU	2004	decreasing
<i>Eugenia gilgii</i>		Cameroon, Nigeria	CR	2000	decreasing
<i>Eugenia kameruniana</i>		Cameroon	CR	2000	
<i>Eugenia tabouensis</i>		Côte d'Ivoire	VU	1998	
<i>Euphorbia tuckeyana</i>		Cape Verde	NT	2017	unknown
<i>Eurypetalum unijugum</i>		Cameroon	VU	2004	decreasing
<i>Fagara mezoneurospinosa</i>		Côte d'Ivoire	EN	1998	
<i>Fernandoa ferdinandi</i>		Cameroon	VU	2015	decreasing
<i>Fleurydora felicis</i>		Guinea	VU	1998	
<i>Floscopa mannii</i>		Cameroon, Nigeria	EN	2004	decreasing
<i>Forsskaolea procruidifolia</i>		Cape Verde	NT	2017	unknown
<i>Garcinia afzelii</i>		Côte d'Ivoire, Ghana	VU	1998	
<i>Garcinia brevipedicellata</i>		Cameroon, Nigeria	VU	1998	
<i>Garcinia epunctata</i>		Ghana	VU	1998	
<i>Garcinia kola</i>		Benin, Cameroon, Côte d'Ivoire, Ghana, Liberia, Sierra Leone	VU	2004	decreasing
<i>Garcinia staudtii</i>		Cameroon, Nigeria	VU	1998	
<i>Gastrodia africana</i>		Cameroon	CR	2000	
<i>Genlisea barthlottii</i>		Côte d'Ivoire, Guinea	VU	2016	stable
<i>Genyorchis macrantha</i>		Cameroon	VU	2000	
<i>Genyorchis micropetala</i>		Cameroon	EN	2004	
<i>Genyorchis platybulbon</i>		Cameroon	CR	2000	
<i>Gilbertiodendron bilineatum</i>		Côte d'Ivoire, Ghana, Liberia, Sierra Leone	VU	1998	

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Gilbertiodendron limba</i>		Côte d'Ivoire, Ghana, Guinea, Liberia, Sierra Leone	NT	2012	unknown
<i>Gilbertiodendron pachyanthum</i>		Cameroon	VU	1998	
<i>Gilbertiodendron robysianum</i>		Côte d'Ivoire	VU	1998	
<i>Gilbertiodendron splendidum</i>		Côte d'Ivoire, Ghana, Sierra Leone	VU	1998	
<i>Gilletiodendron glandulosum</i>		Mali	VU	2011	increasing
<i>Globularia amygdalifolia</i>		Cape Verde	EN	2017	unknown
<i>Gluema ivorensis</i>		Cameroon, Côte d'Ivoire, Ghana	VU	1998	
<i>Gluema korupensis</i>		Cameroon, Nigeria	EN	2017	unknown
<i>Gnetum africanum</i>	Eru	Cameroon	NT	2011	decreasing
<i>Gnetum buchholzianum</i>	Eru	Cameroon, Nigeria	NT	2011	decreasing
<i>Gossweilerodendron balsamiferum</i>		Cameroon, Nigeria	EN	1998	
<i>Gossweilerodendron joveri</i>		Cameroon	VU	2004	decreasing
<i>Gymnostemon zaizou</i>		Côte d'Ivoire	VU	1998	
<i>Habenaria batesii</i>		Cameroon	EN	2004	
<i>Habenaria jaegeri</i>		Guinea, Sierra Leone	EN	2017	decreasing
<i>Habenaria maitlandii</i>		Cameroon	CR	2000	decreasing
<i>Habenaria microceras</i>		Cameroon	LR/nt	2000	
<i>Habenaria nigrescens</i>		Cameroon, Nigeria	VU	2004	
<i>Habenaria obovata</i>		Cameroon	VU	2000	
<i>Habenaria thomana</i>		Cameroon	VU	2004	
<i>Hamilcoa zenkeri</i>		Cameroon	VU	2004	decreasing

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Haplormosia monophylla</i>		Cameroon, Côte d'Ivoire, Liberia, Nigeria, Sierra Leone	VU	1998	
<i>Helianthemum gorgoneum</i>		Cape Verde	EN	2017	unknown
<i>Helichrysum biafranum</i>		Cameroon	VU	2000	
<i>Helichrysum cameroonense</i>		Cameroon	LR/nt	2000	
<i>Helichrysum mannii</i>		Cameroon	LR/nt	2000	
<i>Helichrysum nicolai</i>		Cape Verde	CR	2017	unknown
<i>Helictotrichon mannii</i>		Cameroon	LR/nt	2000	
<i>Hemandradenia chevalieri</i>		Côte d'Ivoire, Ghana	EN	1998	
<i>Hemandradenia mannii</i>		Cameroon, Côte d'Ivoire, Ghana, Nigeria	LR/nt	1998	
<i>Heritiera utilis</i>		Côte d'Ivoire, Ghana, Liberia, Sierra Leone	VU	1998	
<i>Heteradelphia paulojaegeria</i>		Côte d'Ivoire, Guinea, Sierra Leone	EN	2016	decreasing
<i>Hexalobus salicifolius</i>		Cameroon, Côte d'Ivoire	EN	1998	
<i>Homalium dalzielii</i>		Benin, Nigeria	VU	1998	
<i>Homalium hypolasium</i>		Cameroon	EN	2004	
<i>Homalium patoklaense</i>		Côte d'Ivoire	VU	1998	
<i>Homalium smythei</i>		Côte d'Ivoire, Guinea, Liberia, Sierra Leone	VU	1998	
<i>Hoplostigma pierreanum</i>		Cameroon	CR	2000	
<i>Hugonia macrophylla</i>		Cameroon	VU	2004	decreasing
<i>Hugonia micans</i>		Cameroon	VU	2004	decreasing
<i>Hunteria ghanensis</i>		Ghana	EN	1998	
<i>Hygrophila mediatrix</i>		Cameroon, Chad	EN	2014	decreasing
<i>Hymenocoleus glaber</i>		Cameroon	VU	2004	decreasing
<i>Hymenostegia aubrevillei</i>		Côte d'Ivoire, Ghana	NT	2012	decreasing

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Hymenostegia bakeriana</i>		Cameroon, Nigeria	VU	1998	
<i>Hymenostegia gracilipes</i>		Ghana	EN	1998	
<i>Hymenostegia talbotii</i>		Nigeria	CR	1998	
<i>Hypolytrum cacuminum</i>		Côte d'Ivoire, Guinea, Liberia, Sierra Leone	EN	2016	decreasing
<i>Hypolytrum pseudomapanioides</i>		Cameroon	EN	2004	
<i>Hypolytrum subcompositus</i>		Cameroon	CR	2004	
<i>Hypolytrum unispicatum</i>		Cameroon	EN	2017	unknown
<i>Hypseochloa cameroonensis</i>		Cameroon	VU	2000	
<i>Impatiens etindensis</i>		Cameroon	EN	2014	decreasing
<i>Impatiens frithii</i>		Cameroon	EN	2014	decreasing
<i>Impatiens gongolana</i>		Cameroon	EN	2014	decreasing
<i>Impatiens grandisepala</i>		Cameroon	CR	2014	decreasing
<i>Impatiens letouzeyi</i>		Cameroon	EN	2014	decreasing
<i>Impatiens sakeriana</i>		Cameroon	VU	2014	decreasing
<i>Indigofera dasycephala</i>		Cameroon, Nigeria	VU	2015	decreasing
<i>Inversodicraea annithomae</i>		Cameroon	EN	2017	unknown
<i>Inversodicraea bosii</i>		Cameroon	EN	2017	unknown
<i>Inversodicraea boumiensis</i>		Cameroon	VU	2017	unknown
<i>Inversodicraea cristata</i>		Cameroon	VU	2017	decreasing
<i>Inversodicraea kamerunensis</i>		Cameroon	VU	2017	unknown
<i>Irvingia gabonensis</i>		Côte d'Ivoire, Ghana, Guinea, Nigeria, Senegal, Sierra Leone	LR/nt	1998	
<i>Isoglossa dispersa</i>		Cameroon, Guinea, Sierra Leone	VU	2014	decreasing



SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Isoglossa nervosa</i>		Cameroon, Nigeria	VU	2014	decreasing
<i>Isolona deightonii</i>		Ghana, Sierra Leone	VU	1998	
<i>Isolona pilosa</i>		Cameroon	NT	2015	decreasing
<i>Isolona pleurocarpa</i>		Cameroon, Nigeria	VU	2014	decreasing
<i>Isolona zenkeri</i>		Cameroon	VU	2004	
<i>Isonema bucholzii</i>		Cameroon, Nigeria	VU	2014	decreasing
<i>Ixora batesii</i>		Cameroon	EN	2017	unknown
<i>Ixora foliosa</i>		Cameroon, Nigeria	VU	2004	decreasing
<i>Ixora nigerica</i>		Nigeria	VU	1998	
<i>Jollydora glandulosa</i>		Cameroon, Nigeria	VU	1998	
<i>Justicia camerunensis</i>		Cameroon, Nigeria	VU	2014	decreasing
<i>Justicia guineensis</i>		Côte d'Ivoire, Ghana, Guinea, Liberia, Sierra Leone	NT	2017	decreasing
<i>Justicia jamisonii</i>		Côte d'Ivoire, Guinea	EN	2017	unknown
<i>Justicia leucoxiphos</i>		Cameroon	EN	2014	decreasing
<i>Justicia niokolo-kobae</i>		Benin, Mali, Senegal	NT	2011	unknown
<i>Justicia orbicularis</i>		Cameroon, Nigeria	VU	2014	decreasing
<i>Justicia telloensis</i>		Cameroon	EN	2014	decreasing
<i>Justicia tenuipes</i>		Cameroon, Nigeria	EN	2014	decreasing
<i>Karima scarciesii</i>		Côte d'Ivoire, Ghana, Guinea, Guinea-Bissau, Liberia, Senegal, Sierra Leone	NT	2017	decreasing
<i>Keetia bakossii</i>		Cameroon	CR	2004	
<i>Keetia bakossiorum</i>		Cameroon	CR	2017	unknown
<i>Khaya anthotheca</i>	African Mahogany, White Mahogany	Cameroon, Côte d'Ivoire, Ghana, Liberia, Nigeria, Sierra Leone	VU	1998	

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Khaya grandifoliola</i>	African Mahogany, Benin Mahogany, Large-leaved Mahogany, Senegal Mahogany	Benin, Côte d'Ivoire, Ghana, Guinea, Nigeria, Togo	VU	1998	
<i>Khaya ivorensis</i>	African Mahogany, Lagos Mahogany	Cameroon, Côte d'Ivoire, Ghana, Liberia, Nigeria	VU	1998	
<i>Khaya senegalensis</i>	African Mahogany, Benin Mahogany, Dry Zone Mahogany, Senegal Mahogany	Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo	VU	1998	
<i>Kickxia elegans</i>		Cape Verde	EN	2017	unknown
<i>Kniphofia reflexa</i>		Cameroon	EN	2000	decreasing
<i>Korupodendron songweanum</i>		Cameroon	EN	2003	decreasing
<i>Kotschya micrantha</i>		Guinea	VU	2016	decreasing
<i>Kupea martinetegei</i>		Cameroon	CR	2004	decreasing
<i>Landolphia flavidiflora</i>		Cameroon	VU	2014	decreasing
<i>Landolphia maxima</i>		Cameroon, Nigeria	VU	2014	decreasing
<i>Landolphia uniflora</i>		Cameroon, Nigeria	EN	2014	decreasing
<i>Launaea gorgadensis</i>		Cape Verde	CR	2017	unknown
<i>Launaea picridioides</i>		Cape Verde	VU	2017	unknown
<i>Launaea thalassica</i>		Cape Verde	CR	2017	unknown
<i>Lavandula rotundifolia</i>		Cape Verde	NT	2017	unknown
<i>Lecaniodiscus punctatus</i>		Cameroon, Ghana	EN	1998	
<i>Lecomtedoxa plumosa</i>		Cameroon	EN	2017	unknown
<i>Ledermanniella aloides</i>		Cameroon, Liberia, Sierra Leone	VU	2010	unknown

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Ledermanniella batangensis</i>		Cameroon	CR	2010	unknown
<i>Ledermanniella bifurcata</i>		Cameroon	VU	2010	unknown
<i>Ledermanniella keayi</i>		Cameroon	CR	2010	unknown
<i>Ledermanniella letouzeyi</i>		Cameroon	EN	2004	decreasing
<i>Ledermanniella linearifolia</i>		Cameroon	EN	2010	decreasing
<i>Ledermanniella onanae</i>		Cameroon	EN	2010	stable
<i>Ledermanniella prasina</i>		Cameroon	VU	2017	unknown
<i>Ledermanniella pusilla</i>		Cameroon	EN	2010	stable
<i>Ledermanniella sanagaensis</i>		Cameroon	CR	2010	stable
<i>Ledermanniella schlechteri</i>		Cameroon	VU	2010	decreasing
<i>Ledermanniella thalloidea</i>		Cameroon	EN	2010	stable
<i>Ledermanniella variabilis</i>		Cameroon	EN	2010	unknown
<i>Lefebvrea angustisecta</i>		Cameroon, Nigeria	LR/nt	2000	
<i>Lefebvrea camerunensis</i>		Cameroon	EN	2000	
<i>Lefebvrea kupense</i>		Cameroon	VU	2004	unknown
<i>Leiothylax quangensis</i>		Cameroon	EN	2010	unknown
<i>Lepidagathis chevalieri</i>		Guinea	VU	2017	unknown
<i>Lepidagathis pobeguinii</i>		Côte d'Ivoire, Guinea, Mali	NT	2017	unknown
<i>Leplaea cedrata</i>	Light Bossé, Scented Guarea	Cameroon, Côte d'Ivoire, Ghana, Liberia, Nigeria, Sierra Leone	VU	2017	
<i>Leplaea thompsonii</i>	Black Guarea, Dark Bossé	Cameroon, Côte d'Ivoire, Ghana, Liberia, Nigeria	VU	2017	
<i>Leptoderris aurantiaca</i>		Cameroon, Nigeria	VU	2015	decreasing
<i>Leptoderris ledermannii</i>		Cameroon	EN	2015	decreasing
<i>Leptoderris macrothyrsa</i>		Cameroon	EN	2015	decreasing

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Leptonychia kamerunensis</i>		Cameroon	VU	2017	unknown
<i>Leptonychia moyesiae</i>		Cameroon, Nigeria	NT	2017	unknown
<i>Leptonychia subtomentosa</i>		Cameroon	EN	2017	unknown
<i>Limnophyton fluitans</i>		Cameroon, Nigeria	VU	2010	unknown
<i>Limonium braunii</i>		Cape Verde	EN	2017	unknown
<i>Limonium brunneri</i>		Cape Verde	CR	2017	unknown
<i>Limonium jovibarba</i>		Cape Verde	CR	2017	unknown
<i>Limonium lobinii</i>		Cape Verde	CR	2017	unknown
<i>Limonium sundingii</i>		Cape Verde	CR	2017	unknown
<i>Liparis goodyeroides</i>		Cameroon, Nigeria	CR	2000	
<i>Lipotriche tithonioides</i>	Simandou Daisy	Côte d'Ivoire, Guinea	EN	2014	decreasing
<i>Lobelia columnaris</i>		Cameroon	VU	2015	decreasing
<i>Lobelia gillettii</i>		Cameroon	VU	2015	decreasing
<i>Loesenera kalantha</i>		Côte d'Ivoire, Liberia	VU	1998	
<i>Loesenera talbotii</i>		Cameroon, Nigeria	VU	2004	decreasing
<i>Loeseneriella camerunica</i>		Cameroon	EN	2015	decreasing
<i>Lophira alata</i>	Azobe	Cameroon, Côte d'Ivoire, Ghana, Liberia, Nigeria, Sierra Leone	VU	1998	
<i>Lovoa trichilioides</i>	African Walnut, Congowood, Tigerwood	Cameroon, Côte d'Ivoire, Ghana, Liberia, Nigeria, Sierra Leone	VU	1998	
<i>Luzula mannii</i>		Cameroon	VU	2017	unknown
<i>Macaranga beillei</i>		Côte d'Ivoire	VU	1998	
<i>Macaranga paxii</i>		Cameroon, Nigeria	VU	1998	
<i>Maclaudia felixii</i>		Cameroon, Côte d'Ivoire, Guinea, Sierra Leone	NT	2014	decreasing
<i>Macropodiella heteromorpha</i>		Cameroon, Côte d'Ivoire	VU	2010	unknown

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Macropodiella pellucida</i>		Cameroon	EN	2010	stable
<i>Magnistipula conrauana</i>		Cameroon	EN	2015	decreasing
<i>Magnistipula cuneatifolia</i>		Cameroon	EN	2015	decreasing
<i>Magnistipula multinervia</i>		Cameroon	CR	2015	unknown
<i>Malouetia barbata</i>		Cameroon	EN	2014	decreasing
<i>Manilkara lososiana</i>		Cameroon	EN	2017	unknown
<i>Manniella cypridioides</i>		Cameroon	EN	2004	
<i>Mapania ferruginea</i>		Cameroon	VU	2004	
<i>Mapania raynaliana</i>		Cameroon	EN	2017	unknown
<i>Maranthes sanagensis</i>		Cameroon	VU	2015	decreasing
<i>Marantochloa mildbraedii</i>		Cameroon	EN	2004	
<i>Marsdenia exellii</i>		Guinea	EN	2013	decreasing
<i>Marsdenia magniflora</i>		Cameroon, Côte d'Ivoire, Liberia, Nigeria, Sierra Leone	VU	2014	decreasing
<i>Medusandra richardsiana</i>		Cameroon	VU	2004	decreasing
<i>Memecylon alipes</i>		Cameroon	EN	2015	decreasing
<i>Memecylon amshoffiae</i>		Cameroon	EN	2015	decreasing
<i>Memecylon bakossiense</i>		Cameroon	CR	2015	decreasing
<i>Memecylon candidum</i>		Cameroon, Nigeria	VU	1998	
<i>Memecylon dasyanthum</i>		Cameroon	VU	2004	decreasing
<i>Microberlinia bisulcata</i>		Cameroon	CR	2000	
<i>Microberlinia brazzavillensis</i>	Zebrawood	Cameroon	VU	1998	
<i>Micromeria forbesii</i>		Cape Verde	EN	2017	unknown
<i>Mikaniopsis maitlandii</i>		Cameroon, Nigeria	VU	2004	decreasing
<i>Mikaniopsis vitalba</i>		Cameroon	VU	2004	

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Milicia excelsa</i>		Benin, Cameroon, Côte d'Ivoire, Ghana, Nigeria, Sierra Leone, Togo	LR/nt	1998	
<i>Milicia regia</i>		Benin, Cameroon, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Senegal	VU	1998	
<i>Millettia conraui</i>		Cameroon, Nigeria	EN	2015	decreasing
<i>Millettia coruscans</i>		Cameroon	EN	2015	decreasing
<i>Millettia hypolampra</i>		Cameroon, Nigeria	NT	2015	decreasing
<i>Millettia laurentii</i>		Cameroon	EN	1998	
<i>Millettia macrophylla</i>		Cameroon, Nigeria	NT	2015	decreasing
<i>Millettia pilosa</i>		Cameroon, Nigeria	VU	2015	decreasing
<i>Millettia warneckei</i>		Ghana, Guinea, Liberia, Sierra Leone, Togo	VU	1998	
<i>Mitragyna ledermannii</i>		Benin, Cameroon, Côte d'Ivoire, Ghana, Liberia, Nigeria	VU	1998	
<i>Mitragyna stipulosa</i>		Cameroon, Gambia, Ghana, Guinea, Nigeria, Senegal, Sierra Leone	VU	1998	
<i>Mitrostigma monocaule</i>		Cameroon	CR	2017	unknown
<i>Mitrostigma barteri</i>		Cameroon	EN	2004	decreasing
<i>Momordica enneaphylla</i>		Cameroon	VU	2004	
<i>Monocyclanthus vignei</i>		Ghana, Liberia	EN	1998	
<i>Monodora unwinii</i>		Nigeria	VU	1998	
<i>Monopetalanthus compactus</i>		Côte d'Ivoire, Liberia, Sierra Leone	VU	1998	
<i>Monopetalanthus hedinii</i>		Cameroon	CR	1998	
<i>Napoleonaea egertonii</i>		Cameroon, Nigeria	VU	2004	decreasing
<i>Napoleonaea lutea</i>		Nigeria	CR	1998	
<i>Napoleonaea reptans</i>		Nigeria	CR	1998	

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Nauclea diderrichii</i>		Cameroon, Côte d'Ivoire, Ghana, Liberia, Nigeria, Sierra Leone	VU	1998	
<i>Nemum bulbostyloides</i>		Côte d'Ivoire, Guinea, Liberia, Sierra Leone	VU	2016	decreasing
<i>Nemum megastachyum</i>		Cameroon	NT	2017	unknown
<i>Neoboutonia mannii</i>		Cameroon, Nigeria	LR/nt	1998	
<i>Neolemonniera clitandrifolia</i>		Ghana, Liberia, Nigeria, Sierra Leone	EN	1998	
<i>Neoschumannia kamerunensis</i>		Cameroon, Côte d'Ivoire	CR	2014	decreasing
<i>Neostenanthera hamata</i>		Côte d'Ivoire, Ghana, Liberia, Sierra Leone	VU	1998	
<i>Nesogordonia papaverifera</i>		Benin, Cameroon, Côte d'Ivoire, Ghana, Liberia, Nigeria, Sierra Leone	VU	1998	
<i>Newtonia camerunensis</i>		Cameroon	CR	2000	
<i>Nodonema lineatum</i>		Cameroon, Nigeria	VU	2004	
<i>Nothospondias staudtii</i>		Cameroon, Côte d'Ivoire, Ghana, Nigeria	VU	1998	
<i>Okoubaka aubrevillei</i>	Death Tree	Cameroon, Côte d'Ivoire, Ghana, Guinea, Liberia, Nigeria, Sierra Leone	EN	2015	decreasing
<i>Oncoba lophocarpa</i>		Cameroon	VU	2004	decreasing
<i>Oncoba ovalis</i>		Cameroon, Nigeria	LR/nt	2000	
<i>Oncocalamus wrightianus</i>	Rattan, Rattan Palm	Benin, Nigeria	EN	2017	unknown
<i>Oriciopsis glaberrima</i>		Cameroon	LR/nt	1998	
<i>Ormocarpum klainei</i>		Cameroon	EN	2015	decreasing
<i>Osbeckia porteresii</i>		Côte d'Ivoire, Guinea, Liberia	EN	2017	decreasing
<i>Ossiculum aurantiacum</i>		Cameroon	CR	2004	
<i>Ostryocarpus zenkerianus</i>		Cameroon	CR	2015	decreasing

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Oxyanthus montanus</i>		Cameroon	VU	2004	decreasing
<i>Oxyanthus okuensis</i>		Cameroon	CR	2000	decreasing
<i>Oxygyne triandra</i>		Cameroon	CR	2000	
<i>Pachycarpus medusonema</i>		Cameroon	EN	2014	decreasing
<i>Palisota preussiana</i>		Cameroon	VU	2004	
<i>Papaver gorgoneum</i>		Cape Verde	CR	2017	unknown
<i>Pararistolochia ceropegioides</i>		Cameroon	VU	2004	decreasing
<i>Pararistolochia goldieana</i>		Cameroon, Nigeria, Sierra Leone	VU	2004	decreasing
<i>Pararistolochia preussii</i>		Cameroon	CR	2000	
<i>Paronychia illecebroides</i>		Cape Verde	NT	2017	unknown
<i>Pauridiantha divaricata</i>		Cameroon	VU	2004	decreasing
<i>Pauridiantha venusta</i>		Cameroon	VU	2004	decreasing
<i>Pavetta baconiella</i>		Cameroon	VU	2017	unknown
<i>Pavetta brachycalyx</i>		Cameroon	EN	2004	decreasing
<i>Pavetta brachysiphon</i>		Cameroon	CR	2017	unknown
<i>Pavetta kupensis</i>		Cameroon	CR	2004	
<i>Pavetta lasioclada</i>		Cameroon, Côte d'Ivoire, Ghana, Guinea, Mali, Sierra Leone, Togo	VU	1998	
<i>Pavetta laxa</i>		Cameroon	CR	2017	unknown
<i>Pavetta longistyla</i>		Cameroon	CR	2017	unknown
<i>Pavetta mollissima</i>		Ghana	VU	1998	
<i>Pavetta muiriana</i>		Cameroon	EN	2004	decreasing
<i>Pavetta rubentifolia</i>		Cameroon	CR	2004	unknown
<i>Pellegriniodendron diphyllosum</i>		Cameroon, Côte d'Ivoire, Ghana	LR/nt	1998	
<i>Pentarrhinum ledermannii</i>		Cameroon	VU	2014	decreasing



SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Peperomia kamerunana</i>		Cameroon	EN	2004	decreasing
<i>Peperomia thomeana</i>		Cameroon	LR/nt	2000	
<i>Pericopsis elata</i>	African Teak, Afronesia, Afronesia	Cameroon, Côte d'Ivoire, Ghana, Nigeria	EN	1998	
<i>Periploca chevalieri</i>		Cape Verde	EN	2017	unknown
<i>Petchia africana</i>		Cameroon	EN	2014	decreasing
<i>Phagnalon melanoleucum</i>		Cape Verde	EN	2017	unknown
<i>Phoenix atlantica</i>		Cape Verde	EN	2017	unknown
<i>Phyllanthus bancilhonae</i>		Côte d'Ivoire, Guinea, Liberia, Sierra Leone	NT	2017	unknown
<i>Phyllanthus caesiifolius</i>		Cameroon	CR	2004	
<i>Phyllanthus kidna</i>		Cameroon	CR	2017	decreasing
<i>Phyllanthus nyale</i>		Cameroon	CR	2004	decreasing
<i>Phyllanthus profusus</i>		Ghana, Guinea, Liberia	VU	1998	
<i>Phyllopentas ledermannii</i>		Cameroon, Nigeria	VU	2004	decreasing
<i>Physacanthus nematosiphon</i>		Côte d'Ivoire, Ghana, Guinea, Liberia, Sierra Leone	NT	2017	decreasing
<i>Physacanthus talbotii</i>		Cameroon, Nigeria	EN	2014	decreasing
<i>Pierreodendron kerstingii</i>		Benin, Côte d'Ivoire, Ghana, Togo	VU	1998	
<i>Pierrina zenkeri</i>		Cameroon	NT	2015	decreasing
<i>Piptostigma calophyllum</i>		Cameroon	VU	2014	decreasing
<i>Piptostigma fugax</i>		Côte d'Ivoire, Ghana, Liberia	VU	1998	
<i>Piptostigma giganteum</i>		Nigeria	VU	1998	
<i>Placodiscus attenuatus</i>		Côte d'Ivoire, Ghana	EN	1998	
<i>Placodiscus bancoensis</i>		Côte d'Ivoire, Ghana	VU	1998	
<i>Placodiscus boya</i>		Côte d'Ivoire, Ghana	VU	1998	

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Placodiscus bracteosus</i>		Côte d'Ivoire, Ghana	VU	1998	
<i>Placodiscus caudatus</i>		Cameroon	EN	2004	decreasing
<i>Placodiscus oblongifolius</i>		Ghana	VU	1998	
<i>Placodiscus opacus</i>		Cameroon	VU	2004	decreasing
<i>Placodiscus pseudostipularis</i>		Côte d'Ivoire, Ghana, Liberia, Sierra Leone	EN	1998	
<i>Plagiosiphon longitubus</i>		Cameroon	CR	2000	
<i>Platysepalum scaberulum</i>		Cameroon	CR	2015	decreasing
<i>Platytiropsis buchholzii</i>		Cameroon, Nigeria	NT	2015	decreasing
<i>Plectranthus cataractarum</i>		Cameroon	VU	2003	decreasing
<i>Plectranthus dissitiflorus</i>		Cameroon	CR	2000	
<i>Plectranthus linearifolius</i>		Guinea	EN	2014	unknown
<i>Pleioceras zenkeri</i>		Cameroon, Nigeria	VU	2014	decreasing
<i>Pleurostyliia serrulata</i>		Cameroon	VU	2015	decreasing
<i>Pogostemon micangensis</i>		Cameroon	VU	2017	unknown
<i>Polycarpaea garuensis</i>		Cameroon, Nigeria	EN	2015	decreasing
<i>Polycarpaea gayi</i>		Cape Verde	NT	2017	unknown
<i>Polycarpaea rheophytica</i>		Cameroon	EN	2015	decreasing
<i>Polystachya bicalcarata</i>		Cameroon	VU	2004	decreasing
<i>Polystachya cooperi</i>		Cameroon, Nigeria	EN	2004	
<i>Polystachya farinosa</i>		Cameroon	EN	2004	
<i>Polystachya geniculata</i>		Cameroon	EN	2004	
<i>Polystachya kupensis</i>		Cameroon	CR	2004	
<i>Polystachya victoriae</i>		Cameroon	CR	2000	
<i>Premna grandifolia</i>		Côte d'Ivoire	VU	1998	
<i>Pristimera biholongii</i>		Cameroon	CR	2015	decreasing
<i>Pristimera breteleri</i>		Cameroon	CR	2015	decreasing

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Prunus africana</i>	Red Stinkwood, African Almond, African Cherry	Cameroon	VU	1998	
<i>Pseuderanthemum dispersum</i>		Cameroon, Nigeria	VU	2014	decreasing
<i>Pseudosabicea batesii</i>		Cameroon	VU	2004	decreasing
<i>Pseudosabicea medusula</i>		Cameroon	VU	2004	decreasing
<i>Pseudosabicea pedicellata</i>		Cameroon, Nigeria	VU	2004	decreasing
<i>Pseudovigna sulaensis</i>		Sierra Leone	VU	2013	stable
<i>Psychotria bimbiensis</i>		Cameroon	CR	2003	decreasing
<i>Psychotria camerunensis</i>		Cameroon	VU	2004	decreasing
<i>Psychotria densinervia</i>		Cameroon	EN	2004	unknown
<i>Psychotria lanceifolia</i>		Cameroon	VU	2004	unknown
<i>Psychotria microthyrsa</i>		Cameroon	CR	2017	unknown
<i>Psychotria minimicalyx</i>		Cameroon	CR	2004	
<i>Psychotria moliwensis</i>		Cameroon	CR	2003	decreasing
<i>Psychotria moseskemei</i>		Cameroon, Nigeria	CR	2003	
<i>Psychotria njumei</i>		Cameroon	EN	2017	unknown
<i>Psychotria podocarpa</i>		Cameroon, Nigeria	VU	2004	decreasing
<i>Psydrax bridsoniana</i>		Cameroon	EN	2004	decreasing
<i>Pteleopsis habeensis</i>		Ghana, Mali, Nigeria	EN	1998	
<i>Pterocarpus zenkeri</i>		Cameroon	EN	2015	decreasing
<i>Pterygota bequaertii</i>		Cameroon, Côte d'Ivoire, Ghana, Nigeria	VU	1998	
<i>Pterygota macrocarpa</i>		Cameroon, Côte d'Ivoire, Ghana, Nigeria, Sierra Leone	VU	1998	
<i>Pulicaria diffusa</i>		Cape Verde	EN	2017	unknown
<i>Pyrenacantha cordicula</i>		Cameroon, Côte d'Ivoire, Ghana	EN	2004	decreasing

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Quassia sanguinea</i>		Cameroon, Nigeria	VU	2004	decreasing
<i>Raphia regalis</i>	Raphia Palm	Cameroon, Nigeria	VU	2004	
<i>Raphionacme caerulea</i>		Guinea, Sierra Leone	EN	2013	unknown
<i>Raphionacme keayi</i>		Nigeria	EN	2014	decreasing
<i>Rhabdotosperma ledermannii</i>		Cameroon, Nigeria	VU	2004	decreasing
<i>Rhaphidophora pusilla</i>		Cameroon	VU	2004	
<i>Rhaphiostylis ovatifolia</i>		Cameroon	EN	2017	decreasing
<i>Rhaphiostylis subsessifolia</i>		Cameroon	EN	2017	decreasing
<i>Rhaptopetalum breteleari</i>		Cameroon	CR	2015	unknown
<i>Rhaptopetalum depressum</i>		Cameroon	EN	2015	decreasing
<i>Rhaptopetalum geophylax</i>		Cameroon	NT	2015	decreasing
<i>Rhaptopetalum sessilifolium</i>		Cameroon	EN	2015	decreasing
<i>Rhodognaphalon brevicuspe</i>		Cameroon, Côte d'Ivoire, Ghana, Nigeria, Sierra Leone	VU	1998	
<i>Rhynchosia ledermannii</i>		Cameroon	CR	2015	unknown
<i>Rhytachne furtiva</i>		Burkina Faso, Ghana	VU	2010	decreasing
<i>Rhytachne glabra</i>		Guinea, Sierra Leone	VU	2013	stable
<i>Rhytachne megastachya</i>		Ghana, Guinea, Sierra Leone	NT	2010	unknown
<i>Rinorea faustiana</i>		Cameroon	EN	2004	decreasing
<i>Rinorea keayi</i>		Cameroon, Nigeria	LR/nt	1998	
<i>Rinorea simoneae</i>		Cameroon	EN	2017	unknown
<i>Rinorea thomasii</i>		Cameroon	VU	2004	
<i>Robynsia glabrata</i>		Côte d'Ivoire, Ghana, Nigeria	VU	1998	

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Rothmannia ebamutensis</i>		Cameroon	EN	2004	decreasing
<i>Rungia eriostachya</i>		Côte d'Ivoire, Guinea, Guinea-Bissau, Mali	NT	2017	unknown
<i>Rutidea nigerica</i>		Benin, Cameroon, Nigeria	VU	2004	unknown
<i>Sabicea xanthotricha</i>		Cameroon, Nigeria	EN	2004	decreasing
<i>Salacia conraui</i>		Cameroon	CR	2015	unknown
<i>Salacia dimidia</i>		Cameroon	NT	2015	decreasing
<i>Salacia lebrunii</i>		Cameroon	VU	2015	decreasing
<i>Salacia lenticellosa</i>		Cameroon, Nigeria	VU	2015	decreasing
<i>Salacia letouzeyana</i>		Cameroon, Nigeria	NT	2015	decreasing
<i>Salacia lucida</i>		Cameroon, Nigeria	VU	2015	decreasing
<i>Salacia mamba</i>		Cameroon	NT	2015	decreasing
<i>Salacia miegei</i>		Côte d'Ivoire	VU	1998	
<i>Salacia nigra</i>		Cameroon, Nigeria	VU	2015	decreasing
<i>Salacia talbotii</i>		Cameroon, Nigeria	NT	2015	decreasing
<i>Salacia volubilis</i>		Cameroon	VU	2015	decreasing
<i>Sapium aubrevillei</i>		Côte d'Ivoire, Ghana	VU	1998	
<i>Sarcolophium suberosum</i>		Cameroon	NT	2015	decreasing
<i>Sarcophrynium villosum</i>		Cameroon	EN	2004	
<i>Satanocrater fellatensis</i>		Guinea	VU	2017	unknown
<i>Saxicolella laciniata</i>		Cameroon	VU	2010	stable
<i>Saxicolella marginalis</i>		Cameroon, Nigeria	CR	2010	unknown
<i>Saxicolella nana</i>		Cameroon	VU	2010	unknown
<i>Scaphopetalum parvifolium</i>		Nigeria	VU	1998	
<i>Schefflera hierniana</i>		Cameroon	VU	2014	decreasing
<i>Schefflera mannii</i>		Cameroon, Nigeria	VU	2014	decreasing
<i>Schumanniophyton problematicum</i>		Côte d'Ivoire, Ghana, Sierra Leone	VU	1998	

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Scleria afroreflexa</i>		Cameroon	EN	2017	unknown
<i>Scleria guineensis</i>		Guinea	CR	2016	decreasing
<i>Scleria robinsoniana</i>		Guinea, Sierra Leone	NT	2013	unknown
<i>Sclerochiton preussii</i>		Cameroon, Nigeria	EN	2014	decreasing
<i>Secamone letouzeana</i>		Cameroon	VU	2014	decreasing
<i>Secamone racemosa</i>		Cameroon	VU	2004	
<i>Sericanthe toupetou</i>		Côte d'Ivoire, Ghana	EN	1998	
<i>Sideroxylon marginatum</i>		Cape Verde	EN	2017	unknown
<i>Silene biafrae</i>		Cameroon	NT	2015	stable
<i>Simirestis staudtii</i>		Cameroon, Sierra Leone	CR	2015	unknown
<i>Solanum rigidum</i>		Cape Verde	VU	2017	unknown
<i>Sonchus daltonii</i>		Cape Verde	EN	2017	unknown
<i>Soyauxia talbotii</i>		Nigeria	EN	1998	
<i>Spathandra barberi</i>		Ghana	VU	1998	
<i>Staurogyne bicolor</i>		Cameroon	VU	2014	decreasing
<i>Staurogyne kamerunensis</i>		Cameroon, Nigeria	NT	2014	decreasing
<i>Staurogyne pseudocapitata</i>		Cameroon	EN	2014	decreasing
<i>Stelechantha arcuata</i>		Cameroon	CR	2003	decreasing
<i>Stenandrium thomense</i>		Cameroon	EN	2014	decreasing
<i>Sterculia oblonga</i>	Yellow Sterculia	Cameroon, Côte d'Ivoire, Ghana, Liberia, Nigeria, Sierra Leone	VU	2016	
<i>Stereospermum zenkeri</i>		Cameroon	CR	2015	decreasing
<i>Strychnos elaeocarpa</i>		Cameroon	VU	2004	decreasing
<i>Strychnos millepunctata</i>		Côte d'Ivoire	VU	1998	
<i>Strychnos staudtii</i>		Cameroon	VU	2004	decreasing
<i>Stylochaeton pilosus</i>		Guinea, Sierra Leone	EN	2013	decreasing

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Succisa trichotocephala</i>		Cameroon, Nigeria	NT	2015	unknown
<i>Synsepalum aubrevillei</i>		Côte d'Ivoire, Ghana	VU	1998	
<i>Synsepalum brenanii</i>		Cameroon	CR	2000	
<i>Synsepalum glycydora</i>		Nigeria	VU	1998	
<i>Synsepalum tsoukpe</i>		Côte d'Ivoire	EN	1998	
<i>Tabernaemontana hallei</i>		Cameroon	VU	2014	decreasing
<i>Talbotiella eketensis</i>		Nigeria	EN	1998	
<i>Talbotiella gentii</i>		Ghana	CR	1998	
<i>Tapinanthus letouzeyi</i>		Cameroon	VU	2000	
<i>Tapinanthus preussii</i>		Cameroon, Nigeria	VU	2004	decreasing
<i>Tapura ivorensis</i>		Côte d'Ivoire, Ghana	VU	1998	
<i>Tarenna hutchinsonii</i>		Guinea, Liberia, Sierra Leone	CR	2013	decreasing
<i>Teclea carpopunctifera</i>		Côte d'Ivoire	VU	1998	
<i>Terminalia ivorensis</i>	Black Afara	Cameroon, Côte d'Ivoire, Ghana, Guinea, Liberia, Nigeria, Sierra Leone	VU	1998	
<i>Ternstroemia polypetala</i>		Cameroon	VU	1998	
<i>Testulea gabonensis</i>		Cameroon	EN	1998	
<i>Tetraberlinia tubmaniana</i>		Liberia	VU	1998	
<i>Thecacoris annobonae</i>		Cameroon	EN	2004	decreasing
<i>Thunbergia rufescens</i>		Cameroon, Nigeria	EN	2014	decreasing
<i>Thyrsosalacia pararacemosa</i>		Cameroon	EN	2015	decreasing
<i>Thyrsosalacia racemosa</i>		Cameroon	VU	2015	decreasing
<i>Tieghemella africana</i>		Cameroon, Sierra Leone	EN	1998	
<i>Tieghemella heckelii</i>	Cherry Mahogany	Cameroon, Côte d'Ivoire, Ghana, Liberia, Nigeria, Sierra Leone	EN	1998	
<i>Tiliacora lehmbachii</i>		Cameroon	EN	2004	decreasing

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Tolpis farinulosa</i>		Cape Verde	EN	2017	unknown
<i>Tricalysia atherura</i>		Cameroon	VU	2004	decreasing
<i>Tricalysia lejolyana</i>		Cameroon	EN	2004	unknown
<i>Trichilia ornithothesa</i>		Côte d'Ivoire, Ghana	VU	1998	
<i>Trichoscypha bijuga</i>		Cameroon, Côte d'Ivoire, Ghana, Guinea, Liberia	NT	2004	
<i>Trichoscypha cavalliensis</i>		Côte d'Ivoire, Ghana, Liberia	VU	1998	
<i>Trichoscypha engong</i>		Cameroon	VU	2014	decreasing
<i>Trichoscypha hallei</i>		Cameroon	EN	2014	decreasing
<i>Trichoscypha mannii</i>		Cameroon, Côte d'Ivoire, Ghana, Liberia, Nigeria	VU	1998	
<i>Trichostachys interrupta</i>		Cameroon, Nigeria	VU	2004	decreasing
<i>Triclisia lanceolata</i>		Cameroon	EN	2004	decreasing
<i>Triclisia macrophylla</i>		Cameroon, Sierra Leone	CR	2004	decreasing
<i>Trifolium gillettianum</i>		Cameroon	CR	2015	decreasing
<i>Turraea adjanohounii</i>		Côte d'Ivoire	VU	1998	
<i>Turraeanthus africana</i>		Benin, Cameroon, Côte d'Ivoire, Ghana, Nigeria, Sierra Leone	VU	1998	
<i>Tylophora cameroonica</i>		Cameroon	LR/nt	2000	
<i>Tylophora urceolata</i>		Cameroon	VU	2000	
<i>Umbilicus schmidtii</i>		Cape Verde	EN	2017	unknown
<i>Utricularia tetraloba</i>		Guinea, Sierra Leone	VU	2017	decreasing
<i>Uvariastrum zenkeri</i>		Cameroon, Nigeria	VU	1998	
<i>Uvariadendron connivens</i>		Cameroon, Nigeria	LR/nt	1998	
<i>Uvariadendron fuscum</i>		Cameroon	LR/nt	2000	
<i>Uvariadendron giganteum</i>		Cameroon	VU	2004	
<i>Uvariadendron occidentale</i>		Cameroon, Côte d'Ivoire, Ghana, Liberia, Nigeria	VU	1998	



SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Uvariopsis korupensis</i>		Cameroon	EN	2014	decreasing
<i>Uvariopsis submontana</i>		Cameroon	EN	2014	decreasing
<i>Uvariopsis tripetala</i>		Ghana, Nigeria	VU	1998	
<i>Uvariopsis vanderystii</i>		Cameroon	VU	2014	decreasing
<i>Vepris felicis</i>		Côte d'Ivoire, Guinea, Liberia, Sierra Leone	CR	2017	decreasing
<i>Vepris heterophylla</i>		Cameroon, Ghana, Mali	EN	1998	
<i>Vepris lecomteana</i>		Cameroon, Nigeria	VU	2004	decreasing
<i>Vepris suaveolens</i>		Côte d'Ivoire, Ghana, Guinea, Nigeria, Sierra Leone	LR/nt	1998	
<i>Vepris trifoliolata</i>		Cameroon	VU	1998	
<i>Verbascum capitis-viridis</i>		Cape Verde	VU	2017	unknown
<i>Verbascum cystolithicum</i>		Cape Verde	EN	2017	unknown
<i>Vernonia bamendae</i>		Cameroon, Nigeria	VU	2000	
<i>Veronica mannii</i>		Cameroon	LR/nt	2000	
<i>Vitellaria paradoxa</i>	Shea Butter Tree	Cameroon, Côte d'Ivoire, Ghana, Guinea, Nigeria, Senegal	VU	1998	
<i>Vitex lehmbachii</i>		Cameroon	EN	2004	decreasing
<i>Vitex yaundensis</i>		Cameroon	CR	2004	decreasing
<i>Warneckea austro-occidentalis</i>		Cameroon, Nigeria	EN	2015	decreasing
<i>Warneckea mangrovensis</i>		Cameroon	EN	2015	decreasing
<i>Warneckea memecyloides</i>		Cameroon, Côte d'Ivoire, Ghana, Nigeria	VU	1998	
<i>Warneckea ngutiensis</i>		Cameroon	CR	2015	unknown
<i>Warneckea wildeana</i>		Cameroon	EN	2015	decreasing
<i>Whitfieldia preussii</i>		Cameroon	VU	2014	decreasing
<i>Winklerella dichotoma</i>		Cameroon	CR	2010	unknown

SCIENTIFIC NAME	COMMON NAME(S)	COUNTRY	RED LIST STATUS	YEAR ASSESSED	POPULATION TREND
ANIMALIA					
<i>Withania chevalieri</i>		Cape Verde	CR	2017	unknown
<i>Xylopia africana</i>		Cameroon, Nigeria	VU	2014	decreasing
<i>Xylopia elliotii</i>		Ghana	VU	1998	
<i>Xylopia talbotii</i>		Nigeria	VU	1998	
<i>Xysmalobium samoritourei</i>		Guinea, Sierra Leone	EN	2014	decreasing
<i>Zanthoxylum atchoum</i>		Côte d'Ivoire	VU	1998	
<i>Zanthoxylum chevalieri</i>		Ghana	VU	1998	
<i>Zanthoxylum psammophilum</i>		Côte d'Ivoire	EN	1998	
<i>Zehnderia microgyna</i>		Cameroon	CR	2010	unknown