

AFRICA

IVINDO NATIONAL PARK

GABON



Forest between Ipassa and Kongou Falls, Ivindo National Park, Gabon © IUCN / Wendy Strahm

WORLD HERITAGE NOMINATION – IUCN TECHNICAL EVALUATION

IVINDO NATIONAL PARK (GABON) – ID N° 1653

IUCN RECOMMENDATION TO WORLD HERITAGE COMMITTEE: To refer the nomination under natural criteria (ix) and (x)

Key paragraphs of Operational Guidelines:

Paragraph 77: Nominated property meets World Heritage criteria.

Paragraph 78: Nominated property meets integrity requirements, however does not fully meet protection and management requirements.

1. DOCUMENTATION

a) Date nomination received by IUCN: Original nomination received in February 2020.

b) Additional information officially requested from and provided by the State Party: Following the IUCN field evaluation mission, the State Party submitted additional information on the nominated property, including on logging concessions, local communities, funding and management of Ivindo National Park. Further to the IUCN World Heritage Panel, a progress report was sent to the State Party by IUCN on 16 December 2020. This letter advised on the status of the evaluation process and sought responses and clarifications on logging concessions in the buffer zone, mining, and the development of the management plan, among other points. The State Party submitted additional information on these points on 26 February 2021.

c) Additional literature consulted: Various sources, including: Arnegard, M.E., McIntyre, P.B., *et al.* (2010). Sexual signal evolution outpaces ecological divergence during electric fish species radiation. *The American Naturalist* 176(3): 335-356; Boupoya, A., Doumenge, C. & Lejoly, J. (2010). La végétation des clairières sur sol hydromorphe dans le massif forestier du nord-est du Gabon: premières études sur la clairière de Mékandjé (parc national de l'Ivindo), *Acta Botanica Gallica*, 157(1); Burgess, N., Hales, *et al.* (2004). *Terrestrial eco-regions of Africa and Madagascar: A conservation assessment*. WWF U.S.; Bush, E.R., Whytock, R.C., *et al.* (2020). Long-term collapse in fruit availability threatens Central African forest megafauna. *Science*, 370(6521); Darwall, W.R.T., Smith, K.G., *et al.* (eds.) (2011). *The Diversity of Life in African Freshwaters: Under Water, Under Threat. An analysis of the status and distribution of freshwater species throughout mainland Africa*. Cambridge, IUCN, Cambridge, U.K. & Gland, CH; Dauby, G., Hardy, O.J., *et al.* (2013). Drivers of tree diversity in tropical rain forests: new insights from a comparison between littoral and hilly landscapes of Central Africa. *Journal of Biogeography*, doi:10.1111/jbi.12233; Hopkins, C.D., (1981). On the diversity of electric signals in a community of electric Mormyrid fish in West Africa. *Amer. Zool.* 21: 211-222; Hopkins, C.D., Lavoué, S. & Sullivan, J.P. (2007).

Mormyridae. In: Stiassny *et al.* (eds.), *The fresh and brackish water fishes of Lower Guinea, West-central Africa*: 219-334; Maisels, F., Motsaba, P., & Aba'a, R. (2010). *Great ape and human impact monitoring in the Ivindo Landscape, Gabon*. Final report, second cycle of monitoring in the Park and southern buffer zone, WCS; Maisels, F., Strindberg, S., *et al.* (2013). Devastating Decline of Forest Elephants in Central Africa. *PLOS ONE* 8(3): e59469; Malan, D.F. (2020). *Projet de mise à jour des biens naturels de la liste indicative du patrimoine mondial au Gabon et présentation du dossier de nomination du Parc National de l'Ivindo*. Rapport de mission; MGB (2021). *Les forêts à Caesalpinioideae matures et intactes de l'Ivindo*. Missouri Botanical Garden, <http://legacy.tropicos.org> (accessed 16/03/2021); Mittermeier, R.A., Myers, N., *et al.* (1998). Biodiversity Hotspots and Major Tropical Wilderness Areas: Approaches to Setting Conservation Priorities. *Conservation Biology* 12(3), 516-520; Olson, D.M., Dinerstein, E., *et al.* (2000). *The Global 200: A Representation Approach to Conserving the Earth's Distinctive Ecoregions*. Conservation Science Program, WWF, U.S.; PRBC (2006). *Les Forêts du Bassin du Congo: Etat des Forêts 2006*. Le Partenariat pour les Forêts du Bassin du Congo; Rayden, T. & Essame Essono, R. (2010). *Evaluation of the management of wildlife in the forestry concessions around the national parks of Lopé, Waka and Ivindo, Gabon*. WCS Gabon; Sassen, M. & Wan, M. (2006). *Biodiversity and local priorities in a community near the Ivindo National Park Makokou, Gabon*. Report. Research mission carried out within the framework of the management and development of the Ivindo National Park (Ogooué-Ivindo/Gabon) 23 March - 02 May 2005; Stévant, T., Texier, *et al.* (2016). *Threatened Plant Species of Gabon*. Missouri Botanical Garden, St. Louis, U.S.; UNESCO (2010). *World Heritage in the Congo Basin*. UNESCO World Heritage Centre; Temgoua, L.F. (2006). *Identification et caractérisation des clairières marécageuses du parc national de l'Ivindo (Gabon)*. Mémoire Master 2 FRT, ENGREF, Montpellier, France; Vande weghe, J.P. (2006). *Ivindo et Mwagna : eaux noires, forêts vierges et baïs*. WCS, Libreville, Gabon; Vande weghe, J.P. (2014). *Biodiversity of Gabon's National Parks and Reserves. 1. A Pictorial Introduction*. ANPN, Libreville, Gabon; Vande weghe, J.P., Bidault, E. & Stévant, T. (2016). *Les plantes à fleurs du Gabon. Une*

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d) Consultations: 13 desk reviews received. The field evaluation mission met with a wide range of stakeholders including the Ministry of Forestry, Water, Sea and Environment, the National Agency of National Parks (ANPN), the site management, Wildlife Conservation Society (WCS), Tropical Ecology Research Institute (IRET) and Missouri Botanical Garden. The mission also met with representatives from the forestry sector, and provincial and municipal authorities.

e) Field Visit: Wendy Strahm, 22-30 October 2020

f) Date of IUCN approval of this report: April 2021

2. SUMMARY OF NATURAL VALUES

Ivindo National Park (INP) is nominated under criteria (vii), (ix) and (x). The nominated property is situated on the geographic equator at an altitude between 350 and 748 m.a.s.l. at the southern border of the Archean plateau of northern Gabon. INP is shared by the provinces of Ogooué-Ivindo and Ogooué-Lolo. It encompasses an area of almost 298,758 ha with a five km-wide buffer zone of 182,268 ha surrounding the national park's boundaries (see table 1).

INP is subject to a transitional equatorial climate, with two main rainy seasons from October to November and from April to May and is crossed by a network of picturesque black-water rivers. The southern part of the nominated property is within the Langoué River system. The Djidji River drainage in the central part of INP is largely covered by the nominated property, whilst Ivindo River and interlaced tributaries in the north-west of INP belong to a transboundary watershed with Cameroon and Congo. A series of rapids and waterfalls bordered by intact rainforest mark this section of Ivindo River, of which the most important ones are Mingouli falls, at a height of 48 m and Kongou falls further upstream, at a height of 56 m stretching over a distance of two km. Their aesthetic value has been put forward as a principle element under criterion (vii). This part of the river has also been

designated within a Ramsar Site, which also includes further areas outside and downstream of the nominated property. The highest waterfalls in the nominated property are up to 60 m in height and can be found at the western border of INP on Didji River. The aquatic habitats harbour a diverse fauna of freshwater fishes, including many endemic fish species, 13 fish species recorded as threatened, and at least seven species of *Podostemaceae* riverweeds, with probable micro-endemic aquatic flora at each waterfall. There are many fish species yet to be described and areas in INP that have hardly been investigated. Similarly, a reportedly healthy population of the Critically Endangered Slender-snouted Crocodile (*Mecistops cataphractus*) finds shelter in the Djidji River, whose watershed is free from fishing nets which can be fatal to this Crocodile.

Situated in the lower Guinean Rainforest zone, the nominated property boasts very old *Caesalpinioideae* climax forest on about 30-40% of its area in the south of INP, along with naturally created swampy clearings. The *Caesalpinioideae* old-growth forests have been identified as being biogeographically unique and of high conservation value, supporting, for instance, the very high diversity of butterflies in INP. The old-growth forests house a rich biodiversity, including important and stable populations of threatened flagship mammals and avian fauna. These include species on the IUCN Red List of Threatened Species, such as the Critically Endangered Forest Elephant (*Loxodonta cyclotis*), Western Lowland Gorilla (*Gorilla gorilla*), the Endangered Chimpanzee (*Pan troglodytes*) and Grey Parrot (*Psittacus erithacus*) as well as the Vulnerable Grey-necked Rockfowl (*Picathartes oreas*), Mandrill (*Mandrillus sphinx*), Leopard (*Panthera pardus*), and African Golden Cat (*Caracal aurata*), and three species of Pangolin (*Manidae spp.*). Despite severe losses of Forest Elephant populations in other areas, Gabon is said to house half of the remaining Forest Elephant populations, with INP providing an important safe haven. INP's megafauna benefits from natural swampy clearings of great ecological importance. These marshy clearings are relict herbaceous ecosystems that add to the diversity of the nominated property's vegetation.

The entire INP is uninhabited by people and generally difficult to access and therefore considered to be largely pristine. Only in the northern part of the buffer zone, a few small settlements can be found. Ivindo River is being used for some customary fishing.

3. COMPARISONS WITH OTHER AREAS

The nomination dossier provides a brief account regarding the comparative analysis for Ivindo National Park (INP) in respect to criterion (vii). The intact and pristine river courses and waterfalls of INP are put forward as the primary basis for the nominated property's aesthetic value under criterion (vii). While the nomination concedes that there exist other, more spectacular waterfalls in the world, including emblematic World Heritage properties, it contends that these are all surrounded by other types of vegetation

and disturbed by human intrusions. In contrast, the waterfalls of INP would be embedded in a vast area of intact tropical forest, creating a special ambiance, reported as unique at this scale.

IUCN notes that the case for criterion (vii) is primarily based on the integrity of rivers and waterfalls of the nominated property. However, what is missing is a clear identification and systematic analysis of the value of these attributes compared against waterfalls and rivers in the tropics and other World Heritage properties globally. The nomination does not provide an explanation of how the rivers and waterfalls of INP may or may not represent a superlative natural phenomenon and/or carry an aesthetic value of global importance. Nevertheless, IUCN recognises the aesthetic appeal and particularity of pristine tropical forest interspersed with the braided structure of Ivindo River in the instance of Kongou falls, and potentially others not visited by the field evaluation, which blend in seamlessly with the surrounding forests, offering a myriad of stunning perspectives. This landscape diversity within INP as such however, and the limited extent and scale of these waterfalls would not appear to warrant a case for global significance under criterion (vii), based on the information available. These values, and the wider integrity considerations, can also more appropriately be related to the application of criterion (ix).

The comparative analysis provided in the nomination dossier for criteria (ix) and (x) is based on the overarching observation that spatial differentiation within tropical rainforests is so significant at all scales that each protected area can only represent a fraction of faunal and floral diversity, which is distinct from one area to another.

In this vein, the comparative analysis distinguishes, at global scale, the Guineo-Congolian forests from Asian tropical forests and neotropical forests on the grounds of their species composition. Therefore, the comparative analysis does not engage in detailed comparison with properties in Asia and Latin America and focuses on a comparison of African tropical forests only. At regional scale, the nomination compares the nominated property with the eight World Heritage properties that are located in the Guineo-Congolian forest region. The nomination argues that the sub-regional differentiation within the Guineo-Congolian forest region is such that the forests of the Lower Guinea sub-region, where INP is situated, are clearly distinct from those in the Congolian sub-region. This is suggested by studies showing that the forests of Lower Guinea are the richest of all Guinean-Congolian forests, including the highest percentage of endemic species, as exemplified by *Caesalpinioideae*. Similarly, at sub-regional level, the comparative analysis highlights the division of Lower-Guinean forests into four distinct zones, which each exhibit a considerable variation of the floristic composition in the order of 80%. The forests of the interior plateau are marked by a large diversity of *Caesalpinioideae*, which may be most accentuated in the Ivindo basin as the most diverse region of Gabon. This also holds true at site level, where the forests at the Western border differ

from the Eastern border at a rate of 60%. In principle, the same would apply to the fauna, though with a different pattern.

IUCN, in collaboration with UN Environment WCMC, has undertaken supplementary comparative analysis, focusing on criteria (ix) and (x). Regarding criterion (ix), it can be noted that while the Ecosystem and Relict Cultural Landscape of Lopé-Okanda (Gabon) World Heritage property is also identified in the nomination dossier as being part of the Lower-Guinean forest, it is also clearly differentiated from Ivindo, being comprised of large areas of savannah bisected by gallery forest. It deserves to be also noted that this ecoregion, and the nominated property in particular, is part of one of the world's last remaining tropical areas still containing forest wildernesses. The Ivindo landscape area has been described as representative of one of the richest regions of Lower Guinea in terms of biodiversity, hosting a high number of species that are endemic or sub-endemic to the interior plateaus of Gabon.

Furthermore, the nominated property lies within two freshwater ecoregions that are not yet represented on the World Heritage List. INP is part of the Gulf of Guinea Rivers and Streams, a freshwater priority ecoregion that is thus far represented by only one other World Heritage property, which are characterised by the presence of many species of vertebrates and trees only known to occur within this ecoregion, and significant ichthyologic values noted further below. The watercourses of INP stand out in that they are wild and free-flowing rivers meandering through pristine tropical forest, with hardly any human visitation of large parts of INP. From that perspective, the nominated property can arguably be seen as exceptional, providing sufficient space for continued and undisturbed evolutionary processes.

The nominated property is characterised by large and diverse forest ecosystems and is situated in ecoregions, which are only represented by two other World Heritage properties, one of which is the Dja Faunal Reserve. It is worth noting though that the Dja Faunal Reserve, and the Tentative List sites Ecosystème et paysage culturel pygmée du massif de Minkébé (Gabon), and Parc national d'Odzala-Kokoua (Congo) – both previously nominated under biodiversity criteria – are not part of these freshwater ecoregions. The large and diverse forest ecosystems of INP are of significant conservation value, notably due to the presence of very old *Caesalpinioideae* forests. Awoura forests (*Julbernardia pellegriniana*) are endemic to the Lower Guinea region, and forests of *Eurypetalum batesii* are endemic to Gabon. Both contribute to the nominated property's biodiversity, along with the presence of natural swampy clearings.

Regarding criterion (x), the vegetation of the nominated property appears to be highly biodiverse. The Guineo-Congolian forests within the nominated property are intact and include a large proportion of mixed mature forests. Many large and medium-sized mammal species, including several species of primates, contribute to the nominated property's faunal

diversity, including globally threatened species (see previous section). Even though the site has not been intensively surveyed, it is known to host a significant number of bird, reptile and amphibian species. Numerous rare and/or endemic plant and animal species are also found in INP. In addition, IUCN notes that, together with two other protected areas, the nominated property is considered to be amongst the most irreplaceable protected areas in the world for mammal, bird and amphibian conservation.

Ivindo River hosts a dozen species of weakly electrogenic fishes of the genus *Paramormyrops* (*Mormyridae*) whose speciation in the Ivindo River is a unique biological phenomenon, which has not been observed in the Dja Faunal Reserve. External ichthyologist reviewers noted sixteen fishes exclusively native to the Ivindo, with particular richness among killifishes (*Cyprinodontiformes*) and elephantnose fishes (*Mormyridae*), including very specialised and fragile species of the genus *Ivindomyrus*, named after Ivindo River. Riverine fish species flocks are globally rare and the *Paramormyrops* flock is unique in Africa. According to the current state of knowledge, there is no other stream environment in Africa that boasts so many congeneric fish species living within a circle of a few hundred-meters only. At least twelve fish species that are potentially undescribed also occur throughout the Ivindo region and certainly or probably exist within INP's borders. Even though much further investigation into INP's ichthyofauna is warranted, IUCN supports the scientific opinion to date strongly suggesting that Ivindo's fish diversity bears global significance due to the intersection of high endemism, the presence of an exceptional flock of *Mormyridae*, and its biogeographic connections to adjacent ichthyofaunas.

Based on the above, IUCN considers that the nominated property appears to be of global significance in terms of biodiversity values of the nominated property, both with regards to criteria (ix) and (x). The combination of a large area of untouched climax *Caesalpinioideae* forest and river ecosystems without human impact provide justification for criterion (ix). Criterion (x) is strongly supported by INP's rivers harbouring a globally significant fish fauna at exceptional endemism, a highly biodiverse flora and habitats critically important for mammal, bird and amphibian conservation. In terms of criterion (vii), INP may be significant at regional scale; at global scale however, a compelling case has not been made.

4. INTEGRITY, PROTECTION AND MANAGEMENT

4.1. Protection

The nominated property was declared a National Park in 2002 with relevant legislation coming into force in 2008. The northern part of the national park had been protected since 1971 through the integral reserve of Ipassa, covering 10,000 ha. Ivindo National Park (INP) at almost 300,000 ha is owned by the state and receives the highest national protection available in the Gabonese protected area system. Legislation

suggests that INP should be regarded as a Category II protected area.

The National Park Law provides for a zonation of the nominated property to specify levels of protection and use; however, this zonation has not been fully defined yet as biological knowledge is still insufficient and requires further study. In any case, the national park decree limits all human activities inside the nominated property except those stemming from customary use. The only use permitted in INP is fishing under the supervision of national park staff. The protection of INP also benefits from its difficult accessibility. There is a mechanism bringing together park management and local communities, called the Local Consultative Management Committee (CCGL). Overall, the formal protection status is therefore considered adequate.

However, while these provisions are considered adequate, they do not appear to guarantee that extremely damaging activities are prevented, as the previous consideration of a hydro-electric plant along the park's waterfalls suggests. Mining is not allowed inside national parks in Gabon, but may be implemented in buffer zones, subject to an Environmental Impact Assessment (EIA) demonstrating that such activities do not entail negative impacts on the park.

The buffer zone is also legally protected and has to be considered in the complete zoning of the park, along with the surrounding peripheral zone. The IUCN field evaluation noted that the State Party is planning to amend the legal protection for national park buffer zones. In supplementary information, the State Party clarified that the main purpose of this legal change to be adopted in 2021 is to enable local populations living in buffer zones of national parks to acquire land titles. This legal change would neither entail changes to the boundaries of the nominated property's buffer zone nor an amendment to the protective functions of buffer zones.

Logging concessions cover the vast majority of the buffer zone, but have to leave untouched a 500m strip off the national park boundary. The IUCN World Heritage Panel has expressed its concern about the extent of logging concessions in the vicinity of the nominated property and the possibility of edge effects detrimental to the nominated property. While the State Party assured in supplementary information that logging is limited to selective cuts of two trees per hectare, and that all concessions shall receive FSC certification by the end of 2022, only two of the eleven existing concessions currently hold such certification at the time of the IUCN evaluation process.

In conclusion, IUCN considers that the protection regime of the nominated property is adequate, provided that the previously considered hydropower dam inside INP or similar infrastructure projects remain unequivocally and permanently abandoned. IUCN is further of the view that the protection of INP's buffer zone should be strengthened to reduce any possible edge effects on the nominated property.

IUCN considers that the protection status of the nominated property partially meets the requirements of the *Operational Guidelines*, and that the protection in the nominated property's buffer zone should be enhanced.

4.2 Boundaries

The boundaries of the nominated property are identical to those of Ivindo National Park (INP). At a width of 5 km, the buffer zone of INP encompasses an area that is equal to almost one third of INP. While its 5 km standard width does not follow ecological boundaries, it appears to be of sufficient size in principle. However, the buffer zone almost entirely overlaps with logging concessions, which is discussed in the previous and subsequent sections.

INP covers free-flowing rivers and unexploited old-growth forest, including riverine forest with associated fauna. Notably, INP encompasses a significant part of the Djidji watershed. Ivindo River intersects with INP at a length of approximately 80 km and continues to be unimpeded beyond the nominated property.

Natural swampy clearings are an important feature complementing floral diversity and supporting megafauna. While these natural clearings convince through their intactness, INP includes only a fraction of a vast group of swampy clearings stretching from northern Congo to south-eastern Cameroon and north-eastern Gabon. Therefore, their potential global significance could only be represented through a serial approach but not by INP alone.

In contrast, the *Caesalpinioideae* forests only occur in the remaining highly natural parts of the lower sections of the Ivindo watershed, including in the nominated property. Research based on satellite imagery confirms that INP's forest cover remained almost entirely unchanged over the last decades, supporting the claim of INP's excellent integrity. IUCN notes though that large areas of *Caesalpinioideae* can be found east of INP. Smaller areas have also been observed in the south of Ivindo National Park. When comparing the size of INP with that of other inscribed World Heritage properties and Tentative List sites, INP is comparatively small in size and could potentially cover *Caesalpinioideae* forests more fully. However, even if *Caesalpinioideae* and other elements of the nominated property's biodiversity range over an area larger than that of the national park, INP is still vast enough with its almost 300,000 ha to conserve its biodiversity and large tracts of old-growth climax *Caesalpinioideae* forests, flanked by Awoura (*Julbernardia pellegriniana*) and *Eurypetalum batesii* as well as associated fauna, in particular insects requiring old-growth forest, including endemic insects.

Overall, IUCN considers that the boundaries of the nominated property are adequate as they capture vast and viable areas of INP's key values exhibiting a superb integrity.

IUCN considers that the boundaries of the nominated property meet the requirements of the *Operational Guidelines*.

4.3 Management

The management of the nominated property is carried out under the responsibility of the National Agency of National Parks (ANPN) of Gabon. Ivindo National Park (INP) is essentially subject to a non-intervention regime, with the exception of controlled fishing and negligible levels of visitation in the few areas that are accessible. The nominated property has a comprehensive Management Plan whose term was however supposed to expire in 2020. However, the nomination dossier does not specify in how far the plan has been implemented to date. At the time of the field evaluation, i.e. two months before the plan's expiry, there appeared to be little information was available in terms of the Management Plan's implementation levels, as well as in terms of review and consultation processes for the new management plan. Nevertheless, the State Party confirmed in supplementary information that the term of the Management Plan has been extended until 2022 as the revision had to be postponed due to Covid-19.

While the Management Plan is comprehensive and ambitious, there is no clear indication on how the Plan was going to be monitored for effectiveness, nor on the steps in place to develop the next five-year Management Plan. The nomination indicates that only 53 of 75 indicated staff positions are filled. Many of the activities and objectives were not achieved during the 2016-2020 timeframe. The Management Plan foresaw an estimated budget of 10 million Euro for a period from 2016-2020, however the nomination dossier indicates that only 6.75 % of this estimated budget has been mobilised. Supplementary information from the State Party estimates 1.3 million Euro as annual budget need. Various funding sources are envisaged, or in the process of being negotiated, but at the time of finalisation of this evaluation report not at a stage where the short- and medium-term funding is confirmed.

The State Party plans to incorporate a monitoring plan in the new management plan on the basis of an inventory of fauna conducted in the period of 2017 to 2020. Additional work on inventories of flora is planned. IUCN considers it important to ensure that a proper inventory and monitoring plan is included in the Management Plan to close knowledge gaps on biodiversity within INP and to inform park management, including the zonation of INP.

The review process of the management plan is now foreseen to take place in the second half of 2021 and is expected to take into account a potential World Heritage listing. In response to IUCN's request for information on consultation processes for the existing Management Plan and its envisaged revision, the State Party states that it has conducted a participatory process, but did not provide any details or indications as to what is foreseen for the review process.

IUCN considers that the management of the nominated property does not fully meet the requirements of the *Operational Guidelines*, notably in terms of the absence of the expected up-to-date management plan and the levels of committed funding to the conservation of the nominated property.

4.4 Community

The nominated property is not inhabited, and only a few villages are located within the buffer zone. Under current law, people who live in the buffer zone are not allowed legal title to the land, which is owned by the State. The State Party plans to amend the buffer zone law to enable local populations to acquire land titles.

The Local Consultative Management Committee (CCGL) is inscribed in the law and was developed to bring in input from all stakeholders including the surrounding local communities as well as the surrounding forestry concessionaires. However, the IUCN field evaluation had no chance to meet with the CCGL as it was not operational at the time of the mission due to re-elections. Following IUCN's request for supplementary information, the State Party confirmed that the CCGL is functional and has been consulted during the drafting process of the nomination and that public consultations had been held. INP staff endeavors to solve human-elephant conflicts in cooperation with local communities.

IUCN considers it important that the new management plan for the nominated property is developed through a fully participatory process. This participatory process needs to include consultations with local communities both in the buffer zone and adjacent to the nominated property. The 2021 review process for the new management plan provides an opportunity to conduct consultations in line with paragraph 123 of the *Operational Guidelines*.

4.5 Threats

The vast majority of the area of Ivindo National Park (INP) remains virtually untouched by human activities, also thanks to its difficult accessibility. While ten percent of the nominated property's area have in the past been affected by logging on a western fringe of the park before INP was designated, the nominated property exhibits a compelling integrity and is generally in an excellent state of conservation. At the same time, while the nominated property is large enough to provide for the effective conservation of its values, it remains important to strive to protect *Caesalpinioideae* also beyond INP as large parts of this old-growth forest are also located outside the nominated property. Likewise, INP's freshwater biodiversity, which includes many fragile species, will depend on the protection from potential impacts of developments upstream and downstream of INP. Wide-ranging fauna requires protection from poaching and other threats also outside national park boundaries, as exemplified by population declines of the Critically Endangered Forest

Elephant (*Loxodonta cyclotis*) as a consequence of poaching for ivory in nearby national parks.

The conservation value of *Caesalpinioideae* old-growth habitats is emphasised by the fact that they are becoming increasingly rare due to logging concessions in almost all areas surrounding INP, including selective logging in the buffer zone of INP. While logging is prohibited within the nominated property, felling may reach up to 500m from INP's boundaries. The nomination dossier argues that the positives of the forestry concessions outweigh the negatives. Especially those concessions in the buffer zone that are FSC-certified would facilitate the combat against poaching as they enable the control of access. The National Agency of National Parks (ANPN) is also cooperating with several logging companies to address poaching threats.

While these logging concessions for selective cuts arguably create less fragmentation than other productive land uses, such as palm oil plantations, forestry operations include clearances for stocking, and felling focuses on the largest and most valuable trees. These operations have already resulted in the introduction of the invasive ant *Wassmannia auropunctata* to INP and also open up previously inaccessible areas through the creation of access roads. Access roads are supposed to be decommissioned after completion of the exploitation, but an effective control appears to be an ambitious undertaking in light of a total of eleven concessions located on all sides of the national park, where the Critically Endangered Forest Elephant (*Loxodonta cyclotis*) is also present. IUCN also notes that thus far only two of these eleven logging concessions are FSC-certified. Hence, there is no present guarantee for the sustainability and control of these concessions.

In this respect, it is important to note that anti-poaching efforts may be constrained by insufficient staffing and funding of the park management. It was suggested during the field evaluation that increased poaching of forest elephants in Minkébé and Mwagna national parks has pushed the remaining elephant populations south to areas where they are safe, including in INP thanks to the nominated property's inaccessibility. If the surrounding areas become more accessible due to infrastructural developments and logging concessions, poaching may become a threat to the nominated property in future, unless capacity for effective anti-poaching measures is ensured. This will be crucial to sustain INP's important role for the protection of critically endangered forest elephants.

Another complex of potential threats to INP includes envisaged developments for the exploitation of the Bélinga iron ore deposits, located approximately 180 km northeast of the nominated property. First, sediment from the mine and pollution from tailings could affect the thus far pristine Ivindo River and its aquatic biodiversity. Second, transport infrastructure for the operation of the mine could have negative impacts on the park. A transmission line and a new railway line are being considered in proximity of INP. Third, a hydropower plant planned to be located

downstream of the nominated property could truncate the thus far unimpeded river system and affect INP's aquatic biodiversity. The hydropower plant had initially been planned inside INP, on the Kongou falls, but discarded due to geological issues. Finally, these activities could have further knock-on effects such as fragmentation of the forest landscape and increased pressure on the natural resources through immigration.

Tourism and levels of visitation remain very low for the time being, with less than 200 people visiting annually prior to Covid-19. Internal zoning of INP foresees a zone for ecotourism according to supplementary information submitted by the State Party. This would include five hotels inside INP, implying further infrastructural encroachment, and hence avenues for poaching, into the park.

Overall, IUCN notes with concern the number of threats that have the potential to affect the potential OUV of the nominated property, but acknowledges that the nominated property so far exhibits an exceptional integrity.

In conclusion, IUCN considers that while the requirements of the *Operational Guidelines* are met in terms of the integrity of the nominated property, however protection and management requirements are only partially met.

5. ADDITIONAL COMMENTS

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6. APPLICATION OF CRITERIA

Ivindo National Park (Gabon) has been nominated under natural criteria (vii), (ix) and (x).

Criterion (vii): Superlative natural phenomena or natural beauty or aesthetic importance

The nominated property hosts scenic and varied waterfalls, in forest landscapes which are virtually untouched by human activity. However, the nomination does not provide detail as to how the rivers and waterfalls of INP may or may not represent a superlative natural phenomenon and/or carry an aesthetic value of global importance. While IUCN acknowledges the aesthetic appeal and scenic value of pristine tropical forest interspersed with unimpeded black water river branches, the waterfalls do not stand out compared to other World Heritage waterfalls globally in terms of their extent, and dimensions. They may be of regional significance but, based on the documentation available, there does not appear to be a strong case for global significance under criterion (vii). Furthermore the attributes noted as of significance under this criterion, such as the undisturbed forests and river landscapes, can also be considered to be represented under criterion (ix).

IUCN considers that the nominated property does not meet this criterion.

Criterion (ix): Ecosystems/communities and ecological/biological processes

Ivindo National Park combines a vast area of untouched climax *Caesalpinioideae* forest interspersed with pristine river ecosystems. The nominated property is characterised by large and diverse forest ecosystems whose vast majority of area exhibits an exceptional intactness, notably the old-growth *Caesalpinioideae* forests. Ivindo National Park is situated in two freshwater ecoregions, Ogooue - Nyanga - Kouilou - Niari and the Southern Gulf of Guinea Drainages - Bioko, neither of which are yet represented on the World Heritage List. The watercourses of INP stand out in that they are wild and free-flowing rivers meandering through pristine tropical forest, with hardly any human presence in large parts of INP. From that perspective, the nominated property can be seen as exceptional, providing sufficient space for continued and undisturbed evolutionary processes. The rivers of Gabon provide crucial habitat to one of the world's best examples of remarkable speciation in flowing waters. Evolutionary processes are exemplified by species flocks in which the speciation process has been working at very high pace for reasons that are not yet understood.

IUCN considers that the nominated property meets this criterion.

Criterion (x): Biodiversity and threatened species

The nominated property contains a highly biodiverse flora and habitats critically important for mammal, bird and amphibian conservation. The old-growth forests of the nominated property boast a rich biodiversity, including important and stable populations of threatened mammals and birds. These include the Critically Endangered Forest Elephant (*Loxodonta cyclotis*), Western Lowland Gorilla (*Gorilla gorilla*), the Endangered Chimpanzee (*Pan troglodytes*) and Grey Parrot (*Psittacus erithacus*). The vegetation of the nominated property appears to be highly biodiverse. Numerous rare and/or endemic plant and animal species are also found in the nominated property. The fish fauna within and around Ivindo National Park holds global significance on account of its exceptional endemism, distinctive species assemblage reflecting historical connectivity with several adjacent basins, and inclusion of one of the world's most impressive examples of a riverine flock of species, belonging to the genus *Paramormyrops* (*Mormyridae*). Hardly anywhere else in the world have so many similar fish species been observed within just a few hundred-meter radius, according to current knowledge with much of Ivindo still remaining to be sampled.

IUCN considers that the nominated property meets this criterion.

7. RECOMMENDATIONS

IUCN recommends that the World Heritage Committee adopts the following draft decision:

The World Heritage Committee,

1. Having examined Documents WHC/21/44.COM/8B and WHC/21/44.COM/INF.8B2;

2. Refers the nomination of **Ivindo National Park, Gabon**, back to the State Party, noting the strong potential for this nominated property to meet criteria (ix) and (x), in order to allow it, with the advice of IUCN and the World Heritage Centre, if requested, to:

- a) complete and provide the new and revised management plan for Ivindo National Park, and to ensure that this plan:
 - i. takes into account the protection of the potential Outstanding Universal Value (OUV) of the nominated property, including through proper inventories and a monitoring plan for its freshwater biodiversity and *Caesalpinioideae* forests,
 - ii. is developed through a fully participatory process, including consultations with local communities both in the buffer zone and adjacent to Ivindo National Park,
 - iii. is supported by secure, sufficient and sustainable funding for the management of Ivindo National Park,
 - b) ensure any potential infrastructure projects outside the nominated property will not negatively impact the potential OUV of the nominated property, and would be subject to prior assessment in line with the IUCN World Heritage advice note on Environmental Assessment,
 - c) Increase the area of the buffer zone that would not be subject to logging regimes to the greatest extent possible, to reduce any edge effects on the natural systems inside the nominated property, and ensure that all concessions in the buffer zone of Ivindo National Park have received FSC certification and that they will be strictly controlled and managed without any significant impacts on the potential OUV of the nominated property,
 - d) ensure that any future internal zonation of Ivindo National Park is based on inventories of the biodiversity values and does not allow tourism infrastructure, such as hotels, to be located inside the park;
3. Expresses its appreciation for the designation of Ivindo National Park and the extensive efforts to date regarding the nomination of this site.

Map 1: Nominated property and buffer zone

