



# DYNAMICS OF PROTECTED AREAS IN CENTRAL AFRICA: FROM ECOLOGICAL ISSUES TO SOCIO-ECONOMIC DEVELOPMENT

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**Central Africa is a priority region for biodiversity conservation due to its exceptional heritage and high level of endemism (Colyn & Deleporte, 2004; Brooks *et al.*, 2011; Dagalier *et al.*, 2019). Its ecosystems have the value of a common good for both current generations, including the 40 million people who benefit from the natural resources they provide, and future ones (Nasi *et al.*, 2011; Hiol Hiol *et al.*, 2014; FAO, 2016). The social and cultural functions performed by these ecosystems are so essential that their alteration, let alone disappearance, would have consequences for the quality of life of populations at local, national and global levels.**

As is the case in the rest of the world, biodiversity in the subregion is threatened, particularly through poaching (better organized and equipped), deforestation and the expansion of shifting agriculture, and so-called “development” activities (mining, urban expansion, etc.; Abernethy *et al.*, 2016). This impact of anthropogenic activities on nature is unprecedented; the total mass of man-made materials (concrete, steel, asphalt, etc.) is increasing everywhere, and surpassed that of global biomass (total mass of all living organisms) in 2020. Unfortunately, this phenomenon has not reached its peak, since projects predict that this anthropogenic mass will at the least double by 2040 (Elhacham *et al.*, 2020).

Nevertheless, biodiversity conservation and sustainable environmental management could increase resilience and reduce the vulnerability of human societies to climate change (de Wasseige *et al.*, 2015; Seddon *et al.*, 2019; see Chapter 9 of this book). In Africa, this change will be characterized by increasingly frequent droughts and increased variability in rainfall patterns (de Wasseige *et al.*, 2015; IPBES, 2019). To check the loss of biodiversity, it is estimated that a minimum of 30% of the Earth’s surface must be protected through conservation measures, including 10% under strong protection (CDB, 2019; Hannah *et al.*, 2020).

The expansion of protected area networks in Central Africa since the 20<sup>th</sup> century is an encouraging development. However, integrating environmental and biodiversity conservation issues into the emergence strategies of governments in the subregion will be challenging, particularly as the economic context is darkening. The decline in the price of oil per barrel since late 2018, coupled with the global health crisis stemming from Covid-19, have led to a deteriorating economic situation.

The subregion has not been spared from this global phenomenon as macroeconomic forecasts for 2020 indicate a growth rate of between –2.5% and –4.3% (BAD, 2020).

This situation is prompting governments to accelerate oil extraction and diversify national economies, especially toward mining and forestry industries. While some forestry industry actors are implementing more sustainable practices, this is not yet the case for many industrial actors (see Chapter 7). The development of agribusiness also is being considered by decision-makers, generally to the detriment of diversified agriculture. Yet agroecology and agroforestry could provide avenues for sustainable development, in contrast to conventional industrial approaches (Torquebiau, 2007; Meynard, 2017).

National economies need to shift toward sustainable and environmentally-friendly sectors. This change of course will not be possible without the support of everyone involved, including foreigners (such as China), who are playing an increasingly important role in diverse key economic sectors.

The development of a greener economy should provide new opportunities for rural communities, which still rely heavily on subsistence slash-and-burn agriculture. This is the main driver of deforestation in Central Africa (Gillet *et al.*, 2016; Karsenty, 2020), a deforestation which is likely to be exacerbated by the projected demographic growth. The subregion’s population, currently estimated at approximately 185 million inhabitants (BAD, 2020), should more than double by 2050 (OFAC, n.d).

While changes in agricultural practices are indispensable, protected areas also can play an important role in this paradigm shift and contribute to the economic diversification of Central Africa. In addition to their fundamental role in maintaining



rainfall, supporting agricultural systems and combating climate change (see Chapter 9), opportunities for economic activities exist in ecotourism (see Chapter 8) and in the development of Non-Timber Forest Product (NTFP) industries. Protected areas are now the backbone of policies and strategies for biodiversity conservation and sustainable management. Over the past decade, the global protected area network has increased steadily, both on land and at sea, including in Central Africa (Doumenge *et al.*, 2015a; UNEP-WCMC, 2018). This increase has helped mitigate the effects of climate change and the accelerating rate of species extinction (WWF, 2020; IPBES, 2019).

Some progress has been made in the implementation of the Strategic Plan for Biodiversity 2011-2020, but it remains insufficient (CDB, 2020). Protected areas will be at the heart of the negotiations of the new post-2020 global biodiversity framework to be discussed at the 15th Conference of the Parties of the Convention on Biological Diversity (COP15-CBD). One of the key measures is to protect at least 30% of the world's land and marine areas, with at least 10% under so-called "strict" protection (CDB, 2019). How can Central African protected areas contribute

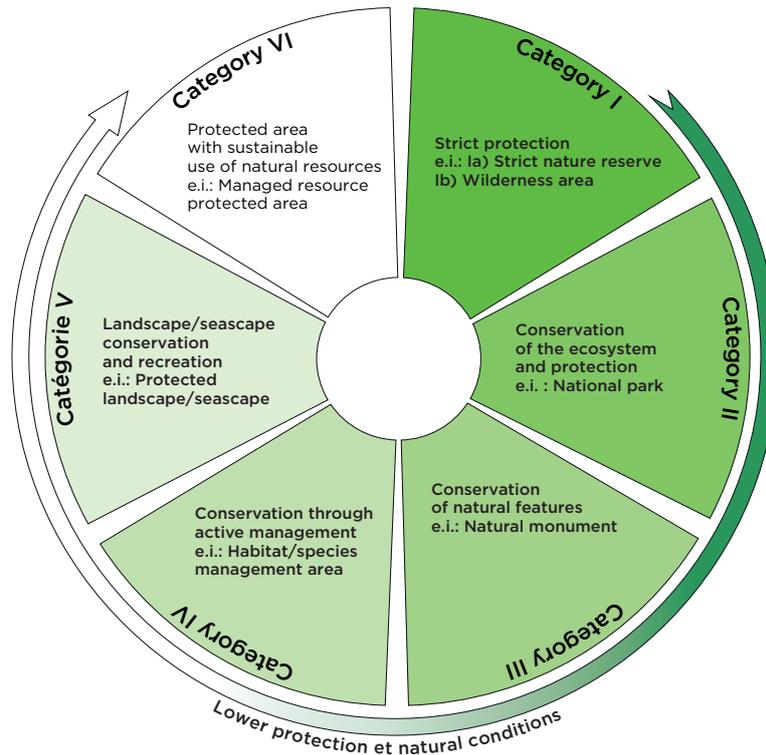
to this new global dynamic of biodiversity protection and preservation of ecological balances? And how are protected area managers in the subregion responding to some of the challenges facing them? This Chapter attempts to answer this twofold question; other more detailed answers also are provided in the thematic chapters of this book.

## 1. Central African protected areas in 2020

### 1.1 Nationally classified protected areas

The International Union for Conservation of Nature (IUCN) defines a protected area as "a clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to ensure the long-term conservation of nature and its associated ecosystem services and cultural values" (Dudley, 2008). This definition covers a wide range of territories and encompasses diverse management statuses and types, grouped into six categories (Figure 1). It also includes a wide range of governance forms which are presented and discussed in Chapters 2 and 3.

Figure 1 - The six IUCN protected area management categories

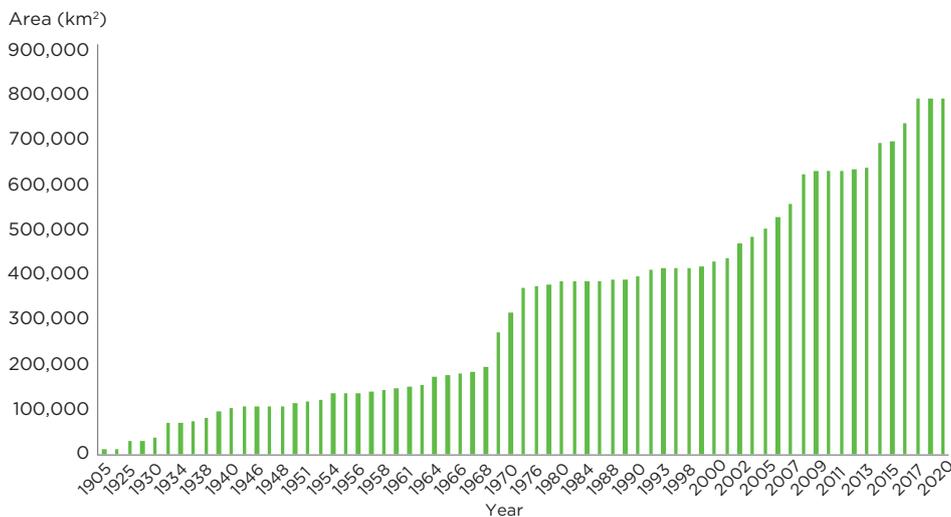


Source: adapted from Dudley (2008)

In Central Africa, the number and size of protected areas increased particularly during the 1930s, and again from the late 1960s to the mid-1970s (Doumenge *et al.*, 2015b; Figure 2). There also was a significant jump following the Rio Convention and the launch of the ECOFAC (Central African Forest Ecosystems)

program. The subregional network currently includes 206 protected areas covering about 799,000 km<sup>2</sup>, all categories combined, or 14.8% of the land area and 5% of the marine exclusive economic zone (EEZ) of Central African countries (Figure 3; Annex 1).

Figure 2 - Evolution of the Central African protected area network since the beginning of the 20th century



Note: This includes all protected areas, both terrestrial and marine, classified under national laws and recognised by WDPA. Source: Central African Forest Observatory (OFAC)

Figure 3 – Spatial distribution of protected areas in Central Africa



Note: International sites include World Heritage sites, Ramsar sites and biosphere reserves. Source: OFAC

Approximately 50% of these protected areas were set up during the first twenty years of the 21<sup>st</sup> century (both in terms of number and size; Figure 2), with 20% of these established during the UN Decade on Biodiversity 2011-2020. This reflects the governments' commitment to developing the Central African protected area network and achieving the Aichi Targets (see box). This commitment has been

demonstrated in particular through the ECOFAC program, which is celebrating its 30th anniversary. This program has contributed to the classification of many protected areas in the subregion, such as Obo (Sao Tome and Principe) and Monte Alen (Equatorial Guinea) national parks, and the reclassification and extension of Lope (Gabon) and Odzala-Kokoua (Congo) national parks.

### The Aichi Targets in relation to Central African protected areas

The Aichi Targets, or “Strategic Plan for Biodiversity 2011-2020”, were adopted in October 2010 by the signatories of the CBD. The eleventh target aims to establish, by 2020, networks of protected areas or other conservation measures at the scale of territories covering at least 17% of terrestrial and 10% of marine and coastal areas. This target concerns both increasing the number of protected areas and improving their effectiveness in protecting biodiversity (CDB, 2011).

Depending on the conservation areas considered, the Aichi Target for terrestrial protected areas is either met by a small number of countries (Equatorial Guinea, CAR and Sao Tome and Principe) or by the majority of them (Figure 4). In fact, if only protected areas classified by the countries according to national laws and recognized by the World Database on Protected Areas (WDPA) are considered, only the three countries mentioned meet the Aichi criteria. On the other hand, if internationally recognized sites (World Heritage sites, Ramsar sites, biosphere reserves) as well as other types of protected areas recognized by States are considered, Burundi and Rwanda alone remain well below the 17% target.

Moreover, some countries have already surpassed the target under negotiation of 30% of the territory under protected area status (Congo, CAR, Sao Tome and Principe). Cameroon, Gabon and Equatorial Guinea are not far away, making Central Africa an exemplary region for terrestrial biodiversity conservation – at least on paper. It will be difficult for two countries, Burundi and Rwanda, which have some of the highest rural population densities on the African continent, to meet these targets.

To measure progress in meeting these international objectives, prior work consequently is required to define what is considered a “protected area” with concrete and verifiable criteria. This will allow the same parameters to be used and will curtail possible political considerations

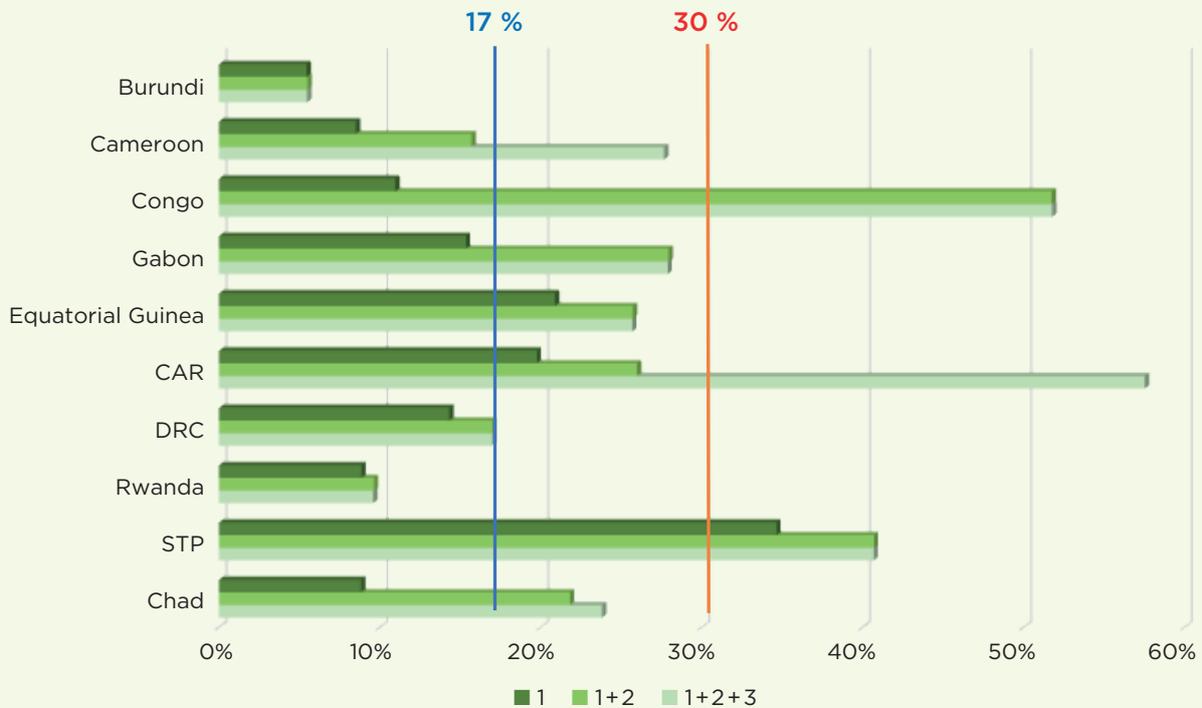


**The Aichi Targets in relation to Central African protected areas**

in the outcome of States' progress toward the stated goals. The IUCN approach of classifying protected areas into globally accepted management categories is sometimes difficult to put into practice due to highly variable national classifications and special political interests. While such harmonization may be difficult at the global level, it is recommended that common frameworks be put in place at the subregional level to reduce disparities.

The elements presented in this box raise a number of questions that will be discussed later in this section. It includes a more detailed analysis of protected area connectivity and management effectiveness, and the consideration of measures involving the outskirts of protected areas that could contribute to the achievement of the Aichi Targets (see sections 1.4 and 2.3).

**Figure 4 - Percentage of terrestrial protected areas in relation to the national surface area**



Notes: 1. National protected areas: protected areas classified by States according to national laws and recognized by the WDPA; 2. International protected areas: protected areas listed under the World Heritage and Ramsar conventions or part of the biosphere reserve network; 3. Other national protected areas: protected areas recognized as such by States but not recognized by the WDPA, such as Zones of Hunting Interest (ZIC). Source: OFAC

In Central Africa, the three most common categories of protected areas are national parks (category II), species conservation areas (category IV, wildlife reserves or similar), and protected areas where sustainable use of biodiversity is allowed (category VI, various types of hunting areas; Table 1). While national parks in savanna ecosystems often are relatively old, most forest parks are

recent (Doumenge *et al.*, 2015b). This is the case, for example, of the 13 national parks in Gabon, created in 2002, and of most forest parks in Cameroon.

Categories IV and VI include protected areas that are often vast, especially in savanna zones, to protect sufficient populations of large wildlife. Most of the hunting estates (from the French *domaine de chasse*, category VI), particularly in the Democratic

Republic of the Congo (DRC), Gabon and Congo, were created explicitly for the sustainable exploitation of large fauna and sport hunting. However, as this activity is currently closed in these countries, these areas are considered, and even managed, as wildlife reserves (category IV; see box section 1.3). The difference between these two types of protected areas is therefore difficult to establish in the absence

of detailed knowledge of each protected area. The figures presented should be considered instead as a whole: over half of the protected areas and nearly three quarters of the surface area represent territories with a protection status that can accommodate certain forms of sustainable use of biodiversity (non-industrial and for the benefit of contracted operators or rural communities).

**Table 1 - Distribution of protected areas in Central Africa according to IUCN categories**

IUCN category	Number of protected areas		Size of protected areas	
		%	km <sup>2</sup>	%
I	3	1.5	1,375	0.2
II	76	36.9	209,196	26.2
III	5	2.4	465	0.1
IV	77	37.4	363,452	45.5
V	3	1.5	362	0.1
VI	42	20.4	223,959	28.0
<b>Total</b>	<b>206</b>	<b>100.0</b>	<b>798,809</b>	<b>100.0</b>

Notes: These are national protected areas (marine and terrestrial). These statistics may differ from those officially reported by countries due to differences in the way protected areas are categorized. Source: OFAC

Over the last five years, the most notable development in Central Africa has been the increase in the number of marine protected areas, which complement the network of terrestrial protected areas in the subregion (Figure 3). While this effort by coastal States is to be welcomed, only 5% of EEZs are protected, well below the 10% of marine and coastal areas set by the Aichi Targets. The first marine areas were created in the 1990s, although tentative efforts to implement conservation measures in marine areas began in Gabon as early as the 1960s. By 2017, nine marine parks and associated buffer zones had been created in this country, as well as 11 aquatic reserves. In line with this initiative, Gabon has committed to protecting 30% of its marine territories by 2030.

It should be recalled that it is currently impossible to specify the exact number or size of protected areas in Central Africa. National statistics and the status of protected areas are not always known precisely. One revealing example is that of DRC's hunting estates and reserves, most of which were created during colonial times. The texts creating these estates and reserves are not all available, and their inventory, which is being

carried out by the *Institut Congolais pour la Conservation de la Nature* (ICCN), has not yet been made available to OFAC.

Furthermore, the global definition of protected areas provided by IUCN is not always sufficient to determine what is considered a protected area under the laws of each country. The legal framework in many Central African countries does not provide a very precise definition of the term "protected area", which hinders the full use of national efforts to achieve Aichi Target 11. We will return to this question in the following sections.

### 1.2 Protected areas with international status

Among the areas dedicated to conservation, two refer to international conventions: World Heritage sites, and wetlands of international importance known as "Ramsar sites". These sites are proposed by countries to be included in the relevant lists managed by UNESCO (United Nations Educational, Scientific and Cultural Organization) and the Ramsar Convention Secretariat.

A third case concerns biosphere reserves, an international network of reserves run by UNESCO's Man and the Biosphere program.

These international sites occupy more than 600,000 km<sup>2</sup>, or 11.2% of the subregion's land area

(Table 2). Only 22% of this total has official protection status under national laws and are included in national protected area networks (Figure 3). This is the case, for example, of the largest Ramsar site in the subregion, straddling Congo and DRC.

**Table 2 - Central African protected areas under international status or agreement**

International status	Number of sites	Surface area (km <sup>2</sup> )
World Heritage	13	135,343
Ramsar	51	425,459
Biosphere Reserves	13	45,729
<b>Total</b>	<b>77</b>	<b>606,531</b>

Source: OFAC

The designation of an area under an international label does not impose any particular regulatory protection. Nevertheless, States undertake to report to the secretariats of the conventions to which they adhere on the conservation of the ecological characteristics of the sites for which they have obtained the designation. For example, the Ramsar Convention provides in Article 3.2 (§4.3.7) that each Contracting Party “shall arrange to be informed at the earliest possible time if the ecological character of any wetland in its territory and included in the List has changed, is changing or is likely to change as the result of technological developments, pollution or other human interference. Information on such changes shall be passed without delay” to the secretariat of the convention. The national reports submitted by the contracting parties show that the two conventions – World Heritage and Ramsar – often have played a crucial role in preventing or halting activities that could have negatively affected sites critical for biodiversity conservation.

Thus, although most of these sites do not have a high level of protection, governments have stronger protection obligations on these territories than on “ordinary” lands. Therefore, these areas could, in the same way as conventional protected areas, be capitalized on in the efforts made by States to meet their global commitments, particularly Aichi Target 11 (see box in section 1.1). With this in mind, some countries have already included these internationally designated protected areas within their protected area network.

### 1.3 Other areas involved

Each State has its own “conservation vocabulary” and classifications may vary depending on the institution in charge of protected areas. For example, what is called a hunting estate (in French, *domaine de chasse*) in Chad corresponds to a ZIC (zone of hunting interest, from the French *Zone d'Intérêt Cynégétique*) in Cameroon, which also are found in CAR (see box). While some of these hunting areas have been degraded and their reclassification to other land uses could be an option, others still contain significant biodiversity or play a role in the countries' ecological framework. Their classification in IUCN categories IV to VI (or even II) could then be fully justified. As a result, these areas could contribute to the achievement of Aichi Target 11 and could even allow some countries in the subregion to reach the 30% target for protected areas, which will be discussed at the next COP-15 (CDB, 2019; see box section 1.1).

Other forms of protection can also contribute to achieving the Aichi Targets. This is the case of buffer zones, on the outskirts of protected areas, which can benefit from special status, as in Congo. In this country, buffer zones are considered protected areas and can be included in the protected area network.

Some countries also have developed other legal tools to protect the environment. For example, Congo's new forest code provides for two categories of forests: protection forests, with the “main purpose of guaranteeing the maintenance of a permanent

## Trophy hunting areas in Central Africa: IUCN category VI?

**P. Scholte, GIZ-Côte d'Ivoire**

Central African countries have large areas devoted to trophy hunting (Table 3 and Figure 5). In Cameroon, CAR and Chad, these hunting areas (referred to by their French acronym, ZIC) cover 12%, 32% and 2% of the national territory respectively, equivalent to almost 90% of the combined area of all other protected area categories in the first two countries (Figure 4).

While there are differing opinions on this matter (Cooney *et al.*, 2017), from a conservation perspective, hunting areas are important for biodiversity conservation due both to their immense size and the role they play in maintaining natural environments and large mammal populations. The success of certain ZICs is due to the efforts private hunting company staff, who at least partially monitor these territories (Scholte & Iyah, 2016). The management of these hunting areas is subject to specifications; a quota of animals that can be hunted is set each year by the Minister of Forestry and Wildlife. In addition, wildlife assessments are conducted in them every five years (Booth and Chardonnet, 2015; Roulet, 2007).

One of the difficulties in classifying hunting areas as protected areas is the diversity of their status, governance and management (see also Table 5, Chapter 2). For example, CAR and Cameroon have not included their hunting areas in the WDPA, while Chad has included some of them. Congo, Gabon and DRC also have included their hunting estates in their lists of protected areas; in the absence of game tourism, their management is not fundamentally different from a wildlife reserve (IUCN category IV).

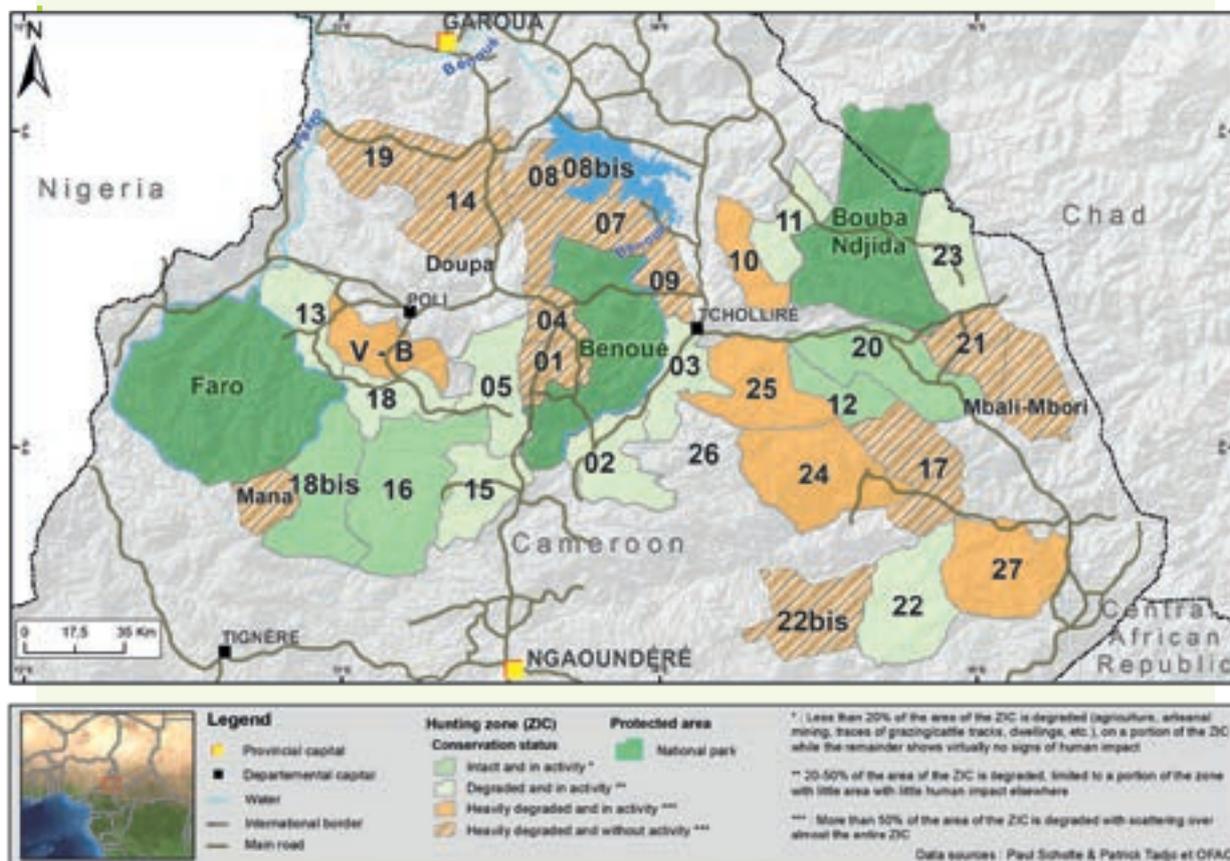
In Cameroon, private hunting areas and community and communal hunting areas are considered protected areas under the law, but they have not been included in the global database of protected areas (UNEP-WCMC, 2017). Nevertheless, in official publications such as those of the Ministry of Forests and Wildlife (MINFOF, 2017), the country presents hunting areas alongside national parks and wildlife reserves as “more or less recognized by the IUCN classification”, and assumes that they contribute to the achievement of Aichi Target 11.

The IUCN classification includes category VI, whose main objective is “to protect natural ecosystems and use natural resources sustainably, where conservation and sustainable use can be mutually beneficial” (Dudley, 2008). Following the example of Zambia and Tanzania, which have suggested the inclusion of their trophy hunting areas in this category, Central African hunting areas also could be included in this same category (Shafer, 2015; Booth & Chardonnet, 2015). Nevertheless, those in favor and those against hunting areas continue to disagree on this question.

Currently, hunting areas are declining overall, due to increased operational costs from agricultural encroachment and poaching, as well as reduced profits (decline in the trophy hunting market). Efforts currently are underway to organize a structured transition to other land uses for areas where hunting operations have ceased. Hunting companies with economic and ecological potential also are being supported to stop agricultural encroachment. This would allow countries to reclassify non-operational hunting areas to other land uses (pastoralism, reforestation, etc.) and some could be maintained in the protected area system.

Trophy hunting areas in Central Africa: IUCN category VI?

Figure 5 - Distribution of hunting areas in the North region of Cameroon



Sources: P. Scholte and OFAC

Table 3 - Importance of hunting areas in countries where hunting tourism is active

Country / Designation	Number	Surface area (km <sup>2</sup> )
<b>Cameroon <sup>1</sup></b>		
Zone of hunting interest (ZIC)	45	41,597
Community-managed ZIC (ZIC-GC)	26	15,352
<b>CAR <sup>2</sup></b>		
Village hunting zone (ZCV)	12	34,287
Community wildlife estate (DFC)	6	4,186
Leased hunting sector	70	157,594
Leased hunting zone	1	450
<b>Chad</b>		
Hunting estate	8	25,714
<b>TOTAL</b>	<b>168</b>	<b>279,179</b>

Notes:

<sup>1</sup> of which 32 in the North (in savanna, 14 active) and 38 in the South (in forest, all active);

<sup>2</sup> of which 79 in the North-West (in savanna, some active) and 10 in the South-West (in forest, none active).

Source: OFAC, Roulet *et al.* (2008), Lescuyer *et al.* (2016), UNEP-WCMC & IUCN (2021)

forest cover for the conservation of fragile soils, springs or watercourses and sacred forests”, as well as natural conservation forests, with the “main purpose of ensuring the sustainability of forest species, the protection of the habitat of fauna and flora or the preservation of landscapes” (Congo, 2020). In DRC, the status conservation forestry concession has been established, in particular to meet certain expectations related to Reducing Emissions from Deforestation and Forest Degradation (REDD+; see section 4).

Provisions also exist for the creation of community forests, or even for the creation of local community forestry concessions (in DRC; Vermeulen & Karsenty, 2015). The main objective of these provisions is to enable rural communities to secure control over forest areas for their own benefit, in theory in a sustainable manner. However, some of these provisions are being used by rural communities to create conservation areas without jumping through the hoops of protected area management agencies. This is the case in DRC with the association *Mbou Mon Tour*, which has led the project to create the Mbali River community forestry concession (bringing together six villages), intended for the conservation of bonobos and their habitat (see Chapter 2). This example is not an isolated case and could, in the long run, lead to a set of territories with a primary conservation vocation, which would complement the “classic” network of protected areas.

These different examples show that from different pieces of legislation (forestry laws, wildlife and conservation laws), it is possible to set up spaces for biodiversity conservation (see also Doumenge *et al.*, 2015b). However, all of these elements raise the question of the effectiveness of the management of these territories with regard to conservation objectives and the application of laws (Wabiwa Betoko & de Hoog, 2021). Another question mentioned earlier concerns the harmonization of approaches and designations between countries. A shared, expanded and harmonized frame of reference would be desirable.

However, the efforts made to increase the number of protected areas should not absolve the States of their environmental responsibilities outside protected areas, meaning in 70 to 83% of the territories, depending on the objectives set. The question is no longer to pit strong protection zones against weak protection zones (Denhez, 2020), but to develop territorial projects where hotspots of high biodiversity value are connected through a network of ecological corridors supporting socio-economic activities that respect the environment.

Overall, there is an urgent need to consider other concepts, such as IUCN’s Other Effective area-based Conservation Measures (OECM). Biodiversity conservation strategies cannot stop at the borders of protected areas. They must cover



all territories and all socio-economic activities. Thus, under certain conditions, certified forestry concessions under sustainable management make it possible to maintain a forest framework that is fundamental for maintaining biodiversity and associated ecosystem services (Lhoest *et al.*, 2020). They are not protected areas, but they can contribute to maintaining functional ecosystems and play a role in the connectivity of protected areas. In terms of maintaining the living fabric of our planet, management status alone is not the only important factor, but also the proximity of human settlements and effective territorial management.

## 2. Protection of biodiversity

### 2.1. A diversity of biomes

Central Africa extends from the Sahara Desert to the Congolese rainforests and Zambezi open forests (*miombo*), and from coastal mangrove forests to the mountain forests of the Albertine Rift (Table 4 and Figure 6). It is crossed by a climatic gradient characterized by mean annual rainfall ranging from 250 mm to 10,000 mm (Doumenge *et al.*, 2015a). Although the aquatic biomes also are very diverse (freshwater and marine biomes), the following section focuses on the protection of terrestrial ones.

Only 17% of the total area of these terrestrial biomes is protected, either under national status or as a result of international recognition (Table 4). This average masks highly variable degrees of protection; without going into detail here, some small biomes, such as mangroves and low mountain vegetation, are relatively well protected, while others, for example, arid zones and flooded savannas, are not.

Mangroves contribute to the protection of coastlines, notably by reducing marine erosion and by participating in the cycle of nutrients in coastal environments. They host many spawning grounds required for productive and sustainable fisheries. In addition, they produce basic goods for communities living in their vicinity (harvesting bivalve molluscs, firewood, salt, etc.). However, they are under pressure due to infrastructure development for industrial needs and coastal urbanization, overexploitation of fuelwood and colonization by invasive species (FAO, 2017).

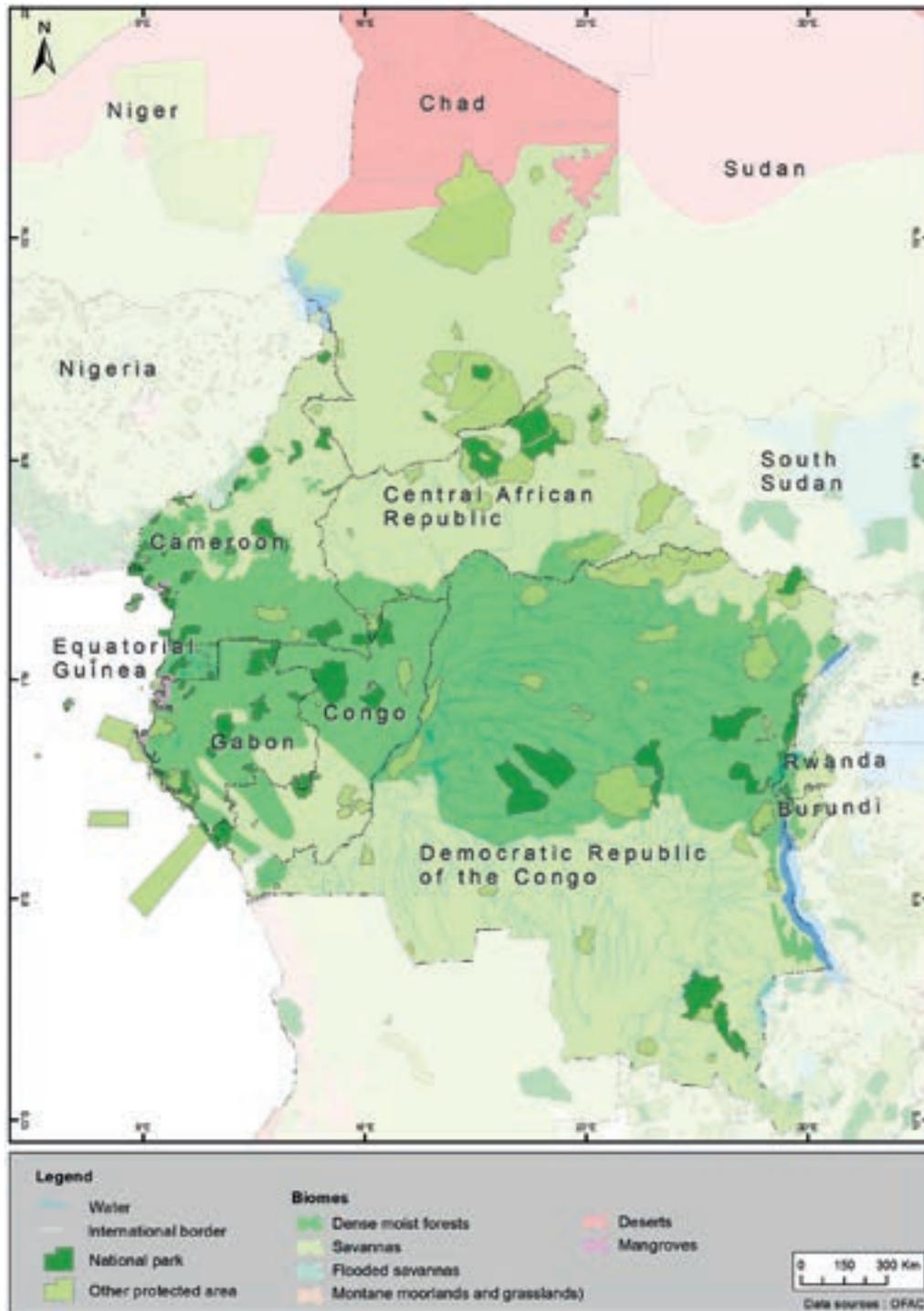
Although the legal and institutional frameworks for mangrove management and exploitation remain insufficient for their protection in Central African countries, Cameroon hopes that all mangroves will have conservation status by 2025 (Nchoutpouen *et al.*, 2017). The figures presented here are therefore likely to evolve according to the dynamics of the countries in terms of the conservation and creation of protected areas.

**Table 4 - Importance of protected areas for the conservation of Central African terrestrial biomes**

Terrestrial biome	Area occupied by the biome in Central Africa (km <sup>2</sup> )	Area covered by protected areas <sup>3</sup> (km <sup>2</sup> )	Proportion of the biome protected (%)
Deserts and dry shrubby thickets	516,620	33,438	6.5
Flooded savannas	12,806	179	1.4
Mangroves	8,441	5,761	68.2
Mountain meadows and thickets	1,328	2,018	56.0
Tropical and subtropical savannas <sup>1</sup>	2,869,909	460,669	16.1
Dense humid tropical and subtropical forests <sup>2</sup>	1,929,171	407,056	21.1
<b>Total</b>	<b>5,338,275</b>	<b>909,120</b>	<b>17.0</b>

Notes: <sup>1</sup> Including open forests; <sup>2</sup> Including mountain forests; <sup>3</sup> Protected areas included here are those under national conservation status as well as World Heritage sites, Ramsar sites and biosphere reserves. Sources: WWF (2012) and WPDA (2020)

Figure 6 – Geographical distribution of protected areas in the terrestrial biomes of Central Africa



Source: OFAC

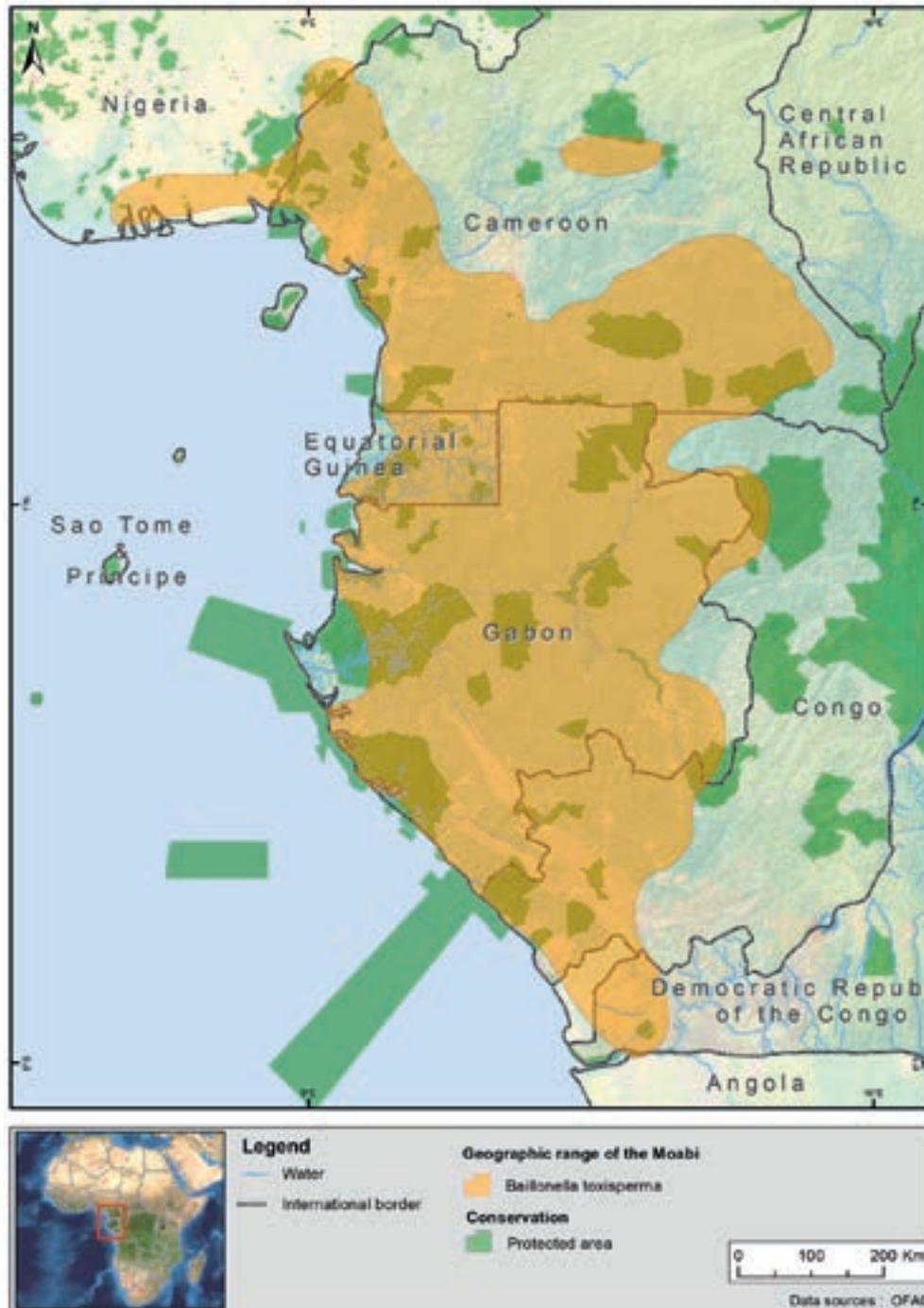
Among the biomes present in the subregion, tropical rainforests are the most iconic. These forests are at the heart of important international climate change issues due to the carbon stocks they contain (Marquant *et al.*, 2015; see Chapter 9). They also are

irreplaceable reservoirs of biodiversity, hosting species characteristic of Central Africa, such as various endemic Fabaceae-Caesalpinioideae and the moabi (*Baillonella toxisperma*), a majestic Sapotaceae and the unique representative of the genus *Baillonella*.

For example, barely 15% of the moabi's range is included in nationally classified protected areas (77,977 / 517,479 km<sup>2</sup>; Figure 7). This tree, endemic to Central Atlantic Africa, was once more widespread. It is currently on the IUCN Red List of vulnerable species (White, 1998). Maintaining its populations is not only important for its genetic diversity and

regeneration capacities, which guarantee sustainable exploitation, but also because it has an economic value for many human populations (cultural, culinary and medicinal uses). In addition, its fruits are eaten by animals such as the forest elephant (*Loxodonta cyclotis*) and great apes, which also are on the IUCN Red List (see section 2.2).

Figure 7 - Protected areas and range of moabi in Central Africa



Source: OFAC

## 2.2. Rich but threatened animal diversity

In terms of wildlife, the subregion is home to iconic animals, including the great apes. The largest existing populations are found here, belonging to the genera *Pan* (chimpanzees and bonobos) and *Gorilla* (gorillas). Both are our closest relatives but also irreplaceable species for maintaining ecological balances; their largely frugivorous diet and large body mass give them a crucial role in forest dynamics as seed dispersers (Haurez, 2015).

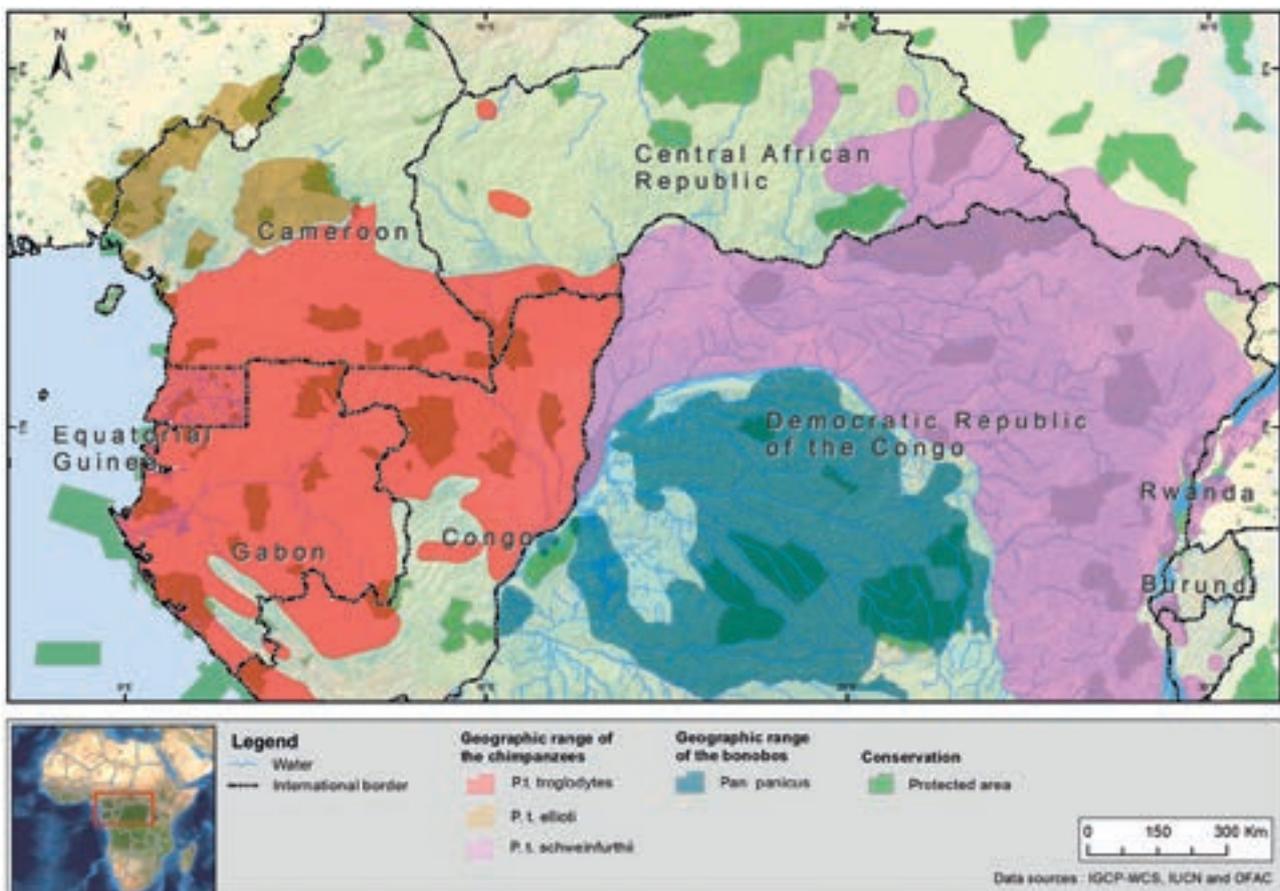
However, ape populations face several threats, including poaching and habitat destruction. Despite the protection measures that are being taken, all of the species are on the IUCN Red List, the list of species threatened with extinction (see box).

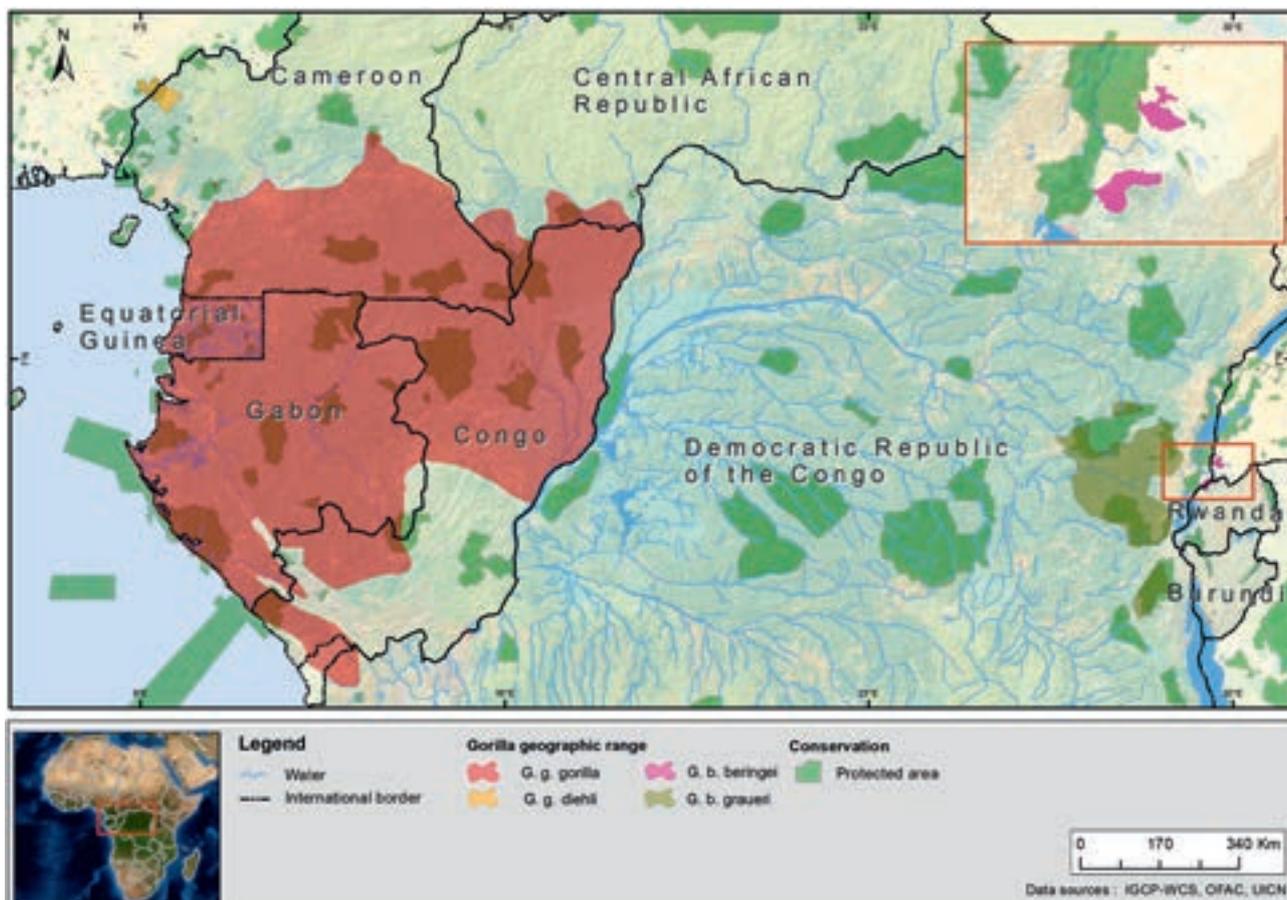
Protected areas play an important role in protecting these great apes and many other species. However, this protection varies greatly depending on the species or subspecies under consideration. For example, only

15% of the range of the Central African chimpanzee and the western lowland gorilla is officially protected (Figure 8 and Table 6). These species are still fairly widespread, but are under severe pressure and their protection needs to be improved.

In contrast, over 98% of the mountain gorilla's range is protected. This species is endemic to the Albertine Rift, and is distributed over a very limited area surrounded by agricultural land and very high human population densities. Nonetheless, the remaining mountain gorilla populations are almost entirely included in protected areas, whose management effectiveness has been improved significantly in recent years. These populations, close to extinction a few years ago, are now increasing. The positive effect of well-managed protected areas on this threatened species is particularly noteworthy, providing a very concrete illustration of the importance of protected areas in the conservation of an iconic species, one which is the basis of a flourishing ecotourism industry (see Chapter 8).

Figure 8 - Protected areas and ranges of great apes in Central Africa





### 8b - Gorillas

Note: Only nationally classified protected areas included in WDPA are considered here.  
Sources: IGCP-WCS, IUCN and OFAC

**Table 5 - Importance of protected areas for the conservation of Central African great apes**

Taxon	Range (km <sup>2</sup> )	Range within protected areas	
		(km <sup>2</sup> )	(% of range)
Elliot's Chimpanzee ( <i>P. t. ellioti</i> )	90,329	31,345	34.7
Central Chimpanzee ( <i>P. t. troglodytes</i> )	713,386	107,998	15.1
Eastern Chimpanzee ( <i>P. t. schweinfurthii</i> )	982,190	161,970	16.5
Bonobo ( <i>Pan paniscus</i> )	416,301	73,405	17.6
Cross River Gorilla ( <i>G. g. diehli</i> )	3,674	1,540	41.9
Western Lowland Gorilla ( <i>G. g. gorilla</i> )	690,027	104,715	15.2
Eastern Gorilla ( <i>G. b. graueri</i> )	48,195	16,265	33.7
Mountain Gorilla ( <i>G. b. beringei</i> )	789	775	98.2

Notes: The figures presented are for the entire range of the species and subspecies. Only nationally classified protected areas included in the WDPA are included. Sources: IGCP-WCS, IUCN and OFAC

## Status of the great apes in Central Africa

### E. Abwe, San Diego Zoo Global & WCS

Populations of all great apes have declined in recent decades (Table 6), mainly due to habitat loss and fragmentation (Tyukavina *et al.*, 2018), disease (i.e., Ebola; Walsh *et al.*, 2003), hunting and the bushmeat trade (Williamson, 2018), but also the pet trade, which can result in the death of adults at the time of capture. The situation is such that all great apes are listed in Appendix 1 of the IUCN Red List (Ancrenaz *et al.*, 2018).

The conservation issues surrounding these animals are critical and many measures have been taken to stop this dynamic. Internationally, governments have ratified the Agreement for the Conservation of Gorillas and their Habitats (Gorilla Agreement), which came into force in 2008. Outside of government initiatives, protection programs also have been created, overseen by international organizations such as IUCN (e.g., the Bonobo Conservation Strategy 2012-2022). Protected areas are an important tool for the protection of great apes, where they are subject to enhanced protection. In particular, the presence of eco-guards on the ground is an effective measure to deter and control poaching activities (IUCN, 2014). Awareness-raising actions implemented in certain protected areas are also fundamental, such as those initiated in the Lossi sanctuary (Congo), along with an experiment in habituating gorillas to humans (see box in Chapter 2). They sometimes lead to the creation of local associations, as is the case in the Ebo forest in Cameroon, with the *Club des amis des gorilles*, or in DRC, with the *Groupe d'appui pour la conservation des écosystèmes de Basanku et Bolomba*.

Despite all of these initiatives, the protection of great apes in Central Africa remains a major issue. In addition to all of the threats mentioned above, there also are problems associated with armed conflicts, economic opportunities for local communities, etc. The role of protected areas can be improved through a number of means, including better law enforcement (IUCN, 2014) and the creation of buffer zones around protected areas, especially where they are surrounded by “a mosaic of forest types, habitats and areas used by humans” (Morgan & Sanz, 2007).



Table 6 - Status of great ape populations in Central Africa

Taxon	Number	Date of last assessment	Category (according to Annex 1 of the IUCN Red List)
Elliot's Chimpanzee <i>Pan troglodytes ellioti</i>	6,000 to 9,000	Nov. 2015	In danger of extinction
Central Chimpanzee <i>Pan troglodytes troglodytes</i>	Approximately 140,000	Jan. 2016	In danger of extinction
Eastern Chimpanzee <i>Pan troglodytes schweinfurthii</i>	181,000 to 256,000	March 2016	In danger of extinction
Bonobo <i>Pan paniscus</i>	15,000 to 20,000	March 2016	In danger of extinction
Cross River Gorilla <i>Gorilla gorilla dielhi</i>	250 to 300	Jan. 2016	Critically endangered
Western Lowland Gorilla <i>Gorilla gorilla gorilla</i>	316,000	Jan. 2016	Critically endangered
Eastern Gorilla <i>Gorilla beringei graueri</i>	3,800	Aug. 2018	Critically endangered
Mountain Gorilla <i>Gorilla beringei beringei</i>	1,000	Aug. 2018	In danger of extinction

Sources: Oates *et al.*, 2016; Maisels *et al.*, 2016 and 2018; Plumptre *et al.*, 2016 and 2019; Fruth *et al.*, 2016; Bergl *et al.*, 2016

Another animal species that plays a major role in forest dynamics is the forest elephant. Wildlife inventories conducted by the World Wide Fund for Nature (WWF) between 2008 and 2016 revealed a 66% drop in their populations (Thouless *et al.*, 2016; WWF, 2017). Their protection requires both an improvement in protected area networks, the identification of migration corridors and the improvement of forest connectivity between protected areas (see section 2.3). It also requires improved management of human-elephant conflict and the widespread implementation of measures to promote cohabitation with forest elephants (see Chapter 5).

While the presence of protected areas is necessary to officially allocate portions of territory to the protection of biodiversity, this is not always sufficient in the face of certain pressures (large-scale poaching with weapons of war, etc.), especially when the management of these protected areas does not benefit from the desired investment. The disappearance of the last northern white rhinos (*Ceratotherium simum cottoni*) in Garamba Park is a

clear example. The death of the last male individual in 2018 destroyed any hope of saving the species, at least in a natural manner.

When protected areas are degraded, reintroduction options are available to restore balanced, rich and diverse populations. However, such reintroductions are only desirable – and possible – if these protected areas are managed effectively. Recent initiatives, such as the reintroduction of lions (*Panthera leo*) in Akagera National Park (Rwanda) and attempts to introduce several species of oryx (*Oryx spp.*) in the Ouadi Rimé-Oaudi Achim Wildlife Reserve (Chad), show encouraging results.

With regard to the oceans, measures to protect marine biodiversity are very recent in Central Africa. Ocean environments, in general and in the Gulf of Guinea in particular, are subjected to strong pressures such as uncontrolled fishing, coastal erosion, oil exploitation, pollution, and the effects of climate change (Failler *et al.*, 2019). As an example, about 20% of the world's tuna and tuna-like species fisheries operate in Gabonese territorial waters (Sea Shepherd,

2016 in Ndjambou *et al.*, 2019). It is also in these waters that nearly 10% of the world's humpback whales (*Megaptera novaengliae*) come to breed, which recently has become the focus of tourism activities.

In 1981, the Convention for Cooperation in the Protection and Development of the Marine Environment and Coastal Environment of the Western, Central and Southern African Region (or Abidjan Convention) was adopted. Article 11 of this convention provides for the creation of “specially protected areas”. The network of Central African marine protected areas has only been substantially deployed since 2017, mainly in Gabonese territorial waters. However, the marine ecosystems which are currently protected do not represent their diversity; Gabon having the only marine protected area on the high seas (UICN, 2015b).

The development of a network of marine protected areas, designed on coherent geographical scales from the point of view of ecosystems, and benefiting from sufficient human and material financial resources for their proper functioning, is therefore an important lever for the conservation of the marine and coastal wealth of Central Africa. The Blue Gabon program aims to strengthen the protection of the marine environment with the establishment of 20 marine protected areas, representing 26% of the national territorial waters (National Geographic, 2017). This initiative should encourage other coastal countries in the subregion to contribute more effectively to the protection of marine environments and species, within the framework of the strategic work program on marine protected areas (UICN, n.d.).

### 2.3. Protected areas and ecological networks

Effective protection of biodiversity requires respect for the biology and needs of its constituent species. Certain species, such as savanna (*L. africana*) and forest elephants, require vast territories to survive. The main task is to allow the natural movements of populations (migrations, access to food sources...) but also genetic mixing, which is essential for the maintenance and adaptation of animal and plant species (Triplet *et al.*, 2020).

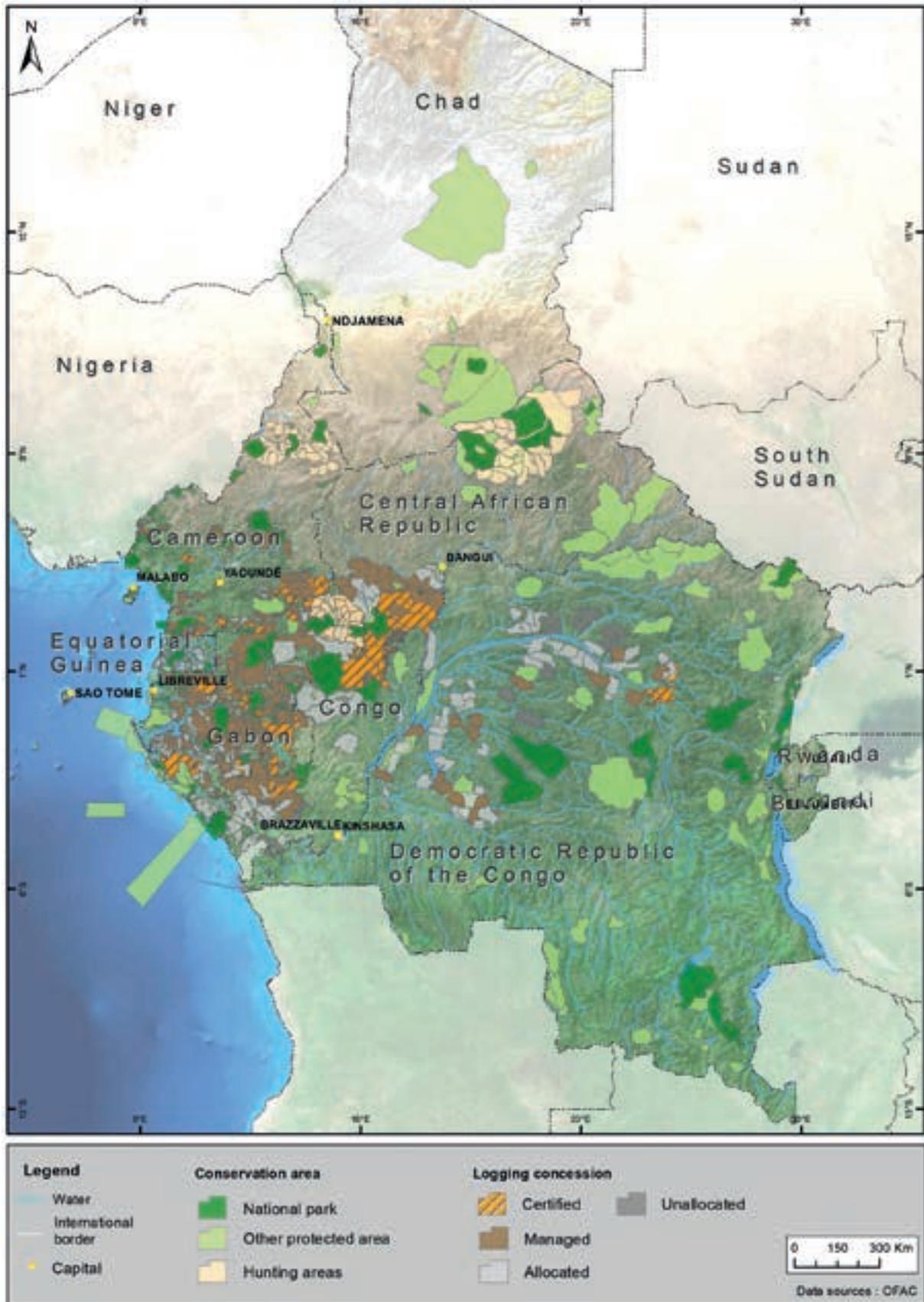
The effectiveness of each protected area must be considered on the scale of larger ecological

networks, including other protected areas, but also other territories allowing a continuity of natural or semi-natural ecosystems within this territorial mesh (Funwi-Gabga *et al.*, 2014). Other areas, such as ZICs (see box section 1.3) and managed and certified forestry concessions, can contribute to this connectivity and to the protection of animal and plant species (Figure 9). Indeed, these economic activities require healthy environments in order to maintain populations of desired species – both animal and plant – and thus, indirectly, their habitats. The ZICs of the savannas of Cameroon and CAR, and the other protected areas of these two countries and of Chad, thus make it possible to create vast, functional ecological complexes in the savanna zones. The ZICs in southern Cameroon also could strengthen connectivity between the national parks in the Sangha Trinational complex, which straddles the borders of Cameroon, Congo and Gabon.

Forestry concessions account for 36% of the total area of great ape priority conservation zones and 14% of the forest elephant's range. These concessions, when under sustainable management and certification, also allow the maintenance of a forest framework that is vital for the maintenance of forest biodiversity and associated ecosystem services (Van Vliet *et al.*, 2017; Lhoest *et al.*, 2020). Wildlife erosion in these concessions is indeed less significant than in forestry concessions without management plans (Karsenty & Gourlet-Fleury, 2016).

Effective conservation policies therefore need to take into account the multiplicity of land uses, particularly the areas inhabited by species that are subject to conservation or sustainable management measures, both within and outside protected areas (Morgan & Sanz, 2007). This means developing multi-sectoral land-use plans, including, in particular, the use of wood, hunting, agriculture and the mining and oil industries with conservation activities (see also Chapter 7). Improving the connectivity of protected area networks and maintaining functional ecological webs are promoted through the Aichi Targets. They require coordinated actions at different scales and between different socio-economic sectors so that the conservation measures adopted are coherent and correspond as closely as possible to both species biology and ecosystem functioning.

Figure 9 - Connectivity of protected areas



Note: Only nationally classified protected areas included in WDPA are considered here. Source: OFAC

### 3. Continually evolving legislation

Governments have a range of tools at their disposal to combat biodiversity loss. All Central African countries have ratified various international agreements and conventions that provide a general framework for actions and policies promoting better coexistence between humanity and the rest of the living world. However, it is national legislation that has the force of law above all else. Moreover, to be effective, such legislation must be enforced by all stakeholders, not just protected area managers.

Since 2015 and the first State of Protected Areas (Doumenge *et al.*, 2015a), a number of new pieces of legislation have been enacted or revised. This is the case, for example, of the law of 8 July 2020 concerning the forestry code in Congo, which introduced the notion of “ecological damage” that the State is likely to suffer as a result of actions against forest ecosystems. One of the changes observed in forest management also concerns conservation forest concessions, which DRC has set up (see box). This type of concession can complement the network of protected areas in the subregion (see section 1.3), provided that the laws and regulations are respected and that the objectives and management of these concessions allow for effective biodiversity protection

(which may not always be the case; Wabiwa Betoko & de Hoog, 2021). However, this offers new opportunities for biodiversity protection and raises questions about the inclusion of this type of land use in the global database of protected areas.

The level of protection provided for in the texts varies greatly according to the type of ecosystems and threats identified on the wild fauna and flora. Since 2017, a decree designates ICCN as the management body of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in DRC. This facilitated the development of a National Ivory Action Plan (NIAP) 2016–2017, with a focus on protecting elephants, which are subject to intensive poaching both in the country and in neighboring countries that serve as a platform for the sale or resale of ivory (Nkoke, 2017).

Nevertheless, while these texts are relatively effective in sustainably preserving wild flora and fauna, including the natural habitats on which they depend, they suffer from some imperfections that are amplified by corruption, poverty and other socio-cultural obstacles. In the event of threats or serious damage to biodiversity, the creation of a protection tool and its implementation thus generally remain the sole responsibility of the government; other stakeholders are at best consulted and rarely involved.

#### Conservation forest concessions

Biodiversity management in forest concessions has undergone significant changes since the 1990s. In addition to the conservation zones allowed in Forest Management Units (FMUs), as established in most forestry codes (protection or conservation series), another category of forestry concession is gradually emerging: the conservation forest concession.

This type of concession was established in DRC by Decree No. 011/27 of 20 May 2011, which set out the specific rules of attribution. This innovative text allows any person who meets the requirements to obtain the right to use the forest by valorizing its environmental services (such as REDD+ projects), excluding any extractive exploitation of its resources and without prejudice to the exercise of forest use rights by local populations and the initial or desired ecological balance of the forest.

This category of forest concession provides a complementary tool to protected areas, which can be used to develop a “soft” approach to protect and value biodiversity. It would be interesting if it were explicitly enshrined in the laws of other countries so that certain forest concessions, initially allocated for industrial exploitation, could be converted into conservation concessions with, at the core, a REDD+ style project.



When imposed and enforced, penalties for offenses against wild fauna and flora, including their natural habitat (detention, monetary fines, etc.) are not always a sufficient deterrent for offenders or their sponsors. Some countries, such as Gabon, have tackled this problem head-on, with the support of non-governmental organizations such as Conservation Justice (2021). The low level of justiciability (RADE, 2020) is attributable to the lack of monitoring and control bodies and, above all, of judicial bodies with jurisdiction over wildlife crime and related issues. One solution would be to rely on “legal indicators” of the effectiveness of national and regional wildlife management legislation.

As some texts are difficult to apply, the contribution of scientific data and information to the development of legal texts in the biodiversity sector should be strengthened. This is a major challenge for the next few years, for genuine applicability and especially for the importance of environmental jurisdiction. The aim is to strengthen the development of environmental law and its effectiveness at both national and regional levels (RADE, 2020).

Only five member countries of the Central African Forest Commission (COMIFAC) have ratified the revised Maputo Convention on the Conservation of Nature and Natural Resources, which entered into force on 23 July 2016. This Convention provides,

alongside obligations to protect natural habitats, their fauna and flora, actions relating to the preservation and restoration of these natural habitats. Protected areas are thus particularly concerned.

The subregional agreement on forest control in Central Africa, signed in 2008, is not limited to logging; it commits member States to strengthening subregional cooperation for the protection of wildlife, including the fight against poaching. Above all, it is an incentive for the signatory States to share strategies and operational means to fight poaching in the context of transboundary protected areas. However, the implementation of this important agreement is still in its infancy. Subregional capacity-building workshops for wildlife law enforcement officers (with representatives from the judiciary, forestry, customs and police) should improve the situation.

Furthermore, the revised Treaty establishing the Economic Community of Central African States (CEEAC), which came into force in 2020, commits States to greater cooperation in the areas of the environment, natural resources and biodiversity than was the case under the 1983 Treaty. However, even though organized wildlife crime is increasing in the subregion, there is still no regional unification of legislation on wildlife and protected areas, as the priorities of CEEAC member States end with the harmonization of national policies.

Various COMIFAC directives, notably those on environmental and social impact studies in forest areas, and on the participation of local and indigenous populations and NGOs in the sustainable management of Central African forests, also apply to protected areas. Although not legally binding, they are a source of obligations for States and individuals alike and should be reflected in national legislation.

Despite some institutional reforms, protected areas and conservation forests are not spared from overlapping uses of natural ecosystems (see, for example, Chapter 7). This indicates that coordination between the various government services involved can remain tricky. Despite this, protected areas are gradually becoming the subject of a coordinated approach among government departments and local authorities, rather than being seen as a sectoral issue. The implementation of the principles of integrated land-use planning should, in this respect, help to promote new synergies between administrations.

#### 4. The management of protected areas under question

The data presented in section 1 show that most Central African countries have or will be able to achieve Aichi Target 11 (17% of territories classified as protected areas) – at least on land – or even the

30% target under negotiation. It is all a question of knowing which “conservation areas” are being taken into account. The diversity of legal statutes in effect allows a diversity of governance and management systems. This makes it possible to adapt management objectives to each specific situation, from strict conservation areas to areas where natural resources may be used in a sustainable manner, allowing the maintenance of green (vegetation) and blue (water) frameworks over vast territories.

Since the 1990s, the protected area networks of the countries in the subregion have expanded and now better cover the entire spectrum of biodiversity. Although the forest (in some regions) and large fauna (in general) are under significant pressure, the ecological frameworks (forests and savannas, aquatic ecosystems, etc.) often remain, allowing biodiversity to be dispersed (see section 2).

In fact, the question that arises is not so much the size of the protected area network as the effectiveness of its management. Although a comprehensive assessment of this issue is warranted, it is beyond the scope of this document. However, a few observations can be made in order to set out certain elements of the debate.

Protected area management “is about what is done to achieve given objectives” (Borrini-Feyerabend, 2014). Despite the considerable progress that has been made, and the use of various tools to measure



management effectiveness (see Chapter 4), Central African countries are facing significant challenges in this domain. With the exception of Rwanda and, to a lesser extent, Gabon, very little government funding is allocated to protected areas. International development assistance partially compensates for these financial deficiencies (Doumenge *et al.*, 2015a; Liboum *et al.*, 2019). However, a paradigm shift is needed to place protected areas – and biodiversity – in a more central place in development policies, and to strengthen the financial and human resources required for effective protected area management.

Effective protected area management depends on many factors, including legal status, clear management and conservation objectives, the type of governance (see Chapter 2), human resources, budgets, current legislation (including in other sectors), the ecological and socio-economic context (presence of nearby communities, industrial projects, etc.), and so on. All of these elements must be taken into account in protected area management plans, which are strategic tools essential for the management of the sites. These plans must extend over several years and be reviewed at the end of this period for possible improvements. They must then be translated into annual management plans, business plans and other operational documents.

The 2015 edition of the State of Protected Areas in Central Africa carried out an initial country-by-country review of the status of protected area management plans in the subregion (Doumenge *et al.*, 2015a). Since 2016, the IMET (Integrated Management Effectiveness Tool) assessments conducted, while covering only a sample of protected areas, nevertheless have noted a failure to produce new or updated management plans. On the contrary, there are an increasing number of development plans that have not been updated. This could be one reason for the decline in management effectiveness in many protected areas.

Moreover, the production of management plans appears to be motivated by a government administrative need and is not fully embraced by managers. Many development plans are not based on useful or up-to-date information. Their quality is insufficient to effectively guide management actions, and they do not make it possible to achieve the objectives set, which

are themselves often imprecise. Without questioning the usefulness of this planning tool, it is becoming increasingly important to question the quality of the documents produced.

IMET assessments conducted by the Central African Forest Observatory (OFAC) in partnership with national administrations indicate that although some protected areas have a management plan, few are actually used to meet management needs. There are several reasons for this: 1) the lack of clarity in the definition of the management vision and objectives, 2) the paucity of basic information on values and threats, making it impossible to establish a reference level for the state of conservation, 3) the absence of a framework for monitoring and self-evaluation of the results of the implementation of the said plan, based on results indicators. Some of these issues are addressed in Chapter 4, in particular the need for regularly updated information for more effective protected area management.

While management effectiveness requires clear and verifiable objectives, human skills and available equipment and funding also are crucial for success. These conditions are significantly improved under Public-Private Partnerships (PPP), as is the resulting management performance (see Chapter 3).

Cameroon has not implemented a PPP, but has chosen to use an external consultancy firm (BRLi, *Bas-Rhône Languedoc Ingénierie*) to assist with change and to address structural deficits in the protected area sector. In this country, management by large territories has been instituted through Technical Operational Units (referred to by their French acronym, UTOs), including protected areas, ZICs, forestry concessions, etc. These UTOs were set up gradually starting in 2000 to facilitate coordination between all stakeholders and to operationalize a more integrated and participatory management of natural resources. Their evaluation showed that this means of managing large territories was relevant, but the structure and functioning of UTOs needed to be reconsidered to take better account of intersectoral complexity on the ground (see box).

This support process (2016 to 2019) allowed the Directorate of Wildlife and Protected Areas (DFAP) and, more broadly, the Ministry of Forests and Wildlife (MINFOF), to identify and define a new strategic approach for the wildlife and protected areas sector,

and to clarify its positioning in the national land-use policy. A strategy for renewing the protected areas network development plan was presented. It should enable DFAP to promote an ecosystem approach and the collaborative management of protected area complexes based on a sustainable land-use planning approach at the landscape level.

Ultimately, these UTOs should become decentralized regional hubs for the development of the rural economy through the sustainable use of natural resources around protected areas. Their overhaul provides for greater involvement of civil society (NGOs) and the private sector (concessionaires and leaseholders), including through the development of non-profit PPPs for protected areas. Territory

projects developed in these UTOs also will require greater synergy and dialogue between all stakeholders (government authorities, technical and financial partners, civil society, etc.) at the scale of the entire landscape. In the absence of national-scale land-use planning, this land-use planning by large area, which is more decentralized, can make it possible to strengthen the effectiveness of sustainable development and biodiversity conservation strategies.

Many indigenous peoples and local communities are impacted by the existence of protected areas, particularly through limitations on access to certain natural resources or, on the contrary, through the development of new activities or jobs (see section 6 of this chapter and Chapter 8). At present, many

### The broad objectives for the overhaul of UTOs in Cameroon

**M. Salifou, independent consultant & J. De Winter, DFS Deutsche Forstservice**

The revision of the protected area network management plan in Cameroon has made it possible to define several major orientations in the overhaul of the UTOs. Each should incorporate a new governance entity and a set of protocols for collaborating with other institutional actors in key sectors influencing wildlife and protected area management (forest management, agro-industry, etc.). This experimentation will initially take place in only ten UTOs (Figure 10). These new governance entities will coordinate various sectoral interventions and involve the private sector in the form of partnerships created with the decentralized administration.

In order to promote multi-sectoral integration, a *Groupement d'intérêt public* (GIP - a public interest grouping with a formal legal status) will be created for each UTO. This group will be mandated within the framework of a non-profit PPP and will be able to delegate part of the implementation of programs to third parties, including certain non-sovereign missions to the private sector and civil society (specialized NGOs). These public interest groups also will be empowered to establish specific regulations, which are essential for better coordination of the stakeholders.

To improve their financial autonomy, the UTOs will be able to seek or generate funding that complements public budget allocations and revenue generated by their development. This could be done through trust funds or payments for environmental services. Any donation should be placed in a single protected area/UTO or even for a specific theme. Finally, the revision of the management strategy provides for facilitating the establishment of PPPs by promoting a non-profit approach to their involvement in the management of the protected areas concerned.

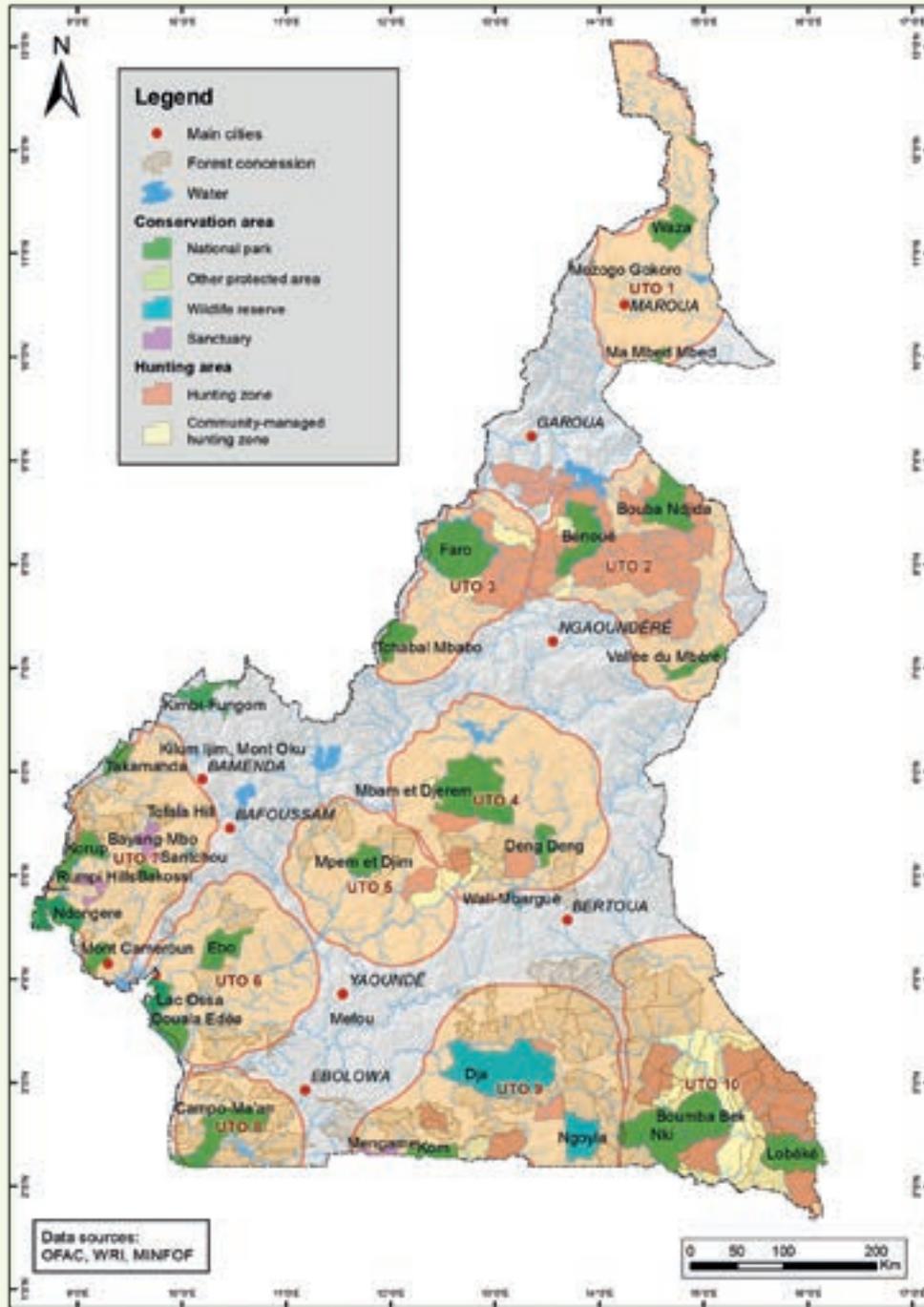
The framework plan for the overhaul of UTOs, drawn up for the period 2020-2035, is based on these major guidelines and includes, at the level of each renovated UTO, the following lines:

- establishment of a governance entity,
- intersectoral coordination,
- sustainable financing and equitable benefit sharing,

**Broad objectives for the overhaul of UTOs in Cameroon**

- creation of zoning, amenities and infrastructure,
- development of biodiversity protection and monitoring of the status of biodiversity and impacts,
- development of tourism,
- follow-up, communication and increased visibility.

Figure 10 - Overview of the network of ten Cameroonian UTOs after their overhaul



Sources: WRI (2013) & MINFOF (2014)

protected area management initiatives aim to consider the well-being and rights of these populations more thoroughly in order for conservation actions to be better accepted and effective. A shift from conflictual relations to real collaboration requires an understanding of the needs of each stakeholder as well as the development of a culture of transparency, which guarantees a minimum of mutual trust and joint decisions accepted by all actors.

It is in this context that mechanisms such as Free, Informed and Prior Consent (FPIC) must be put in place (see box). This type of mechanism would be interesting to develop more systematically in Central African protected areas to strengthen the capacities of all governance actors (including rural communities) and to promote “good governance” as well as more effective management.

## 5. Funding

To be effective, protected areas need long-term financial support. Increasing this financial support, for the protected areas and for the development of their peripheries, is obviously a central question because it remains today insufficient. Public funding is far below what is needed and the shortfall is partly met by international public funding (Calas, 2020; see also Chapter 9), as well as by many private donors.

The emergence of PPPs also is an important element (see Chapter 3).

According to the platform dedicated to identifying initiatives in the forest/environment sector developed by OFAC that has been operational since 2016, the total amount of funding committed to the biodiversity sector for the period 2015–2029 is approximately US\$3.1 billion. It is important to note that the figures used in these accounts are taken from project documents, contracts or audits, and they do not necessarily reflect the amounts actually spent on the implementation of these initiatives; in addition, there are various funds that could not be accounted for.

Among the different international, bilateral and multilateral donors that are financing themes related to biodiversity conservation, the European Union (EU) is by far the largest (Figure 12). It contributes 68% of the total funding recorded for the subregion.

DRC’s protected areas have been receiving financial support in recent years, reflecting changes needed to preserve biodiversity more effectively. These changes are seen in the alignment of ICCN’s recently adopted community conservation strategy with that of some official development assistance donors, and in the determination to ensure long-term support for the costly management of conservation. Several trust funds have been created (including the one for Virunga National Park, an emblematic protected area in DRC).



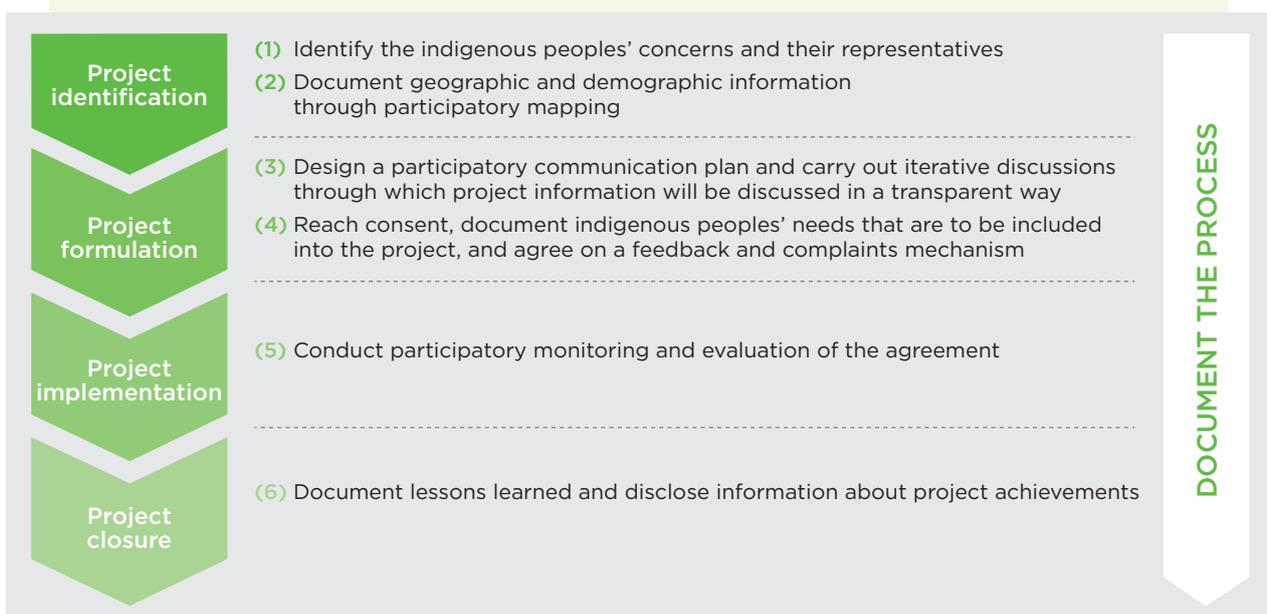
## FPIC for indigenous peoples and local communities

W. E. Waitkuwait, M. Nkolo, J. Metsio Sienne, N. Takougang and W. Njing Shei, GIZ-Cameroon

FPIC is enshrined in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP, Article 10) and the CBD. This approach requires that all stakeholders, and in particular indigenous peoples and local communities, be given the opportunity to express their opinion on any development project that is expected to have impacts on their way of life and well-being. This notably involves communicating relevant information to these populations. This approach is a factor of good governance, allowing, in particular, to better integrate the needs and rights of these peoples in all conservation and development projects. COMIFAC has included the FPIC approach in its guidelines for the participation of local people in forest management (COMIFAC, 2015). At the national level, this approach is also described in detail in a number of tools, such as the Guide for Consultation of Indigenous Peoples for FPIC and Participation, in Congo, and the Procedure Manual for Obtaining Free, Prior and Informed Consent in the Framework of REDD+ Initiatives in Cameroon.

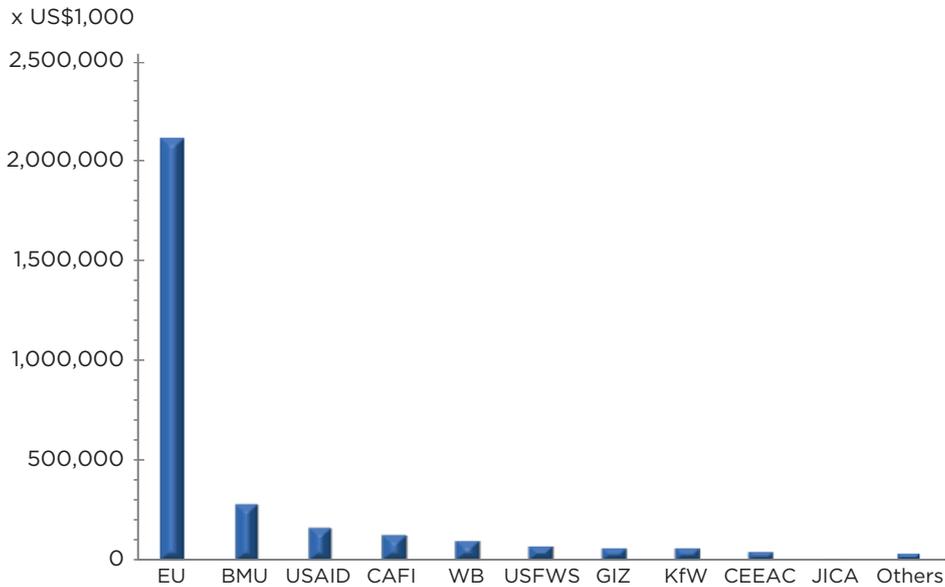
To facilitate the implementation of the COMIFAC guidelines, German cooperation is supporting the development of a FPIC toolkit, which will serve as a subregional reference. This toolkit takes into account the guidance provided by international guides that describe several stages of FPIC (Figure 11). It also aims to build on existing knowledge by including activities such as the relocation of villages within Sena Oura National Park and the process of revising the management plan for Lobeke National Park in Cameroon. The application of FPIC is not limited to the establishment of protected areas. It also is important for those involved in governance, in the development or review of management plans, to identify those aspects of management where FPIC will be required.

Figure 11 – Diagram of the six key steps to be considered when following the FPIC approach



Source: FAO (2017)

Figure 12 – Donor funding for conservation in Central Africa for the period 2015 to 2029



BMU: Federal Ministry of the Environment (Germany); CAFI: Central African Forest Initiative; CEEAC: Economic Community of Central African States; EU: European Union; GIZ: German Agency for International Cooperation; JICA: Japan International Cooperation Agency; KfW: German Credit Institution for Reconstruction; USAID: United States Agency for International Development; USFWS: United States Fish and Wildlife Service; WB: World Bank. Source: OFAC.

The Okapi Fund, a founding member of CAFE (Consortium of African Funds for the Environment), was established back in 2013 but did not actually become operational until 2019. By the end of the same year, the first two endowments of the fund were released, from KfW (*Kreditanstalt für Wiederaufbau*) and the Global Environment Facility (GEF), via the World Bank, amounting to €14 million and US\$7.4 million, respectively. The Okapi Fund plans

its first interventions in 2022. These will benefit Kahuzi-Biega and Garamba National Parks, two World Heritage sites placed by UNESCO on the list of endangered sites.

International institutions such as UNESCO encourage States and their specialized agencies, as well as public and private donors, to contribute to trust funds, rather than financing projects with a limited implementation period and whose successive





cycles do not guarantee the necessary continuity of support. These conservation trust funds are widely deployed on the African continent. They are used as fundraising and management tools under REDD+ strategies and to directly support certain protected areas (Spergel & Wells, 2010; CFA, 2014). This is the case of the Sangha Trination Foundation and the Okapi Fund for Nature Conservation. The CAFE is seeing its membership increase year after year.

These international financial instruments help to increase and secure long-term financing, but they are not free of flaws. As they are aligned with carbon and/or financial markets, they depend on complex processes that can generate uncertainty (Lapeyre, 2017). They also tend to shift the centers of decision-making outside countries (to stock markets or carbon markets), to decrease the importance of national administrations and to increase that of certain intermediaries (such as international NGOs) in negotiations and decision-making (Méral *et al.*, 2009).

Other innovations such as PPP contracts and Participatory Management Contracts (PMCs) are also becoming more widespread. In the long term, the task is to set up actions corresponding to national policies and priorities, with the support of professional partners capable of providing needed technical and financial support. To our knowledge, half a dozen PPPs and PMCs have been concluded with ICCN since 2005 in DRC.

In conclusion, it should be emphasized that any conservation financing strategy must involve a range of mechanisms that complement each other. These different funding instruments need to be mobilized at various scales, from local (a site) to national, or even subregional (Gobin & Landreau, 2017).

## **6. Local and indigenous communities and protected areas in Central Africa: reducing conflicts, enhancing opportunities**

The reconciliation of environmental and socio-economic issues within the framework of national and local development plans is a major challenge for the creation and management of protected areas. The current approach is based on a new paradigm: “Conservation as a lever for development, security and resilience”. This means no longer considering protected areas only within the strict limits of their perimeters, but rather considering the entire matrix of the landscapes that surround them and all of the social, economic and environmental issues that are at stake.

One of the factors hindering the achievement of the objectives assigned to protected areas is in effect the state of conflict that has long prevailed and still prevails between managers and local and indigenous communities. Local and indigenous communities

refer to all populations organized on the basis of customs and traditions, united by ties of solidarity and kinship that underpin their cohesion and ensure their reproduction in space and time, and who live or reside around, within or near protected areas, exercising customary use rights (COMIFAC, 2015).

The daily lives of these communities and their way of life remain very much linked to the use of natural resources, which provide them with what they need for food, health, aesthetics, construction and handicrafts, energy, agricultural and livestock activities, and spiritual and leisure activities (Gami, 1999 & 2010; Stolton *et al.*, 2015). These resources also have a financial value. Their trade on local, national and even international markets contributes significantly to generating income for all of the actors involved in the various commodity chains, including those who harvest them but also those who process, transport, export and sell them (FAO, 2016).

Access to and use of natural resources and places of identity therefore involve issues of survival, authority, power and enrichment for managers, communities, private sector representatives and NGOs. Protected areas are struggling to establish themselves as drivers of economic development in the areas where they are located, and many of them have become “pantries surrounded by hunger” (Sournia, 1990). This situation is due to several mechanisms, such as: a glaring lack of planning for national development and the sharing of national wealth; impoverished rural populations, partly displaced from the protected territory and who express their determination to exploit it; productive systems – in particular agricultural systems – that are not very productive combined with population growth; and external economic operators, individual or organized as a company, who come to carry out activities in and around the protected areas.

### 6.1 The origin of conflicts

Different kinds of situations crystallize conflicts around protected areas. They can be linked to the very creation of the protected areas, which often is accompanied by the forced displacement of communities, as well as the plundering of their natural resources. In particular, protected areas are the site of tensions around access to wildlife, from which the communities are excluded (Clarke *et al.*, 2019).

However, activities such as agriculture, hunting and infrastructure construction projects continue to encroach on protected areas, with consequences on their integrity. This encroachment is a consequence of the communities’ poverty, as well as of their resistance to the creation of protected areas (Lewis, 1996).

Another type of conflict is becoming increasingly important on the outskirts of some protected areas, namely that between humans and wildlife that approach villages and devastate crops (UICN, 2015a). This issue is discussed in detail in Chapter 5.

The territories around protected areas also are affected by conflicts related to access to land. The inadequate management of land issues is mainly due to a lack of knowledge on the part of land-use planners of the complexity of local dynamics of natural resource exploitation (Binot & Joiris, 2007).

These conflicts are exacerbated by other factors, such as the prevailing insecurity in the subregion and in neighboring countries, and the abusive behavior of some eco-guards toward local and indigenous communities. Cases of physical abuse, torture, confiscation of fresh meat, extrajudicial executions and destruction of property have been reported by human rights organizations.

### 6.2 From conflict to collaboration

The recognition that the exclusion of local and indigenous communities from protected areas was ineffective has led States to seek a management approach that would allow for effective biodiversity conservation and the economic development of stakeholders (Moukouya *et al.*, 2015). This approach was at the heart of the ECOFAC program as well as, more recently, that of the PPPs signed between States and various partners (see Chapter 3).

Before establishing a protected area, an obvious first step would be to gather information about the people who live there and how they live, and to receive their consent (see box section 4), to ensure that conservation restrictions do not threaten their traditional livelihood activities. However, as a study of 34 protected areas has shown (Pyhälä *et al.*, 2016), this is almost never done in most Central African countries, or if it is, it is carried out incompletely.



Yet the conservation paradigm has evolved over time, notably with the adoption of the CBD in 1992, in which biodiversity conservation and sustainable use are asserted as inseparable (Adam, 2012). Local and indigenous communities must be, along with other actors, including the State and conservation NGOs, at the heart of their management. Their involvement is motivated by the fact that over many generations they have developed a body of knowledge that has enabled them to live and nourish themselves from the forest and its biodiversity while preserving its productive capacities (FAO, 2016).

Even if this is not yet sufficiently realized on the ground, functional changes have been made in the definition of the management objectives of protected areas, with a view to contributing to the strengthening of the link between conservation and natural resource use. The establishment of the IUCN protected area categories, for example (see Figure 1), refers to different conceptions of the place of humans in environmental protection policies (Héritier & Laslaz, 2008).

The operationalization of the community participatory approach in the creation and management of protected areas translates into interventions at two levels: the revision of regulatory frameworks and the development of initiatives that operationalize participatory approaches. However, each country's legislation

and management objectives provide different opportunities for the participation of local communities. In Cameroon, for example, memoranda of understanding between local communities and MINFOF make it possible to specify the forms of collaboration and define the rights and duties of each party (see box).

Fighting lawbreaking and poaching are other important concerns of protected area managers. More participatory management could enable official managers to be more effective while also allowing local and indigenous communities to partially reclaim management of their hunting territories.

Despite these advantages, participatory monitoring remains very underdeveloped, or even non-existent (Gabon, Burundi and Equatorial Guinea) and is limited to very specific sites in CAR (Dzanga-Sangha Protected Areas, referred to by the French acronym APDS) and Congo (Lake Tele). Within the framework of the CAWHFI (Central African World Heritage Forest Initiative) project, awareness-raising and the integration of communities in APDS monitoring committees have thus encouraged local populations to oppose the armed groups active in CAR and to prevent them from penetrating into the protected areas. Countries such as Cameroon and DRC also have set up village monitoring committees (known as COVAREF or *Comités de Valorisation des Ressources Fauniques*) and farmer-forest committees.

## Memoranda of understanding between local communities and conservation authorities in Cameroon

**P. Bigombe-Logo, CERAD**

In Cameroon, human rights-based conservation is growing. Under the facilitation of WWF-Cameroon, memoranda were signed between indigenous peoples and the conservation services of some protected areas. These documents define the commitments of each party in the management of the protected area, including the modalities for exercising the communities' use rights. The Campo-Ma'an National Park memorandum was signed in 2011, following several years of negotiation. Park managers and the Bagyeli indigenous people agreed on several points: 1) the necessary participation of local and indigenous communities in the sustainable management of the park's forests and the conservation of its biological diversity, 2) the promotion of and respect for FPIC principles in negotiations with the Bagyeli for the co-management of the park, and 3) the recognition and enjoyment of their use rights for their survival. It in effect has been accepted that resource harvesting can be sustainable and does not pose a serious threat to the maintenance of biodiversity.

An agreement also was signed in 2018 concerning the Ngoyla Wildlife Reserve. This agreement determines the access of the indigenous Baka people to certain resources of the reserve, notably NTFPs, partially protected animals and those used in cultural rites, and resources resulting from fishing activities (subject to authorization by MINFOF). Also described is the association of the Baka with certain management activities (ecological monitoring, ecotourism, surveillance, etc.), and their controlled presence within the restricted access zone of the reserve. In return, they pledge to denounce any practice contrary to the prescriptions of the reserve's management plan, to break off any collaboration with actors involved in illegal activities within the reserve and its surrounding areas (poaching, illegal mining and illegal logging) and to harvest NTFPs in a sustainable manner.

In the same vein, MINFOF signed a memorandum in 2019 with an association of indigenous Baka peoples from Moloundou, ASBABUK (*Association Sanguia Baka Buma'a Kpodé*), regarding the national parks of Lobeke, Nki and Boumba-Bek. Among the points that ASBABUK has committed to respect are its involvement in the implementation and monitoring of the execution of the activities included in the action plan, the management and sustainable use of natural resources, as well as the sensitization of the community to these practices, the designation of their representatives in strategic, technical and communication activities related to the development of the parks and the respect of the framework of their traditional activities in the parks concerned, etc. The conservation services have pledged to facilitate this community's access to resource areas in the parks concerned, to rely as much as possible on the labor and/or expertise of the Baka in the implementation of park development activities, to facilitate the setting up of frameworks for consultation and discussion between the public authorities, the communities, NGOs and other development partners, to follow up on the relevant complaints made by the Baka, etc.

The signing of these memoranda marks a definite evolution in the relationship between indigenous "Pygmy" peoples and protected areas in Cameroon. If they are effectively implemented, monitored and evaluated, with the genuine participation of all stakeholders, as provided for in their respective texts, they will contribute to laying the foundations for the progressive improvement of relations between indigenous peoples and protected areas in Central Africa.



In the Dja Faunal Reserve in Cameroon, local residents have organized themselves into vigilance committees, under the impetus of the NGO African Wildlife Foundation (AWF), to support the conservation of this protected area. These committees were established by decision of the administrative authority and received logistical support funded by the ECOFAC 6 program. The information provided by these committees led to the seizure of weapons, ammunition and poached meat in the reserve, as well as to the arrest of several poachers (Epanda *et al.*, 2019).

Such approaches are beneficial in that they allow, through the analysis of the information collected, a better knowledge of the presence of armed groups from other parts of the country or from neighboring countries. They also make it possible to concentrate patrols in the most sensitive crime areas and to be more efficient in the organization of these patrols. This ultimately allows better management of material and human resources.

These different initiatives have the advantage of involving and empowering communities against external aggression, particularly poaching and illegal exploitation of timber resources. They also allow these communities to benefit from additional financial income (in the form of salaries) and thus to be able to meet their families' daily needs.

Despite the promising results of these oversight committees, they still face difficulties. These are related to, among other things, death threats made by poachers who are arrested, cases of complicity

between some committee members and poachers, a lack of legal coverage and non-responsiveness of the government – which leads to discouragement – and a lack of adequate equipment (Epanda *et al.*, 2019).

It also should be noted that these participatory monitoring initiatives must grapple with a continuing lack of recognition in existing regulations. The question of responsibilities, as well as the support of the communities involved, remains problematic and is not always very clear.

To protect their wildlife resources, Central African countries nevertheless have adopted increasingly dissuasive laws and ratified several international conventions, including CITES (Ngeh *et al.*, 2018). These regulations vary from one country to another, but the objective is the same everywhere, namely to prevent and punish offenses. Violations are supposed to be brought to the attention of the competent authorities, in this case the judicial authorities, for processing and decision. Unfortunately, cases are not always brought before courts and tribunals and, when they are, are not always sanctioned by a judgment (in DRC, for example, out of the 35 cases registered between January 2016 and March 2018, only three judgments were rendered; Ngeh *et al.*, 2018).

To reverse this trend, one of the main strategies is to strengthen law enforcement, which involves closer monitoring of procedures, from investigations and operations, to convictions and enforcement, particularly at the local level (Henson *et al.*, 2017). The capacities of local and indigenous communities



that are partners in the fight against poaching are being strengthened through training workshops organized through several projects. The aim of the Project for the Application of Law for Fauna (PALF) is to improve the level of wildlife law enforcement in Central Africa, particularly in Cameroon, Congo, Gabon and CAR. It is being put in place for a period of four years (2018-2022) and one of the main expected outcomes is the establishment of clearer enforcement mechanisms and their effective implementation in the subregion (OFAC, 2019).

### 6.3 Toward greater control of development activities

While conflicts still exist between local and indigenous communities and protected area managers, the involvement of these communities in management is now considered good practice (Vermeulen & Triplet, 2009). It is based on the economic assumption that if communities are involved in conservation activities and find in them economic benefits, they will be motivated to conserve biodiversity and conflicts with protected areas will decrease.

In the development projects implemented in Central African protected areas, income-generating activities focus on the promotion of alternatives in natural resource management (NTFPs, agroforestry), beekeeping, domestic animal husbandry, sharing of benefits from conservation and tourism (see Chapter 8). Among the initiatives implemented, some focus on developing NTFPs, which local and indigenous communities use both for their own needs and as sources of income and employment. NTFPs include plants for food, medicine and crafts (fruits, nuts, mushrooms, fibers, bark, etc.), as well as animals and their by-products (game, honey, etc.).

As the management and exploitation of NTFPs remains artisanal and part of the informal sector, these products still do not contribute sufficiently to the sustainable development process. Projects are set up to support communities, in order to assist them in structuring development sectors.

A project on the outskirts of the Dja Faunal Reserve has supported the structuring of the 15 most commercialized NTFP value chains in Cameroon. This has improved their commercial value, so that the

beneficiary populations, and in particular women, can earn the income necessary for their development. As a result of this work, the prices per kilogram of the NTFPs concerned have increased considerably, as the processing of raw products has led to an increase in the value added. With regard to protected areas, this initiative also has enabled the development of reforestation capacities of local and indigenous communities through the establishment of local tree nurseries. The signing of reciprocal environmental agreements (REAs) between the groups involved in the project also committed them to stop supporting poaching activities.

The 2016-2020 phase of the CAWHFI project also enabled the implementation of several actions in the different parks involved:

- *Nouabale Ndoki National Park (Congo)*: members of local and indigenous communities have been recruited to participate in park management (contractual and seasonal). The communities from which they come also have received training to monitor the management of social infrastructure built by the park management body in Makao and Bomassa (dispensaries, schools and water supply), and to carry out beekeeping and farming activities in order to diversify their sources of income (Unesco, 2019);
- *Lobeke National Park (Cameroon)*: a plan to secure the use rights of the community living on the outskirts of the park was adopted, along with a set of actions to be carried out over a four-year period, with the support of various organizations. The signing of a memorandum of understanding between the communities and MINFOF focused on the respect of their rights, including access to forest resources and the practice of their customs and practices (Unesco, 2019);
- *APDS (CAR)*: ecotourism and monitoring activities have strengthened the capacities of local and indigenous communities in mastering the concept of ecotourism, in the efficient administration of the management committees of community-managed hunting areas (ZIC-GC), as well as in communicating ecological and cultural values to tourists. Other initiatives also have been launched for some time by WWF to empower rural people and strengthen local development (see box).

## The APDS complex and indigenous and local communities

F. Mavinga, WWF-CAR and J. Barske, WWF-Germany

The APDS complex was created in 1990 to promote local development of impoverished populations while ensuring wildlife conservation. Managers have paid particular attention to the well-being of local communities and have developed a number of actions to benefit them.

These actions can be grouped under five headings:

- **strengthening indigenous culture:** the international organization OrigiNations has supported the creation of a group of indigenous youth who are contributing to the intergenerational protection and promotion of their cultural and natural heritage, as well as to the active defense of their rights;

- **informing about the rights and duties of citizens:** a Human Rights Center was created by the local organization *Maison de l'enfant et de la femme Pygmées* and by the Indigenous Peoples of Africa Coordinating Committee (IPACC). The Center works with the local population (particularly the BaAka), providing various forms of support: legal assistance and support for conflict resolution, awareness-raising and training on human rights in general and on the rights of indigenous peoples in particular, assistance in obtaining birth certificates to enable them to access government services, the right to vote and stand for election, freedom of movement, etc. The Center also informs and trains local civil and administrative authorities, as well as law enforcement officers, eco-guards, etc. on indigenous rights;

- **improving the education system:** the park manager, in partnership with *Action pour le Développement Intégral des Humains* (ADIH) and the Society of African Missions (SMA), has supported the construction of two school hostels to enable BaAka children and youth in the villages to attend secondary school;

- **improving the health system:** again in partnership with ADIH and SMA, the strategy is to strengthen the existing rural health centers and to set up a mobile unit to: 1) facilitate access to health care and preventive health education for the most marginalized BaAka communities, 2) organize continuous surveillance of human-animal transmissible diseases through a field laboratory, an employee health program, animal carcass surveillance, and regular observations of primates habituated to close contact with humans. WWF is also involved in health care and education, as well as in the promotion of human rights and indigenous peoples, in collaboration with MINFOF and local partners;

- **promote communication and awareness:** a community radio station was set up in 2011 in Bayanga (*Radio Ndjoku*), in collaboration with *Radio France Internationale* (RFI) to contribute to the peaceful coexistence of communities (awareness-raising programs on human rights principles and environmental and social issues).

In addition to these actions, tourism has been the focus of a development strategy, allowing the local population to benefit from 40% of tourism revenues (see also Chapter 8).



All of these actions promote greater involvement of local and indigenous communities in the management of protected areas and the creation of a dynamic that contributes to conservation activities by reducing conflicts. They also strengthen their skills in specific areas of activity and promote stable and regular sources of income, improving their quality of life and reducing pressures on protected areas.

## Conclusion

Protected area networks in Central Africa have been greatly expanded since the beginning of the 20th century, both on land and at sea. This increase is in line with national and regional nature conservation policies, but also a more global dynamic, reflected at the international level through the Aichi Targets and, more recently, the 30x30 objective (30% of protected areas by 2030) that will be negotiated at the next CBD Conference of the Parties.

If protected areas classified by States under national laws and recognized by the WDPA alone are considered, only a few countries have achieved the Aichi Target. However, if we add the protected areas with an international status (World Heritage, Ramsar, biosphere reserves), most countries have reached this objective and several are approaching the 30x30 objective.

Moreover, when other national protected areas, ones not recognized by the world database of protected areas (such as certain zones of hunting interest and forest reserves), are taken into account, Central Africa can legitimately claim to be well on the way to rapidly

achieving this 30x30 objective. However, in order to agree on the territories taken into account for the validation of these objectives, international efforts must be made to develop a common frame of reference to recognize and categorize all those spaces that can be considered to be protected areas.

The maintenance of functional biodiversity on a global scale cannot ignore the role that certain areas dedicated to the sustainable use of wildlife and forest resources can play in maintaining a functional green and blue frameworks. The role of some ZICs and managed and certified forest concessions may indeed be important in strengthening the connectivity of protected area networks.

The inclusion of these types of land use could open a new discussion in which Central Africa can offer its experience. This also means not only discussing a purely accounting objective of 30% of the territories under more or less strong protection, but also emphasizing the reality of management on the ground and the effectiveness of management of all of these territories, whether they are conventional protected areas or other priority land uses. It is on this point of management effectiveness that the main discussions of the CBD should focus.

On the other hand, it would seem misguided to consider the effectiveness of protected area networks outside their context. The issues of network connectivity and the separation or overlapping of land uses must be considered within the framework of multi-sectoral land use planning. In Central Africa, few countries have set up a land-use planning policy worthy of the name; this is one of the major projects ahead.

The richness of the subregion does not only lie in its biodiversity, nor in its landscapes. It is also rich in human diversity which it is essential to take into account. In the history of protected areas, these peoples often have been excluded from decision-making, even though their survival is often dependent on the use of natural resources. This has been the source of numerous conflicts between managers and local communities, and may have exacerbated the latter's precarious situations. Today, a new paradigm is emerging, calling for the integration of these populations into the management of protected areas. Several examples have been presented in this chapter and others are discussed in the following chapters.

This more inclusive approach will make it possible to highlight local knowledge, but also to leverage the know-how of national and international partners through the PPPs being developed in the subregion. It also will make it possible to rely on new paradigms (eco-development, eco-security, green economy),

making it possible to mitigate the pressures on biodiversity while promoting more sustainable development.

Conservation policies must therefore be aligned with development needs in a region that is aiming for economic growth of between 6 and 8% by 2035, and this within an unprecedented health context that makes the future of protected area management uncertain. Listening to and taking into account the needs of rural communities, helping them to develop their skills, participating in the financing of sustainable agricultural sectors, mobilizing nature-based solutions such as agroforestry, etc., are all avenues that governments and their partners can explore and which will have beneficial repercussions on environmental protection. Beyond the achievement of the Aichi Targets or the 30x30 objective, the Central African protected area network only can have a real positive impact on the environment if its managers make it part of territorial connectivity and succeed in putting humans back at the heart of their environment.



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## Annex 1 – National protected area networks in Central Africa

Country	Terrestrial protected areas			Marine protected areas		
	Number	Area (km <sup>2</sup> )	Proportion of land (%)	Number	Area (km <sup>2</sup> )	Proportion of EEZ (%)
<b>Burundi</b>						
National protected areas	15	1,519	5.5			
International protected areas	4	785	2.8			
<b>Cameroon</b>						
National protected areas	31	40,519	8.5	+	+	+
International protected areas	12	34,154	7.2			
<b>Congo</b>						
National protected areas	15	38,893	11.4	+	+	+
International protected areas	17	140,599	41.1			
<b>Gabon</b>						
National protected areas	20	41,133	15.3	20	52,759	26.0
International protected areas	11	35,288	13.2			
<b>Equatorial Guinea</b>						
National protected areas	13	5,860	20.9	+	+	+
International protected areas	3	1,360	4.9			
<b>CAR</b>						
National protected areas	17	123,143	17.8			
International protected areas	6	38,820	6.2			
<b>DRC</b>						
National protected areas	55	335,851	14.3	1	216	13.4
International protected areas	12	190,619	8.1			
<b>Rwanda</b>						
National protected areas	4	2,337	8.9			
International protected areas	2	167	0.6			
<b>Sao Tome and Principe</b>						
National protected areas	2	347	34.7	+	+	+
International protected areas	2	61	6.1			
<b>Chad</b>						
National protected areas	13	156,206	12.2			
International protected areas	8	155,124	12.1			

Note 1: National protected areas: protected areas classified by States according to national laws and recognized by the WDPA; International protected areas: protected areas listed under the World Heritage and Ramsar conventions or part of the biosphere reserve network. These two categories partly overlap as some of the international protected areas also have national status. These overlaps have not been specified here.

Note 2: There are some mixed protected areas (terrestrial and marine) but these are counted in the terrestrial category because of the small extension of the protected coastal areas.

+ : small areas of protected coastal zones.

Source: OFAC