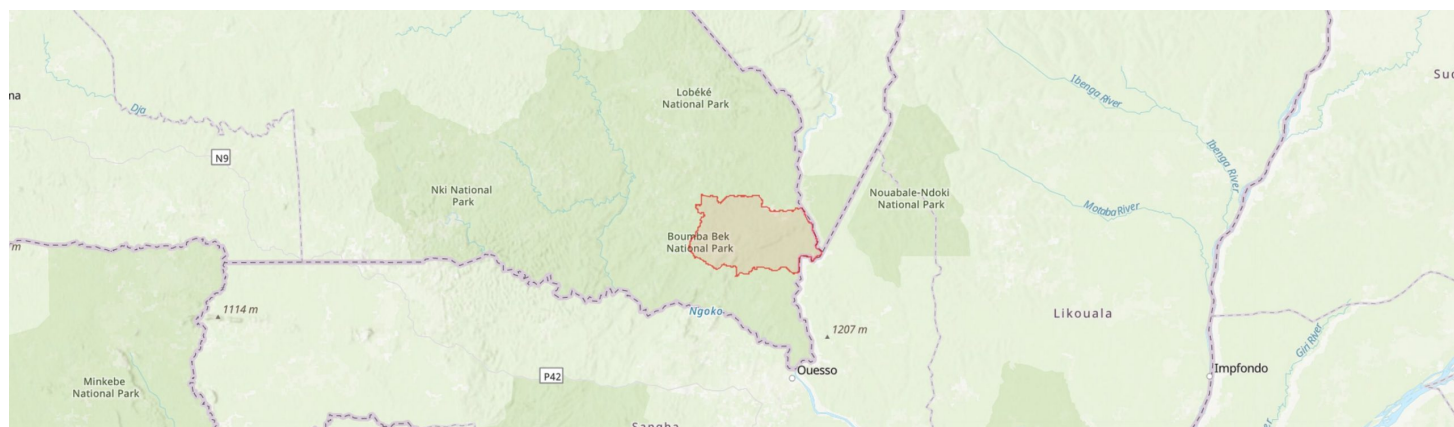


Lobéké National Park

CMNTIPA049



Country: **Cameroon**

Administrative region: **East (Region)**

Central co-ordinates: **2.29740 N, 15.85970 E**

Area: **2164km²**

Qualifying IPA criteria

A(i)

IPA assessment rationale

Lobéké National Park qualifies under IPA criterion A(i) due to important populations of globally threatened species such as *Okoubaka aubrevillei* (EN), *Beilschmiedia congolana* (EN) and *Afraegle asso* (EN). However, it may have greater significance for its habitat types under criterion C, or useful species under criterion B(iii), when these aspects are more fully assessed. Although some evidence exists (Yuh et al., 2019, 2020) of the superior habitat within the National Park compared to the surrounding area, potentially further justifying the area as an IPA, it is as part of a much larger, intact landscape that it has most value.

Site description

Cameroon's Lobéké National Park is one of several protected areas in an extensively forested part of Central Africa where the borders of Cameroon, Central African Republic and Republic of Congo meet. This largely intact forest zone is of major importance for remaining megafaunal populations. The predominantly semi-deciduous (or semi-evergreen) forest habitat has been more sparsely surveyed but is probably less rich in plant species or endemics than the littoral or submontane forests of other parts of Cameroon. However, it is unrivalled in Cameroon in extent and lack of disturbance. Lobéké National Park is one part that has been more thoroughly surveyed,

although the report of Harris (1999), relied upon here, does not cover quite the same area as the National Park now designated. Because there is limited data for this region, the site is perhaps best seen as an example of a much larger habitat rather than as a site that is of greater botanical significance than the surrounding forest and other nearby protected areas such as Bounba Bek.

Botanical significance

Over 760 species of vascular plant have been recorded, of which over 350 are trees (Harris, 1999). Several of these are globally threatened or have a restricted range. *Okoubaka aubrevillei* (EN) is a widespread but very rare and highly threatened semi-parasitic tree with great cultural significance. It is threatened by unsustainable harvesting of its bark for traditional medicine although there is no scientific evidence of its value. Lobéké may represent one of the best sites in Cameroon and globally for its survival (Harris, 1999; Borokini et al., 2015). *Beilschmiedia congolana* (EN) is another species with a large range but very few (five) collections, and only known in Cameroon from Lobéké. *Afraegle asso* (EN) and *Balsamocitrus camerunensis* (DD but VU in Onana & Cheek, 2011) are other notable species for which Lobéké is an important site. Several species reach the northern or western limit of their distribution in southern Cameroon and, although most are not globally rare or threatened, they are little known in Cameroon outside Lobéké. These include *Irvingia smithii* (LC), *Isolona pilosa* (VU), *Bulbophyllum fayi* (VU), *Xylopia gilbertii* (VU), *Xylopia flamignii*, *Xylopia letestui*, *Colletoecema dewevrei*, *Strombosia nigropunctata*, *Millettia comosa*, *Macaranga saccifera* and *Buchnerodendron speciosum* (Harris, 1999). Similarly, species such as *Deinbollia laurentii* (NT) and *Manilkara pellegriniana* are not globally threatened but rare in Cameroon because confined to seasonally flooded habitats (Harris, 1999). Should threats to this relatively undisturbed area continue to increase then some of these species could become globally or nationally threatened.

A large number of threatened timber species are recorded from the site. *Pericopsis elata* (EN) is a valuable timber tree, driven to virtual extinction in West Africa. It is apparently reproducing successfully at Lobéké but is little recorded elsewhere in Cameroon (Harris, 1999). The site is likely to be one of the best national sites for other timber species, such as *Antrocaryon micraster* (VU) and *Anopyxis klaineana* (VU). Lobéké and surrounding forests may also represent some of the best sites in Cameroon or tropical Africa, for large, mature trees of species that are widely logged for timber, such as *Triplochiton scleroxylon* and *Entandrophragma cylindricum*, and which may be of particular importance for biodiversity, forest health and indigenous societies (Harris et al., 2021; Harris & Wortley, 2008).

As well as the predominant semi-deciduous forest on terra firma, Lobéké contains nationally important patches of *Gilbertiodendron dewevrei* mono-dominant forest and various types of inundated, riverine and swamp forest, particularly the "Bais" - saline, sedge-dominated forest clearings frequented by megafauna (Harris, 1999).

Habitat and geology

Lobeke has a four-season tropical monsoon climate (Koppen classification: Am). The main dry season is between December and February, followed by a wet season between March and early June, a short dry season in late June and July, and a second wet season from August to November. Peak precipitation is in October with 226 mm. An average of 1595 mm of rain is recorded per annum and the average temperature is 25.6 °C. Humidity varies little across the year around an average of 81%. Average high temperatures peak at 32 °C in March and April at the beginning of the first wet season and drop to 29 °C in July and August before the second rainy season. Average lows are consistent at 20-21 °C across all months (Weatherbase, 2022).

The site lies over the northern edge of the Congo craton, with metasedimentary pelites and quartzites prominent as well as sandstones and an igneous doloritic band in the southeastern part (BFGM, 2016). Soils are predominantly haplic ferralsols, with some gleyed soils and haplic acrisols (Yerima & Van Ranst, 2005). Harris (1999) reports a bright red, clayey, slippery soil, referred to as "Boma" by local Baka people who consider it fertile for bananas. It naturally supports forest rich in *Triplochiton scleroxylon* and *Terminalia superba* but other soil types on terra firma have a higher tree diversity.

The canopy in terra firma areas is typically around 40 m. It is usually rather open with a variable understory, sometimes of dense *Marantaceae*–*Zingiberaceae* thicket or a low, closed subcanopy at 6–8 m dominated by *Ebenaceae* and *Annonaceae* trees (Birdlife International, 2022). The forest has similarities with Dja National Park but is closest to that in neighbouring Dzangha-Sangha National Park in CAR (Harris, 1999; Harris, 2002). Based on evidence from *Annonaceae*, Lobéké may be more species-rich due to presence of Atlantic species at the limit of their range (Harris, 1999). It is predominantly semi-evergreen (or semi-deciduous) humid forest which Letouzey (1985) maps as three related types, "semi-caducifoliée à *Sterculiaceae* et *Ulmaceae*" (160), "forêts mixtes, semi-

caducifoliées et forêts toujours vertes du Dja, avec prédominance d'éléments de forêts semi-caducifoliées" (164), and "forêts mixtes, toujours vertes du Dja et forêts semi-caducifoliées avec prédominance d'éléments du Dja" (190). Harris (1999) was unable to detect consistent difference between these variations. More distinct are the patches of *Gilbertiodendron dewevrei* monodominant forest (Letouzey's type 189) which are uncommon in Cameroon. Also notable are the large, sedge-dominated forest clearings known locally as "Bais". These appear to occur mainly where the water table is high and the soil is rich in mineral salts, which attract animals that help deter woody vegetation (Harris, 1999; Birdlife International, 2022). Swamp forest (Letouzey's type 11), often dominated by *Raphia laurentii* and *Phoenix reclinata*, is also a major constituent, representing 10% according to Harris (1999) or 40% under the categorisation of Yuh et al. (2019). Seasonally inundated forest, Letouzey's type 195, occurs along the river Sangha, and is characterised by *Guibourtia demeusei*, *Uapaca heudelotii* and other specialist species, and apparently features a high density of vines (Gentry, 1991; Harris, 1999).

Conservation issues

Lobéké N.P. is part of the Sangha Trinational, a cross border conservation zone and, since 2012, a UNESCO World Heritage Site, encompassing three national parks across an area of 746,309 with an additional buffer zone of 1,787,950 ha (IUCN 2012). The complex is managed by WWF, GIZ and WCS Cameroon, and funded by COMIFAC. The Sangha Trinational and buffer zone are in turn part of a much larger Sangha Trinational Landscape (4,393,600 ha), which encompasses the entire corner of Cameroon east of the Yokadouma-Salapoumbé-Mouloundou P4 road. West of this road corridor lies a second enormous (141,000 km) trinational area, the Dja-Odzala-Minkébé (TRIDOM) Landscape, involving cooperation between the governments of Cameroon, Gabon and Republic of Congo (CBFP, 2006).

Harris (1999) indicated that impacts on the forest were low but could change rapidly, particularly through anticipated timber extraction and accompanying migration of workers. According to UNESCO (2021) the forest is still well preserved, with an annual rate of vegetation loss of 0.03%. Yuh et al. (2019) reported a 1.44% reduction in dense forest and a slight increase in swampy forest for the National Park in the period 2001-2014. They deduced that 95% of the area has never been logged, although it is unclear if they consider pre-2001 logging, since Harris (1999) reports some areas as having been logged 2 or 3 times. Timber extraction does take place (Harris, 1999) and the surrounding forest management units, although legally certified and showing low levels of forest change (Yuh et al., 2019), do not promote biodiversity preservation (UNESCO, 2021). The remaining unlogged, old growth areas with giant trees are vulnerable and a powerful lure. Various projects in the wider area are likely to increase pressure by attracting migrant workers and increasing access, including the Chollet dam project at Molondou, the Mballam iron ore mining project and associated railway line, a proposed road through the National Park along the

Sangha and a projected Ouesso-Bangui-Ndjamena road (PIDA, 2019; Mongabay, 2021). Mining exploration permits were issued for the southern buffer zone (MINFOF & WRI, 2021) but UNESCO (2021) report that these have not been renewed. Artisanal mining for diamonds and gold are a cause of concern within the park and also attract people to the area (UNESCO, 2021).

Yuh et al. (2019; 2020) reported some decline in Gorilla and Chimpanzee nest encounters but concluded that the site was extensively used by both species still. While Gorillas also made much use of the neighbouring FMUs, Chimpanzees were more restricted to forest within the National Park, apparently indicating the better-quality forest at the site. Poaching remains a major problem in the area with potentially huge but largely unknown impacts on the regeneration of plant species and structure of the forest should key animal dispersers such as forest elephants continue to slide towards extinction.

Treatment of Baka peoples in this region have raised concerns about the implementation of National Parks and efforts to preserve intact forests. Hunting and gathering rights were granted within a restricted part of the N.P. under a specific agreement with the Baka, as an exception to typical National Park laws (Usongo & Nkanje, 2004). However, concerns have been raised that Baka are marginalised and losing out to other stakeholders, including sport hunting operations (Nelson, 2003). Rights and participation of indigenous groups in the conservation and management of the site have been reaffirmed by UNESCO and should be seen as fundamental and complementary to preventing forest degradation by an influx of miners, loggers, hunters and farmers.

Site assessor(s)

Bruce Murphy, Royal Botanic Gardens, Kew

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IPA criterion A species

SPECIES	QUALIFYING SUB-CRITERION	≥ 1% OF GLOBAL POPULATION	≥ 5% OF NATIONAL POPULATION	1 OF 5 BEST SITES NATIONALLY	ENTIRE GLOBAL POPULATION	SOCIO-ECONOMICALLY IMPORTANT	ABUNDANCE AT SITE
<i>Okoubaka aubrevillei</i> Pellegr. & Normand	A(i)	—	—	✓	—	✓	
<i>Afraegle asso</i> Engl.	A(i)	✓	✓	✓	—	✓	
<i>Beilschmiedia congolana</i> Robyns & R.Wilczek	A(i)	✓	✓	✓	—	—	
<i>Pericopsis elata</i> (Harms) Meeuwen	A(i)	—	✓	✓	—	✓	
<i>Marantochloa mildbraedii</i> Koechlin	A(i)	—	✓	✓	—	—	
<i>Autranella congolensis</i> (De Wild.) A.Chev.	A(i)	—	✓	✓	—	—	
<i>Bulbophyllum fayi</i> J.J.Verm.	A(i)	✓	✓	✓	—	—	
<i>Isolona pilosa</i> Diels	A(i)	✓	✓	✓	—	—	
<i>Garcinia kola</i> Heckel	A(i)	—	—	—	—	✓	
<i>Nauclea diderrichii</i> (De Wild. & T.Durand) Merrill	A(i)	—	—	—	—	✓	
<i>Lophira alata</i> Banks ex Gaertn.f.	A(i)	—	—	—	—	✓	
<i>Xylopia gilbertii</i> Boutique	A(i)	✓	✓	✓	—	—	
<i>Nesogordonia papaverifera</i> (A.Chev.) Capuron ex N.Hallé	A(i)	—	—	✓	—	✓	
<i>Anopyxis klaineana</i> (Pierre) Engl.	A(i)	—	—	✓	—	✓	
<i>Ancistrocladus le-testui</i> Pellegr.	A(i)	—	—	—	—	—	
<i>Diospyros crassiflora</i> Hiern	A(i)	—	—	✓	—	✓	
<i>Afzelia bipindensis</i> Harms	A(i)	—	—	—	—	✓	

SPECIES	QUALIFYING SUB-CRITERION	≥ 1% OF GLOBAL POPULATION	≥ 5% OF NATIONAL POPULATION	1 OF 5 BEST SITES NATIONALLY	ENTIRE GLOBAL POPULATION	SOCIO-ECONOMICALLY IMPORTANT	ABUNDANCE AT SITE
<i>Entandrophragma candollei</i> Harms	A(i)	—	—	—	—	✓	
<i>Pterygota bequaertii</i> De Wild.	A(i)	—	—	—	—	✓	
<i>Antrocaryon micraster</i> A.Chev. & Guillaumin	A(i)	—	—	✓	—	✓	
<i>Entandrophragma angolense</i> (Welw.) C.DC.	A(i)	—	—	—	—	✓	
<i>Entandrophragma cylindricum</i> (Sprague) Sprague	A(i)	—	—	—	—	✓	
<i>Drypetes molunduana</i> Pax & K.Hoffm.	A(i)	—	—	—	—	—	
<i>Fernandoa ferdinandi</i> (Welw.) Milne-Redh.	A(i)	✓	✓	✓	—	—	
<i>Pararistolochia ceropegoides</i> (S.Moore) Hutch. & Dalziel	A(i)	—	✓	✓	—	—	
<i>Agelanthus dichrous</i> (Danser) Polhill & Wiens	A(i)	—	✓	✓	—	—	
<i>Cola brevipes</i> Malvaceae	A(i)	✓	✓	✓	—	—	
<i>Leplaea thompsonii</i> (Sprague & Hutch.) E.J.M.Koenen & J.J.de Wilde	A(i)	—	—	✓	—	—	
<i>Millettia laurentii</i> de Wild.	A(i)	—	—	✓	—	—	
<i>Ochna calodendron</i> Gilg & Mildbr.	A(i)	✓	✓	✓	—	—	

IPA criterion C qualifying habitats

HABITAT	QUALIFYING SUB-CRITERION	≥ 5% OF NATIONAL RESOURCE	≥ 10% OF NATIONAL RESOURCE	1 OF 5 BEST SITES NATIONALLY	AREAL COVERAGE AT SITE
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General site habitats

GENERAL SITE HABITAT	PERCENT COVERAGE	IMPORTANCE
Forest - Subtropical/Tropical Swamp Forest	57	Major
Forest - Subtropical/Tropical Moist Lowland Forest	41	Major
Grassland - Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	1	Major
Wetlands (inland) - Permanent Rivers, Streams, Creeks [includes waterfalls]	—	

Land use types

LAND USE TYPE	PERCENT COVERAGE	IMPORTANCE
Nature conservation	100	
Harvesting of wild resources	100	

Threats

THREAT	SEVERITY	TIMING
Biological resource use - Hunting & collecting terrestrial animals	High	Ongoing - increasing
Transportation & service corridors - Roads & railroads	High	Future - planned activity
Agriculture & aquaculture - Annual & perennial non-timber crops - Shifting agriculture	Medium	Future - inferred threat
Energy production & mining - Mining & quarrying	Medium	Future - inferred threat
Biological resource use - Logging & wood harvesting	Medium	Ongoing - trend unknown

Protected areas

PROTECTED AREA NAME	PROTECTED AREA TYPE	RELATIONSHIP WITH IPA	AREAL OVERLAP
Dzanga-Ndoki National Park (CAF)	National Park	protected/conservation area is adjacent to IPA	—
Lobeké National Park	National Park	protected/conservation area matches IPA	—
Sangha Trinational	UNESCO World Heritage Site	protected/conservation area encompasses IPA	—
Sangha Trinational	Trans-Frontier Conservation Area (core zone)	protected/conservation area encompasses IPA	—

Management type

MANAGEMENT TYPE	DESCRIPTION	YEAR STARTED	YEAR FINISHED
Protected Area management plan in place	Management Plan not seen but assumed to exist under provision of UNESCO status.	—	—

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