

World Heritage Sites

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SANGHA TRINATIONAL

CAMEROON, CENTRAL AFRICAN REPUBLIC & CONGO

Sangha Trinational is a transboundary complex of three adjoining national parks in the dense, remote and little threatened forests where the Congo Republic, Cameroon and the Central African Republic meet. With its surrounding buffer zone the property preserves a huge expanse of intact lowland forest and an array of wetlands and clearings that attract large populations of elephants, gorillas, chimpanzees and forest antelopes. It is a priority area for the conservation of the biodiversity of the Congo basin.

COUNTRIES

Cameroon, Central African Republic and Congo

NAME

Sangha Trinational

NATURAL WORLD HERITAGE SITE

2012: Inscribed on the World Heritage List under natural criteria (ix) and (x).

INTERNATIONAL DESIGNATIONS

2008: *Riviere Sangha en Republique Centafricaine* (275,000 ha) and *Partie Camerounaise du Fleuve Sangha* (62,000 ha) designated Wetlands of International Importance under the Ramsar Convention;

2009: *Sangha-Nouabale-Ndoki* (1,525,000 ha) designated a Wetland of International Importance under the Ramsar Convention.

STATEMENT OF OUTSTANDING UNIVERSAL VALUE

The UNESCO World Heritage Committee adopted the following Statement of Outstanding Universal Value at the time of inscription:

Brief Synthesis

Sangha Trinational (TNS) is a transboundary conservation complex in the Northwestern Congo Basin where Cameroon, the Central African Republic and the Republic of Congo meet. TNS encompasses three contiguous national parks totalling a legally defined area of 746,309 hectares. These are Lobéké National Park in Cameroon, Dzanga-Ndoki National Park in the Central African Republic and Nouabalé-Ndoki National Park in the Republic of Congo. Dzanga-Ndoki National Park is comprised of two distinct units. The parks are embedded in a much larger forest landscape, sometimes referred to as the TNS Landscape. A buffer zone of 1,787,950 hectares has been established in recognition of the importance of the broader landscape and its inhabitants for the future of the property. The buffer zone includes Dzanga-Sanga Forest Reserve in the Central African Republic, which connects the two units of Dzanga-Ndoki National Park.

Natural values and features include the ongoing ecological and evolutionary processes in a mostly intact forest landscape at a very large scale. Numerous and diverse habitats such as tropical forests comprised of deciduous and evergreen species, a great diversity of wetland types, including swamp forests and periodically flooded forests and many types of forest clearings of major conservation importance continue to be connected at a landscape level. This mosaic of ecosystems harbours viable populations of complete faunal and floral assemblages, including top predators and rare and endangered species, such as Forest Elephants, Gorillas, Chimpanzees, and several antelope species, such as the Sitatunga and the emblematic Bongo.

Criterion (ix): The property is characterised by its large size, further supported by the very large buffer zone, minimal disturbance over long periods and intactness thereby enabling the continuation of ecological and

evolutionary processes at a huge scale. This includes the continuous presence of viable populations and natural densities of wildlife, including top predators and large mammals which are often affected by hunting and poaching elsewhere. There is a fully connected mosaic of very diverse habitats, including numerous types of ecologically remarkable forest clearings attracting major wildlife aggregations and countless plant species otherwise not found in the forest landscape. Unlike many other forest protected areas, the property is not a remaining fragment but continues to be part of a much larger intact and landscape with good conservation prospects. This is increasingly rare and significant at a global scale.

Criterion (x): The property represents a wide spectrum of the species-rich humid tropical forests in Central Africa's Congo Basin, and provides protection for a range of endangered species. The flora is enriched by species occurring exclusively in the many types of forest clearings. TNS protects a large number of tree species which are heavily commercially exploited elsewhere, such as the critically endangered Mukulungu. In addition to viable populations of forest elephants, significant populations of the critically endangered Western Lowland Gorilla and the endangered Chimpanzee occur both in and around the property, together with several endangered antelope species, such as the Situnga and the emblematic Bongo.

Integrity

The boundaries of the property coincide with the boundaries of three existing national parks thereby forming a large and contiguous protected area in the heart of the broader TNS Landscape. The entire property is surrounded by a large buffer zone in all three countries which responds to the intricate ecological linkages between the property and its surroundings. This approach provides an umbrella for land-use planning and for integrating the legitimate livelihood needs of local and indigenous communities with nature conservation within the broader TNS landscape. Logging and hunting is banned in the national parks. In addition, the remoteness of TNS adds a natural layer of protection from resource exploitation. It will be essential to ensure that the future activities in the buffer zones, including forest and wildlife management, tourism, agriculture and infrastructure are fully compatible with the conservation objectives for TNS so the surrounding landscape will satisfy the needs of local and indigenous communities while indeed serving as a "buffer" for the property.

Protection and Management Requirements

There is strong and committed joint management of the property bringing together all three States Parties, an indispensable permanent requirement. The three national parks that make up the property all have management and administrative staff provided by governments and if needed complemented through international support from nongovernmental organizations, as well as multi-lateral and bi-lateral agencies. Management, law enforcement, research, monitoring and tourism all require coordination across the national boundaries. There is a Trinational Monitoring and Action Committee (Comité Trinational de Suivi et d'Action), bringing together the three countries at the ministerial level. A Trinational Monitoring Committee unites the three countries at the level of regional administrations. These mechanisms are effective in providing a joint protection and management approach to the property, and will need to be maintained and built upon.

The rights and traditional livelihoods of local and indigenous peoples, such as the BaAkas, are a fundamental and increasingly recognised element in the management of the property. Whereas in Lobéké National Park (Cameroon) there are use zones within the park, in the Central African Republic and the Republic of Congo, local resource use, including indigenous hunting and gathering, is not permitted in the protected areas thereby affecting local livelihoods and creating the potential for conflict. This illustrates the crucial importance of finding an overall balance between nature conservation and local resource use in the broader landscape. The significantly enlarged buffer zone presents an opportunity to better understand and integrate the livelihood needs but also the knowledge of local and indigenous communities under the umbrella of a living TNS landscape. The inscription on the World Heritage List presents a concrete opportunity for the States Parties to translate a range of different commitments of the States Parties regarding the rights of local and indigenous people into action on the ground. Maintaining the ecological values of the property will not only depend on law enforcement but eventually both on the standards of commercial resource extraction in the buffer zone and the acceptance and support of parks by the local and indigenous communities in the surrounding landscape.

IUCN MANAGEMENT CATEGORY

Unassigned

BIOGEOGRAPHICAL PROVINCE

Congo Rain Forest (3.2.1) / West African Woodland Savanna (3.4.4)

GEOGRAPHICAL LOCATION

The composite site is where Nouabalé-Ndoki National Park in northwesternmost Congo meets Lobéké National Park in southeasternmost Cameroon and Dzanga-Ndoki National Park in the southwesternmost point of the Central African Republic. It extends north-south between 03°5'03"N by 02°00'02"N and east-west between 15°32'52"E and 16°53'45"E.

DATES AND HISTORY OF ESTABLISHMENT

- 1990: Dzanga-Ndoki National Park and Dzanga-Sangha Special Forest Reserve in the Central African Republic established by Law No.90.017 under Forest Law 90.003;
- 1993: Nouabalé-Ndoki National Park established in the Republic of Congo by Decree No.93.727 under Forest Law 16.2000; 2002: the Goualougo triangle added to its south;
- 2000: The Central African Forests Commission convened by governments to establish the complex;
- 2001: Lobéké National Park in the Cameroon Republic established by Decree 2001/107/CAB/PM under Forest law 94.01 and Faunal law 95.466;
- 2007: The Sangha Trinational Foundation set up to fund both the property and sustainable development of its surrounding landscape;
- 2010: The buffer zone established.

LAND TENURE

Each park of the property is state owned under the Ministry for Long-term Development, Forest Economy & the Environment (Republic of Congo), the Ministry of Forests & Wildlife (Cameroon Republic) and the Ministry for Waters, Forests, Hunting & Fishing (Central African Republic).

AREA

The total area of the property is 754,286 ha (746,309 ha is stated in the original documentation). The surrounding buffer zone is 1,787,950 ha and extends 115 km east-west by 91 km north-south. The two sites in the Central African Republic (CAR) are joined by the Dzanga-Sangha Special Forest Reserve (335,900 ha). The Reserve is not part of the World Heritage site.

Component site	Region	Country	Area (ha)	Central Coordinates
Nouabalé-Ndoki Nat'l Park + Goualougo triangle	Sangha Likuala	Congo Republic	386,592 19,863	16°33'15" E x 2°36'34 "N
Lobéké National Park	Est Boumba & Ngoko Department	Cameroon Republic	217,854	15°48'51" E x 2°22'02" N
Dzanga National Park Ndoki National Park	Sangha-Mbaéré Prefecture	Central African Republic	49,500 72,500	16°25'27" E x 2°55'00" N 16°13'31" E x 2°27'44" N
TOTAL			754,286	

ALTITUDE

The land slopes gradually from over 500m in Lobéké and the Central African Republic in the north to 330m in the river valleys and lowlands of Nouabalé-Ndoki in the south (de Wasseige & Devers, 2008).

PHYSICAL FEATURES

The Sangha Trinational World Heritage property of three contiguous national parks lies in the low forested plateaus and lowlands either side of the Sangha river as it flows south 135 km through and along the boundary of the property towards the River Congo. The irregular composite site extends 115 km from north to south and 145 km from west to east embedded in a vast mostly intact humid tropical lowland forest, Guineo-Congolese in the west and Central African in the east. It is in the headwaters of four tributaries of the River Congo. Both the property and its buffer areas are well watered and include a great diversity of wetlands: lakes, swamps, flooded forests and a network of 138 natural forest clearings on hydromorphic soils along water courses and in depressions. These are known as *bais* and the smaller clearings as *yangas*. Soils are predominantly red, ferralitic and sandy. In Dzanga they are well drained ferrosols on recent alluvium over sandstone and are fairly fertile. In Nouabalé-Ndoki they are infertile red leached ferralitic sands over sandstone. In Lobéké, Precambrian metamorphic basement rocks, principally schists, gneisses and quartzite underlie porous red ferralitic clay and nutrient-poor soils. The wetland floors of the valleys and clearings are mineral-rich but hydromorphic and very poor and sandy. Many are kept open by heavy use by elephants.

CLIMATE

The climate is equatorial with four seasons: the long rains from August to November, a three month dry season from December to February, the lesser rains between March to May, and a dry summer. The mean annual rainfall is 1,365mm in the north to 1,600mm in the south. Rain falls on 100 to 120 days each year with less than 100mm falling during the driest months. Humidity is between 60-90% all

year. Temperatures are similar throughout the year with a mean of 25°C. Bayanga in the north has a December minimum of 21°C and maximum of 36°C in March and April.

VEGETATION

The forests within and surrounding the property are among the least degraded in Africa. Owing to their inaccessibility, their intactness and biodiversity are very high; the area has been undisturbed so long that its ancient ecological and evolutionary processes persist. Most of the forests of Lobéké, and all those of Nouabalé-Ndoki have never been logged. The property is on the boundary between the humid medium-height semi-deciduous Guinean-Congolese forest in the west and the denser 90% closed wet evergreen high-canopied forest of the Congo Basin to the east. It is one of the last wilderness forest ecosystems in the area and its large surrounding buffer zone is part of an extensive little disturbed landscape, something increasingly rare on a global scale. The forests have long been the basic resource of the local people, but a third of the buffer area near settlements in the south was commercially selectively logged during the second half of the 20th century. However, most was left to regenerate naturally and has become ecologically valuable secondary forest. There are also many wetlands including small lakes, swamps, swamp forests, intermittently flooded forests, and several types and sizes of natural forest clearing where the mineral soil attracts many animals.

1,122 plant species are recorded, 2 critically endangered, 5 endangered and 30 vulnerable. There are eight main forest types: mixed forest on terraces, often almost pure stands of *Gilbertodendron dewevrei* on floodplain alluvial soils, riverine forests, open swamps with raphia palms, seasonally flooded forest along the Sangha river, swamp clearings, savanna (only in the Dzangha-Ndoki Reserve) and secondary forest, especially in Lobéké and Dzanga parks. Pioneer species grow in openings created by natural fires.

The mixed dryland (*terra firma*) forest shelters the greatest variety of vegetation and animals, including large mammals attracted to the many fruiting trees. The tree cover is one of high (30-50m) emergents with a dense to open understorey, lianas and an occasionally dense herbaceous layer of Marantaceae and Zingiberaceae. These dense forests are rich in *Terminalia superba*, and species of the Ulmaceae and Sterculiaceae. The property protects a large number of trees heavily exploited for their wood, including *Austranella congolensis* (CR), afrormosia *Pericopsis elata* (EN), ebony *Diosporus crassiflora* (EN), African tulipwood *Bobgunnia fistuloides* (EN), *Mansonia altissima* (EN) and African walnut *Lovoa trichilioides* (VU). All the following logged species are also listed as vulnerable (VU) by IUCN: *Afzelia bipindensis*, *Albizia ferruginea*, *Nogordonia kabingaensis*, *Pterygota bequaertii*, *Sterculia oblonga*, *Entandrophragma angolense*, *E.candollei*, *E.cylindricum*, *E.utile*, *Khaya grandifoliola*, *K. anthotheca*, *Turraeanthus africanus*, *Guarea cedrata*, *G. thompsonii*, *Aningeria altissima*, *Pausinystalia macroveras* and *Gambeya pulpulchra*. Other vulnerable species of tree not logged industrially include *Pseudospondias microcarpa*, *Antrocaryon micraster*, *Greenwayodendron suaveolens*, *Ricinodendron heudelotii*, *Drypetes molunduana*, *Mallotus oppositifolius*, *Garcinia kola* and *Afrostryax lepidophyllus*; also the liana *Ancistrocladus letestui*,

The *Gilbertodendron dewevrei* forest is mono-dominant, growing in gallery forest-like strips. It is lower in height (30-40m) and less diverse but its seeds also attract large animals. Riverine forest is lower still (20m) with an understorey of large herbs. The swamp forest of the same height is often dominated by the palms *Raphia hookeri* and *R. laurentii* with an understorey of large herbs. The annually flooded forest, also about 20m high, has 30m emergents and many lianas. The forest clearings, seasonal or permanent, which occur on hydromorphic soil, are often dominated by Cyperaceae and herbaceous species found only there. 138 of these clearings are known in the property and in the concessions to its south though many are undocumented and unstudied. They are of two main types: clearings along water courses (*baïs*) and depressions (*yangas*). The *baïs* are kept open by elephants who trample the earth bare and stop vegetation encroaching. The smaller *yangas* found in valleys over limestone depressions in Ndoki and south of Nouabalé-Ndoki are used more by gorillas. Both harbour rich and viable assemblages of plants. Their variability in size, soil type, hydrological conditions and seed dispersal mechanisms have created habitats of rare and endangered species not found elsewhere in the forest. Both are very attractive to animals seeking mineral salts and, among the larger mammals, social contact. Some with alluvial deposits become fertile blackwater swamps. Savanna occurs only in edaphic islands in Dzanga; secondary forest exists mostly in Lobéké and Dzanga.

FAUNA

The Guineo-Congolese forests with their high biodiversity and biomass are one of the critical zones for the conservation of central African biodiversity, although endemism is not marked. The forest types

are very diverse and they have not been overexploited or lost major animal species to overhunting and poaching. Viable populations and natural densities of a rich vertebrate fauna have resulted, including top predators and large mammals often targeted in other forests. Moreover, the interconnecting mosaic of forest clearings which provide mineral licks attract major wildlife aggregations not easily seen elsewhere in the forest. These include endangered species such as forest elephants *Loxodonta africana cyclotis* (VU), western lowland gorilla *Gorilla gorilla gorilla* (CR) and western chimpanzee *Pan troglodytes troglodytes* (EN). The elephant populations number at least 4,000 and are both large and healthy as evident in a balanced sex ratio and the large-tusked males seen moving without fear in the open clearings, sometimes over 100 at once at Bai Dzanga. The large mammals have an important effect by opening up the forest and dispersing seeds. Gorillas and chimpanzees have been seen using tools such as sticks to gauge water depth and to extract honey.

Its scale, remoteness and freedom to date from the Ebola virus make the area important for great ape conservation. The apes are believed to reach the highest population densities known and some may never have encountered man. However, in 2007 a Wildlife Conservation Society expedition discovered 125,000 western lowland gorillas in the north of the Republic of Congo (Convention on Migratory Species, 2008; McConville, 2008): 73,000 of these in and around Odzala-Koukoua National Park and Lossi Sanctuary, a UNESCO Biosphere Reserve to the southwest, and 52,000 found in Lac Télé-Likuala National Park to the southeast of the site. Trinational Sangha supports between 4,000 and 8,000 gorillas and chimpanzees (totals conflated in CMS/GRASP, 2008) and 16 species of smaller primates, most in the less threatened categories of the IUCN Red List. Since they do not swim readily, the distribution of some small arboreal primates is restricted by the Sangha River. Other primates, including the gorillas, show differing behaviour on opposite sides of the river.

The property has 116 mammal species, 429 birds, 29 reptiles, 31 amphibians and 246 fish. Mammal species total 18 primates (including 6 lemurids), 15 carnivores, 14 ungulates, 19 bats, 17 shrews, 25 rodents and 3 pangolins. The most threatened mammals are the Uganda red colobus *Procolobus rufomitratu ssp. tephrosceles* (EN), white-collared mangabey *Cercocebus torquatus* (VU), spotted-necked otter *Lutra maculicollis* (VU) and hippopotamus *Hippopotamus amphibius* (VU). Near threatened species include leopard *Panthera pardus*, African golden cat *Caracal aurata*, bongo *Tragelaphus eurycerus* and giant pangolin *Smutsia gigantea*,

10 monkeys may be seen: western colobus *Colobus guereza occidentalis*, bai colobus *Procolobus rufomitratu oustaleti*, grey-cheeked mangabey *Lophocebus albigena*, agile mangabey *Cercocebus agilis*, moustached monkey *Cercopithecus cephus*, putty-nosed monkey *C. nictitans*, crowned monkey *C. pogonias*, de Brazza's monkey *C. neglectus*, Allen's swamp monkey *Allenopithecus nigroviridis*, northern talapoin *Miopithecus ogouensis*, and the six lemurids, calabar potto *Arctocebus calabarensis*, Bosman' potto *Perodicticus potto*, Thomas's dwarf galago *Galagoides thomasi*, Demidoff's galago *G. demidovii anomurus*, Allen's galago *G. alleni* and southern needle-clawed galago *Eutoticus elegantulus*. There are also spotted hyaena *Crocuta crocuta* and eight small carnivores typical of the region: Congo clawless otter *Aonyx congicus*, civet cat *Viverra civetta*, African palm civet *Nandinia bonotata*, servaline genet *Genetta servalina*, Cape genet *Genetta tigrina*, black-footed mongoose *Bdeogale nigripes*, long-nosed mongoose *Herpestes naso* and marsh mongoose *Herpestes paludinosus*. The hoofed mammals are giant forest hog *Hylochoerus meinertzhageni*, red river hog *Potamochoerus porcus*, water chevrotain *Hyemoschus aquaticus*, sitatunga antelope *Tragelaphus spekei*, dwarf antelope *Neotragus batesi*, six forest duikers, Peters' duiker *Cephalophus callipygus*, bay duiker *C. dorsalis*, white-bellied duiker *C. leucogaster*, black-fronted duiker *C. nigrifrons*, yellow-backed duiker *C. sylvicultor*, blue duiker *Philantomba monticola* and African forest buffalo *Syncerus caffer nanus*. Other animals are Grant's golden mole, *Eremitalpi granti*, giant otter-shrew *Potamogale velox*, tree pangolin *Manis tricuspis*, black-bellied pangolin *M. tetradactyla*, aardvark *Orycteropus afer* and southern tree hyrax *Dendrohyrax arboreus*.

The reptile species are typical of the region. The numerous lakes are important to wildlife, and the little disturbed Sangha River holds populations of Nile crocodile *Crocodylus niloticus*, African long-snouted crocodile *Crocodylus cataphractus*, pygmy crocodile *Osteolaimus olivaceus* (VU) and goliath tigerfish *Hydrocynus goliath*. The total number of fish species is high in comparison with similar West African sites which may be a result of the dynamic seasonal fluctuations of the river. There are 429 species of birds recorded, 177 being resident forest species. Among the threatened birds are the Itombwe nightjar *Caprimulgus cf. prigoginei* (EN), lesser kestrel *Falco naumanni* (VU), yellow-bearded greenbul *Criniger olivaceus* (VU), grey-necked rockfowl *Picathartes oreas* (VU). Near-threatened are the Dja River warbler *Bradypterus grandis* and Gabon batis *Batis minima*. An endemic species is the western

forest robin *Stiphornis erythrothorax*. Among the insects are 415 butterfly, 51 wasp and 108 ant species. Future research will probably discover several new species, arthropods in particular.

CONSERVATION VALUE

Sangha Trinational is a remote transboundary complex of national parks in the little threatened forests of the northwestern Congo basin where Cameroon, the Central African Republic and the Republic of Congo meet. The contiguous parks preserve a huge intact tropical forest which contains a wide range of wetlands and clearings that attract viable populations of elephants, gorillas, chimpanzees and forest antelopes, completely surrounded by a still larger buffer of little developed forest. The property is managed by trinational committees from national to local levels. It is one of IUCN's priority areas for the conservation of the biodiversity of the Congo basin. The Sangha River has been designated in three separate Ramsar Wetlands of International Importance. The area is a WWF/IUCN Centre of Plant Diversity and it lies within a WWF Global 200 Freshwater Eco-region. All three sites are designated Important Bird Areas by BirdLife International.

CULTURAL HERITAGE

The indigenous forest people are the BaAka pygmies, a transhumant population of about 25,000 of whom is scattered in 42 clans from central Cameroon into Gabon, northwest Congo and a corner of the Central African Republic where they form about 30% of the population of the Dzangha-Ndoki Reserve. They are semi-nomadic hunter-gatherers who have a unique and rich culture traceable back 2,400 years which may have existed long before that in isolated but intimate balance with the forest on which they totally depend and which is their spiritual home. They maintain a traditional lifestyle, though with increasing use of more modern techniques. They have a profound knowledge of forest resources and traditional herbal medicines, live without cultivation or tree-cutting and are experienced elephant hunters. They are unified by the Ubangian language and common customs and beliefs. Except for recent over-hunting of elephants for ivory, the impact of the pygmies on their environment is barely perceptible (DFC Gabon, 2004).

LOCAL HUMAN POPULATION

The population is relatively sparse, especially in the Congo Republic. The indigenous BaAka share the land with the incoming Bantu villagers. Except for a small fishing community of 50 in Ndoki which also has a small farm, there are no permanent inhabitants within the property. Buffer zone populations totalled 18,044 in 2007: 7,750 in Dzanga-Ndoki, 5,777 in Nouabalé-Ndoki and 4,517 in Lobéké. Small-scale agriculture and livestock keeping is widespread around the villages of the buffer area. Fishing, logging and resource gathering in the forest are the main activities. Hunting by local people is traditional and legitimate but the establishment of the parks has excluded local communities from land and resources they previously used, affecting local livelihoods, making poachers out of subsistence hunters and created the potential for conflict. Wildlife damage to crops is another source of conflict. Community hunting reserves have been established outside the property but poaching for bushmeat and ivory across international boundaries persists. However, the traditional customs and livelihoods of the indigenous people are respected by international agencies and park administrations as essential to the integrity of the property's ecosystem and culture.

VISITORS AND VISITOR FACILITIES

The remote location and limited infrastructure inhibit the development of tourism at present and visitor numbers are very low. In 2010 they were 350 in Dzanga-Ndoki, 120 in Nouabalé-Ndoki and 55 in Lobéké, many being foreigners. There are small guided visits to BaAka settlements and habituated wildlife at forest clearings. At Dzanga Bai in the Central African Republic up to 100 elephants may be seen at one time and gorilla viewing is very popular at Hokou Bai and Mongambé Bai. There is a hotel at Bayanga, the park headquarters, a 15-bed lodge at Sangha and 40 bed bungalow at Doli, some also at Mambélé. In Cameroon there are tents with 12 beds at Camp Kombo and bungalows with 12 beds at Djemba, and some also at Bolo Bai. Sport hunting is also offered. In Nouabalé-Ndoki in there is a hotel at Boumassa, the park headquarters, and all the larger animals can be seen at Mbéli Bai and Mandika Bai. Commercial safari hunting is legally possible in many parts of the buffer zone and in some areas already occurs where community hunting reserves have been established. The property will benefit from a comprehensive tourism plan. Access is by air or by tracks to Bayanga, Boumassa and Libongo in Cameroon.

SCIENTIFIC RESEARCH AND FACILITIES

Beyond their ecological importance, the clearings and lakes offer unusual opportunities for scientific and tourist observations unavailable in most dense tropical lowland rainforests but many are as yet

undocumented and unstudied. Projects have been carried out by researchers from forestry and wildlife colleges in each country: research institutes at the Universities of Marion Ngouabi at Brazzaville in Congo, of Bangui in the Central African Republic (CAR) and of Dschang in Cameroon; also from five foreign universities. The Wildlife Conservation Society has researched forest elephants for the past fifteen years in Mbele Bai in the CAR. The Goualougo Triangle Ape Project by the Lincoln Park zoo in Nouabalé-Ndoki National Park is studying chimpanzees in detail including ways to counteract the ebola virus threat. Six long-term research sites and five short-term sites have been established, studying wildlife, poaching, ecotourism and human impacts. Botanical studies of the area published by all three protected areas provide the best archive of central African forests; some 400 references are cited in the nomination document. A scientific Committee is planned whose work should benefit future management of the property.

MANAGEMENT

There is strong and committed joint management across the national boundaries of the three contiguous parks established under the Forest laws of all three State Parties to coordinate the property's management, conservation, law enforcement, monitoring, tourism and research. The Central African Forests Commission (COMIFAC) first met in 2000 to create the complex and regulate sustainable development, tourism and poaching within it. A Trinational Supervision and Arbitration Committee set up the same year brings the three countries together at the ministerial level. A Trinational Monitoring Committee does the same at the regional administrative level and a Trinational Planning & Execution Committee holds biannual meetings of park managers at the level of management and implementation. The parks were established between 1990 and 2002 under the Forest and Fauna laws of the three states. Their staffs are provided by their governments, international agencies and non-governmental organizations.

The rights and traditional livelihoods of local and indigenous peoples, such as the BaAka, are increasingly recognised in the management of the property although the establishment of the parks has excluded local communities from land and resources they previously used. In Lobéké National Park in Cameroon a zone for fishing and extractive use of non-timber forest products by local communities has been designated in the west of the park, but in the parks of the Central African Republic and the Republic of Congo, local resource use, including indigenous hunting, gathering, fishing, logging and mining are not permitted. This has affected local livelihoods and, with crop-damage by elephants and gorillas, has created the potential for conflict, which affects relations between park staff and the local people and their attitude towards conservation. However, the Dzanga-Ndoki Special Forest Reserve in the Central African Republic, now in the buffer area, was established in 1990 as a multiple use area to conserve its fauna and ecosystems and meet the needs of local communities. It is subdivided into five zones: Commercial Hunting zone (concessions); Community Hunting zone; Timber Extraction zone; Rural Development zone and Bushmeat Production zone. In the Congo buffer area, community hunting zones have also been designated within logging concessions but poaching for ivory and bushmeat across international boundaries persists despite successful anti-poaching patrols. With funding from UNESCO an anti-poaching brigade was set up on CAR territory in 2010.

The value of the property depends partly on the balance between meeting local needs and effectively controlling the commercial logging, hunting, wildlife management, tourism, agriculture and infrastructure in the buffer zone. This links the site with the surrounding Guineo-Congolese and central African forests and was created to help to integrate the traditional life of the local communities with conservation. The remoteness of the site gives some extra protection from exploitation, but the land is mostly under timber concessions and the site's management needs a strong agreed mandate to guide buffer zone conservation in order to allow the traditional use of resources by indigenous peoples and harmonise laws and regulations across all three states. State Parties are beginning to meet key social and environmental issues under timber certification schemes: in Congo and Cameroon the property adjoins concessions which are committed to regulated logging, many by the standards established by the Forest Stewardship Council which includes social standards. Commercial safari hunting is legally possible in many parts of the buffer zone. To benefit local communities, the revenues and employment from this may have to be monitored to prevent damage to large mammal populations. All three parks wells are being drilled, schools set up, and literacy programs, including for the indigenous people, and support is given to local farmers. Monitoring is done by remote sensing, ground transects and field patrols. It is done daily or weekly of wildlife in clearings and of seasonal game in the buffer zone and constantly of illegal activity. Human distribution and activities is looked at once in one to four years, fauna and forest cover, every 4-5 years.

MANAGEMENT CONSTRAINTS

The area has so far been preserved by its remoteness, low population and lack of development, though the present low visitor numbers will increase with World Heritage status. Excessive commercial and indigenous poaching across international boundaries for bush meat or trophies and for ivory is the most important threat to the wildlife of the property despite successful anti-poaching patrols. The need to balance effective surveillance with legal hunting affects transboundary coordination and community livelihoods together with the local perception and acceptance of conservation. The proscription of traditional uses within the property and wildlife damage to crops in the buffer areas are also sources of conflict which continues to affect the relationship between park staff and local people. Commercial logging in the buffer zone has been selective because difficult, but the site is almost surrounded by industrial logging which needs regulation, as does diamond mining, especially in the northwest though this is at present small-scale, and sport hunting. But improved roads into these concessions will also enable greater intrusion by poachers and miners. The ebola virus has struck in Cameroon and Gabon to the west but had not reached the property in 2012.

COMPARISON WITH SIMILAR SITES

Unlike many other parts of the Congo Basin, the site is a large tract of intact tropical lowland forest which has never been commercially overexploited or lost mammals and birds to overhunting and poaching. It is also a part of a much larger intact landscape which has a good chance of surviving, something increasingly rare on a global scale. Other World Heritage properties are larger and even more diverse but the relative remoteness of the property, with its huge mostly forested buffer zone is exceptional. It has major importance for the Guinean-Congolese forests of West Africa in the combined conservation of at least 4,000 elephants and 4,000-8,000 great apes free of the Ebola virus in a pristine area where the many clearings permit these to be readily seen.

Two other protected areas in the region are already World Heritage properties: Lopé-Okanda National Park in Gabon and Dja Faunal Reserve in Cameroon. However, the site is much larger in area and has greater ape populations than either and, except for elephants in Lopé-Okanda and flora in Dja, is more important than either for other taxa. It is not larger than Salonga National Park or Okapi Wildlife Reserve, is the same size as Virunga National Park; and is larger than Kahuzi-Biega National Park, all in the Democratic Republic of Congo, but is under far less pressure than any of these if the concession logging practices are regulated and do not threaten the livelihoods of local people. Other similar forest parks of the area include the Mengamé Gorilla Sanctuary and the Bouma Bek & Nki National Parks to the west in Cameroon, Odzala National Park and Lossi Sanctuary southwest in the Congo Republic, and to the west and southwest in Gabon the Minkébé, Ivindo and Mwagne National Parks. Except for primates and fish, Minkébé is richer in species than Trinational-Sangha and has thousands more elephants. Odzala is similar though less rich in species, but in both the ebola virus is rampant. In 2005 the Central African Forests Commission (COMIFAC) met to examine the creation from these nine national parks a vast 1,500,000 sq.km complex, the Dja-Odzala-Minkébé Trinational area, but the obstacles to establishing this across a developed region are considerable.

STAFF

Approximately 300 management and administrative staff are provided by governments or are supported by international conservation agencies from the U.S.A., Europe and private foundations. Lobéké National Park has a permanent staff of about 40 including a *conservateur*, a head of patrols and 24 guards. WWF with the German development agency, GIZ provides a biologist, 3 advisors, 2 monitors and 7 technicians through the Djengi project. National forestry and wildlife and provincial agency staff plus community associations help with anti-poaching activities. There are 3 guard stations.

Dzanga-Ndoki National Park has a staff of 148 of which only ten are government funded: one conservateur and 9 guards; another ten are funded from tourism revenues. WWF supports 129 staff in every technical capacity, aided in the buffer areas by village chiefs and community associations. Nouabalé-Ndoki National Park has 18 staff: one conservateur with 2 assistants and 2 patrol leaders, a medical nurse and 12 guards. The long established Wildlife Conservation Society Congo Program supports 7 scientific and technical advisors and around 50 permanent staff. With the Congo Forestry Society and local assistance it helps to control sport hunting in the buffer zone. There are 3 guard stations.

BUDGET

The national budgets for the parks are small at present. Most of the funding is from international agencies, NGOs and logging and sport hunting concessionaires who pay the salaries of the anti-poaching guards. The Trinational Sangha Foundation is a private body formed to secure long term funding of €35million (US\$50million) through donor contributions and is the most important funding source apart from tourist revenues. The current capital is about €20 million (US\$28million) mostly from the German Development Bank (KfW), l'Agence Française de Développement (AFD) and the private German Regenwald-Stiftung (rainforest foundation) and is estimated to cover present needs. Its 11 directors represent the governments of Cameroon, Republic of Congo, Central Africa Republic, WWF, the Wildlife Conservation Society, the Rainforest Foundation, KfW, AFD as an observer, the park managers, and civil society.

LOCAL ADDRESSES

Fondation pour le Trinational de la Sangha:

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Cameroon:

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Central African Republic:

Ministère des Eaux, Forêts, Chasse et Pêche, Cabinet du Ministre:

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Republic of Congo:

Ministère du Développement Durable, de l'Economie Forestière et de l'Environnement:

Direction Générale de la Faune et des Aires protégées

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Directions Générale de l'Economie Forestière

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REFERENCES

The principal sources for the above information were the original World Heritage nomination, the IUCN evaluation report and Decision 36 COM 8B.8 of the UNESCO World Heritage Committee.

CMS/GRASP (2008). *Gorilla. Report on Conservation Status*. Technical Service Publication 7, Royal Belgian Institute of Natural Science, Belgium/UNEP, Nairobi. [Figures cited from Woods Hole Research Center (2003, cited 2005). *Mapping and Monitoring the Forests of Central Africa*. WHRC Land Cover & Land Use Program. Mass., U.S.A.

Convention on Migratory Species (2008). *Action Plan 2008: Western Lowland Gorilla*. First meeting on Conservation of Gorillas and their Habitats. Rome.

de Wasseige C. & Devers, D. (2008). The forests of the Congo Basin: State of the forests 2008. In de Marcken, P., Atyi, R., Nasi, R. & Mayaux, P. *The Forests of the Congo Basin. Central African Region. (2008)*. EU Publications Office. pp.159-168.

d'Huart, J-P. & Dembele, M. (2005). IUCN *Technical Evaluation, Ecosystem and Relict Cultural Landscape of Minkébé (Gabon)*. IUCN, Gland, Switzerland.

Endamana D. *et al.* (2010). A framework for assessing conservation and development in a Congo Basin forest landscape. *Tropical Conservation Science* 3 (3): 262-281.

Kirtley, A., Gontero, D. (2011). *Forests, Development and Dignity for the BaAka. A Needs Assessment of the BaAka Pygmy Population living in the Dzanga Sangha Complex of the Central African Republic*. Submitted to Sacharuna Foundation.

McConville, B. (2008). Report: 125,000 gorillas found in African zone. Associated Press, 5 August 2008.

Sandker M. *et al.* (2011). Logging or conservation concession: Exploring conservation and development outcomes in Dzanga-Sangha, Central African Republic. *Conservation & Society* 9 (4): 299-310.

UNESCO (2010). *Le Patrimoine Mondial dans le Bassin du Congo*. Centre du Patrimoine Mondial, Paris, France.

White, L., & Van de Weghe, J. (2009). *Patrimoine Mondial Naturel d'Afrique Centrale: Bien Existants - Bien Potentiels*. Rapport de l'atelier de Brazzaville du 12-14 Mars 2008, UNESCO Centre du Patrimoine Mondial, Paris, France.

Yanggen, D., Angu, K., Tchamou, N. (2010). *Conservation à l'Echelle du Paysage dans le Bassin du Congo: Leçons Tirées du Programme Regional pour l'Environnement en Afrique Centrale (CARPE)*. IUCN / USAID, IUCN, Gland, Switzerland.

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