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FSC Ecosystem Services Certification Document (public)

FSC Ecosystem Services Certification Document:

INDUSTRIE FORESTIERE DE OUESSO IFO

in

Département de la Sangha, République du
Congo

Report Finalized: February 27, 2023

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Audit team: Gabe Bolton, Lead Auditor,
Ecosystem Services

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List of validated ecosystem services impacts	Code	Date of validation of the impact	Valid until
Conservation of species diversity	ES 1.16	21/12/2022	03/12/2024

Part A: General requirements

1.1 In group certification membership rules shall clarify the division of responsibilities between group members and the group entity for demonstrating ecosystem services impacts	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>
Comments:	
1.2 When only some of the members of the certified group decide to comply with this procedure, specific rules and identification systems shall be established to differentiate the members applying this procedure from the other members	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>
Comments:	
1.3 The organization shall make the ESCD available in at least one of the official language(s) of the country, or the most widely spoken language in the area in which the management unit is located	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Comments: The ESCD was prepared in French, the official language of the Republic of Congo.	
1.4 The organization shall update the ESCD at least every five years	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Comments: IFO indicated they are aware of this requirement.	

Part B: Additional management requirements for the proposed ecosystem services impacts

2. Management requirements for all proposed impacts	
2.1 Peatlands are not drained.	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>
Findings required if No: IFO does not drain peatlands.	
2.2 Wetlands, peatlands, savannahs, or natural grasslands are not converted to plantations or any other land use.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Findings required if No: As verified through document review, field inspections and interviews, IFO implements reduced impact selective logging (RIL), utilizing natural regeneration technique. IFO does not carryout any conversion activities.	
2.3 Areas converted from wetlands, peatlands, savannahs, or natural grasslands to plantation since November 1994 are not certified, except where: 2.3.1 The organization provides clear and sufficient evidence that it was not directly or indirectly responsible for the conversion; or 2.3.2 The conversion is producing clear, substantial, additional, secure, long-term conservation benefits in the management unit; and 2.3.3 The total area of plantation on sites converted since November 1994 is less than 5 per cent of the total area of the management unit.	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>
Findings required if No: IFO has not implemented and has plans to implemented any conversion within the certified MU.	

2.4 Knowledgeable experts independent of the organization confirm the effectiveness of management strategies and actions to maintain and/or enhance the identified high conservation value areas.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Findings required if No:	
3. Management requirements for specific proposed impacts	
Requirements for impact ES1.3 (Maintenance of an ecologically sufficient conservation area network)	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>
Requirement for impact ES1.4 (Conservation of natural forest characteristics) and 1.5 (Restoration of natural forest characteristics)	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>
Requirement for impact ES1.6 (Conservation of species diversity) and 1.7 (Restoration of species diversity)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
3.4 Management activities maintain, enhance, or restore rare and threatened species and their habitats, including through the provision of conservation zones, protection areas, connectivity, and other direct means for their survival and viability.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Findings: Based on comparative population studies conducted in 2007 and 2014, IFO management activities have resulted in an increase in population of great apes (Gorilla and Chimpanzee) and stable population of elephants within the MU. IFO has signed a contract for funding (in excess of 200,000 euros) to carry out another inventory of focus species (Gorillas, Chimpanzee and Elephants) during 2023.	
Requirements for impact ES2.1 (Conservation of forest carbon stocks)	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>
Requirements for impacts related to watershed services	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>
Requirements for impacts related to soil conservation	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>
Requirements for impacts related to watershed services	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>
Requirements for impacts related to recreational services	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>

Part C: Information regarding steps to demonstrating impact

Step 1: Declaration of the ecosystem service(s)	
4.1 The organization shall declare the ecosystem service(s) for which an impact is proposed <input checked="" type="checkbox"/> Biodiversity conservation (ES1) <input type="checkbox"/> Carbon sequestration and storage (ES2) <input type="checkbox"/> Watershed services (ES3) <input type="checkbox"/> Soil conservation (ES4) <input type="checkbox"/> Recreational services (ES5)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Findings: Biodiversity conservation has been declared (ES1). More specifically, IFO management actions allow the maintenance of populations of priority species (gorillas, chimpanzees and forest elephants) and the ecological integrity of the forest, while offering significant economic revenues to the State and local populations.	
4.2 The organization shall briefly describe the legal tenure to manage, use, and/or receive payments for the declared ecosystem service	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Findings: The ESCD provides a description of legal management tenure through forest concession license and most relevant forest legislation. Ouesso Forest Industry (IFO), a company of the Interholco group, has obtained a long-term concession agreement to manage the management unit of the Ngombé forest in northern Congo. The concession, which covers 11,596 km ² , is the largest forest management unit in Congo and to date the largest management unit in the country. The centrepiece of forest legislation in the Republic of Congo is the Forest Code – Law No. 33-2020 of 8 July 2020 ⁴⁶ (replacing Law No. 16-2000, amended by Law No. 14-2009 in 2009), which describes the governance framework for the forest sector and sets the rules for the exploitation and marketing of forest products. The Forest Code provides that activities authorised in the national forest domain must be carried out in such a way as to avoid its destruction, on the basis of sustainable management of forest ecosystems (Articles 49 and 50 of Law No 33-2020) ⁴⁶ .	

4.3 The organization shall list any management objectives related to the declared ecosystem service, including any relevant objectives from the management plan	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Findings:

The ESCD lists the following management objectives related to the biodiversity conservations:

The conservation of the focus species involves first of all i) the preservation of the integrity of their habitat, ii) population monitoring efforts and iii) anti-poaching systems (AML). These objectives together with the management measures are described in the various IFO management documents (management plan, management plans, ESIA, wildlife management plan, HCV study).

The preservation of the integrity of the habitat is achieved through several actions:

- Compliance with the rotation provided for in the management plan or only 1/30th of the production series is exploited each year allowing the recovery of the forest. The annual exploitation area therefore corresponds to 0.15% of the total area of the concession (1.16 million hectares) of forest). Of this total area, IFO harvests only 0.5 to 1 tree per hectare, once every 30 years. About 0.25 m³ of timber per hectare is selectively harvested from an area of 800,000 ha (production series). Calculated over the entire forest area of 1.16 million hectares, this represents less than 0.17 m³ of wood per hectare per year. In 2018, Global Forest Watch observed that the Sangha – where FSC-certified production forests are located, including MUNgombé, had a tree cover of nearly 100%, compared to a national average of 64%.
- This annual selective exploitation is done in compliance with the Minimum Management Diameters (DMA) and the EFIR low impact logging rules that minimize the impacts on the residual forest mass, soils, watercourses and biodiversity.
- The integrity of the habitat is reinforced by the setting aside of more than 27% of the total area of the concession, or 308,000 ha. These areas placed in reserve are not exploited during the entire duration of the development plan.

Wildlife monitoring efforts make it possible to know the evolution of wildlife species populations and define effective protection actions. In this sense, a new study of the area that had been studied in 2007 was conducted between February and October 2014 through the landscape of the IFO concession of Ngombé and the Ntokou-Pikounda National Park in collaboration with WCS. The study area was divided into different strata to examine the effects of logging and human pressure on wildlife abundance. Both studies used identical methods to allow comparison between the baseline study and the current situation.

The anti-poaching systems (AML) include internal IFO patrols and the ecoguard program.

The AML is carried out by mobile patrols (on foot, by canoe, by car) and by surveillance in fixed posts distributed on the main traffic corridors of the MUNgobé. Fixed posts are also installed in the western part of the MU, by the eco-guards of the PNOK. Permanent positions are permanently occupied. A ProGEPP Coordinator develops mission programs. Within PROGEPP, a person is responsible for analyzing the monitoring data of the activities of the LAB, in the same way as the SMART method.

Mobile patrols are carried out in the areas concerned by the exploitation, in areas where an activity is suspected (on intelligence) and during

information campaigns with CLPA. Mixed missions can also be organized with partners (PNOK eco-guards, PNTTP eco-guards, soldiers of the Ouessou city unit. IFO works closely with PROGEPP (IFO Wildlife Managers). A specific team (subcontracted) is responsible for maintaining the boundaries of the MU and the different development series.

PROGEPP Ngombé also carries out environmental education with CLPAs and socio-economic monitoring in model villages.

Auditor verified through document review, interviews with responsible staff and field inspections that IFO is actively implementing these management objectives.

Step 2: Description of the ecosystem service

(it is recommended that you describe this step in approximately 1,000 words for all the clauses)

5.1.1 The current condition of the ecosystem service

Yes No

Findings:

The auditor verified through document review (Plan d'Amgt MUNgombé V4 23 janvier 08, IFO-92-01-v9_MUNgombé - FHVC_Oct 2020_final_High Conservation Values_24 10 2022, IFO_81-v1_MUNgombe - Monitoring 2021_13 Sept 2022, Maisels et al 2015 Wildlife & human impact survey Ngombe-Ntokou-Pikounda EN v2_FINAL) the current conditions detailed in the ESCD.

The whole of MU Ngombé is covered by forests belonging, according to the Yangambi classification, to the dense evergreen humid forests of the Guinea-Congo region and closed forest formations under the main dependence of the soil (swamp forests permanently flooded and forests flooded periodically).

In this forest area (64% of the total area) two main groups are clearly distinguished: dense forests on the one hand, which represent 24% of the total area, open forests with Marantaceae and transition forests, which represent 21% of the total area and different stages of evolution or degradation of these forests with intermediate forests (F3) which, alone, represent 17% of the total area.

A large part of the MU (33%) is covered by formations related to particular ecological conditions, including hydromorphic soils. Permanently flooded formations such as swamps account for most of the surface (25%), while flood-prone formations account for 8%.

The MU Ngombé is particularly rich in fauna, it is particularly notable for the presence of populations of large mammals with protected status such as the western lowland gorilla (*Gorilla gorilla*), the chimpanzee (*Pan troglodytes*), and the forest elephant (*Loxodonta africana*). The leopard (*Panthera pardus*), also protected, is the largest carnivorous predator observed in the region. Ungulates, buffalo (*Cyncerus caffer*), Suidae (hippos), large reptiles, crocodiles (*Crocodilus niloticus*) are also present in the region.

<p>5.1.2 The past condition of the ecosystem service, based on best available information (small and low-intensity managed forests are not required to comply with this clause unless required by the methodology used according to Step 5)</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
<p>Findings:</p> <p>The ESCD details the past condition of the ES at the time IFO obtain the concession liscense of the Ngombe MU in December of 1999. At that time the concession liscense was awarded, there was no wildlife management activity in MU Ngombé. A first AML Unit was set up in 2004, between the Ministry in charge of forests and IFO. This unit was composed of 15 eco-guards and supervised by a patrol leader appointed by the Ministry in charge of forests. The first wildlife monitoring was set up in 2007 and even more intensive in 2014/2015 when WCS started working in MU Ngombé.</p> <p>The PROGEPP teams, and in particular the AML activity, have been reinforced to reach 25 eco-guards and finally 28 to 30 eco-guards. Research, socio-economic monitoring and environmental education activities have been implemented with the partner WCS. In March 2019, WCS withdrew from the PROGEPP scheme due to a decrease in donor funding. IFO and the Ministry of Forestry continued activities and IFO's budget was increased.</p>	
<p>5.1.3 Areas within and outside of the management unit that contribute to the declared ecosystem service (small and low-intensity managed forests are not required to describe areas outside the management unit unless required by the methodology used according to Step 5)</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
<p>Findings:</p> <p>The ESCD provides an description of the surrounding landscape where the MU is located.</p> <p>The MU is included in the reference zones for significant large forest landscapes and excluded from particular areas ("Biodiversity hotspots" of C.I., "Border Forests" of W.R.I.). The MU is part of the national CARPE Tri landscape "Dja-Minkebé-Odzala" in Cameroon, Congo, Gabon. The center and south of the MU are made up of large expanses of forest vegetation and the presence of fauna following a natural pattern of distribution and abundance, except the area along the N2 National Road.</p> <p>The Odzala-Kokoua National Park (PNOK) with an area of 1.35 million ha, and the Ntokou Pikounda Park (PNOK) with an area of 427,200 ha, border with the MU. The PNOK is composed of flora and fauna ecosystems similar to those of the MU Ngombé, especially in the southwestern and western parts of the MU. The Ntokou Pikounda National Park has comparable ecosystems south of MU Ngombé. Like the Odzala-Kokoua National Park, the MU Ngombé is particularly important because of the high density of gorillas. This is due to the abundance of herbs of the Marantaceae and Zingiberaceae families in the undergrowth. On the other hand, probably because of the opening of the forest, the density of chimpanzees and other monkeys, which prefer dense forest as habitat, is lower than in the concessions to the east of the MU (attributed to CIB).</p>	
<p>5.1.4 Beneficiaries of the ecosystem service</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>

Findings:

The ESCD describes the beneficiaries as follows:

There is a wide range of beneficiaries of biodiversity conservation (especially wildlife) in the Republic of Congo.

- In terms of national/international context, wildlife conservation in the Republic of Congo brings benefits for the country's international positioning on the subject of green economy and international commitments on climate and biodiversity. Also in the economic field, tourism operators benefit, and possibly local communities when the sector develops.
- Scientific communities also benefit from these conservation and responsible management actions, being able to use concessions to collect biological data.
- The forests of the Congo Basin are home to particularly endangered endemic species, which are of inestimable value internationally.
- If adequate payment for this ecosystem service is implemented, the organization will be able to maintain and/or improve its conservation measures. These are very expensive, in a very complicated context in terms of governance and economy. This will allow the organization to continue to promote other economic and social benefits for local communities and the state, which will ensure the long-term benefits of biodiversity conservation for all stakeholders, local, national and international.

5.1.5 Threats to the ecosystem service, both human-induced and of natural origin, within and outside of the management unit (small and low-intensity managed forests need describe only threats within the management unit)

Yes No

Findings:

The ESCD describes threats as:

Poaching is the direct and main threat to these species. Activities such as unmanaged logging and mining activities are vectors of unsustainable forest practices (thanks to IFO action in 2018, the Minister of Mines cancelled eight of the permits granted on the concession). The increase in the population of Ouessou and the industrial agricultural activities that are developing on the outskirts of IFO as well as the improvement of the road axes that link the north of the country with the capital has produced population increases in the region giving rise to an increased demand for bushmeat.

Great apes: The main threats to great apes around the world are habitat destruction, hunting and disease. In Africa, hunting and habitat destruction are greatly exacerbated by the lack of effective protection. Because of continued hunting throughout their range, and the high additional risks of the deadly Ebola disease, the western lowland gorillas, *Gorilla gorilla gorilla* are currently listed as endangered. The Central African chimpanzees *Pan troglodytes* have been on the endangered species list since 1996.

In the late 1990s and early 2000s, a well-documented Ebola outbreak killed thousands of gorillas in the area, hitting northeastern Gabon and western Congo – including part of Odzala. Studies at a site in Odzala (immediately west of Ngombé).

Elephants: Central African forest elephants are considered a separate species (*Loxodonta cyclotis*) from the bush elephant *Loxodonta africana* and in the most recent IUCN assessment list, the Central African elephant is listed as endangered (Blanc 2008). The main threat to elephants is a very high poaching pressure for ivory, which has had devastating effects on their populations across many African countries, particularly in the central, eastern and western regions (Beyers et al 2011, Bouche et al 2011, 2012, CITES 2013, 2014, 2015; Maisels et al. 2013; UNEP

et al. 2013, Wittemyer et al 2014).

5.1.6 A summary of culturally appropriate engagement with Indigenous Peoples and local communities, related to the declared ecosystem service including ecosystem services access and use, and benefit sharing

Yes No

Findings:

As verified during the audit, IFO conducts regular, culturally appropriate consultation with local and indigenous communities within and around the MU. Communities within and around the MU are forest dependent communities that depend on forest resources for their subsistence. Consultation includes restrictions on hunting protected species and adhering to regulated hunting periods. Posters of protected species were visible on sign boards in villages visited during the audit and interviewed community members confirmed engagement by IFO.

The ESCD details the socio-economic condition of local and indigenous communities located within and adjacent to the MU and results of social impact study which included extensive consultation with communities.

Step 3: Theory of change: Linking management activities to impacts

6.1 For each declared ecosystem service, the organization shall propose one or more of the impacts from Annex B

Yes No

The impacts that can be demonstrated are listed in the five tables of Annex B.

Under each ecosystem service, there are several impacts to choose from. The choice of the impact is of great importance, as it influences the required information in terms of outcome indicators and the necessary comparisons to show evidence of impact.

For example, ES1.1 Restoration of natural forest cover or ES3.1 Maintenance of water quality.

Finding:

IFO has proposed impact 1.6 Conservation of species diversity.

6.2 For each proposed impact, the organization shall develop a theory of change to describe the link between management activities and the impacts, using Annex A as a template

Yes
No

Follow the template below to develop a theory of change (Clause 6.2)

<p>Finding:</p> <p>IFO has developed a TOC that describes the link between management activities and the defined impact. See table below.</p>	
<p>6.3 The organization shall specify in the theory of change:</p> <p>6.3.1 Any management activities that contribute to the proposed impact, including management activities to mitigate threats described in Clause 5.1.5;</p> <p>6.3.2 Outputs that result from the management activities; and</p> <p>6.3.3 Outcomes that result from the outputs.</p> <p>Applicability NOTE: SLIMF may create a simplified theory of change that does not include outputs, but links the management activities directly to outcomes.</p>	<p>Yes <input checked="" type="checkbox"/></p> <p>No <input type="checkbox"/></p>
<p>Findings:</p> <p>The TOC developed by IFO properly links management activities to outputs and outcomes. See table below.</p>	
<p>6.4 The organization should incorporate any new management activities that contribute to the proposed impact in the monitoring plan of the management unit.</p>	<p>Yes <input checked="" type="checkbox"/></p> <p>No <input type="checkbox"/></p>
<p>Findings:</p> <p>IFOs Monitoring System includes the activities that are proposed, all of which are being monitored. Population data for focus species is from studies conducted in 2007 and 2014 and related comparative analysis. These studies showed a significant increase in great ape populations and stable elephahnat populations. IFO has entered into contract with a service provider to implement a new population inventory in 2023.</p>	
<p>6.5 The organization shall identify and briefly describe any contextual factors that may influence the outcomes, e.g. the introduction of new legislation, or the presence of other water users (SLIMF may focus on local contextual factors)</p> <p>Applicability NOTE: To comply with clause 6.5, SLIMF may focus the identification and description of contextual factors on those that are local, such as the presence of other water users.</p>	<p>Yes <input checked="" type="checkbox"/></p> <p>No <input type="checkbox"/></p>
<p>Findings:</p> <p>IFO details the following factors in the ESCD:</p> <ul style="list-style-type: none"> The increase in the population of Ouesso and the activities of industrial and other agricultural activities, which are developing on the outskirts of IFO as well as the improvement of the roads that link the north of the country with the capital can produce population increases in the region giving rise to an increased demand for bushmeat. Conflicts that have erupted in the Republic of Congo and other African countries, particularly in the CAR and the DRC, have led to migration to the North Sangha region. The repetition of this type of event may give rise to increasing pressures on IFO wildlife. 	

- The creation of a SEZ (Special Economic Zone) in Ouessou will contribute in the coming years, to promote the increase of economic activities of the department and cross-border trade. This will lead to an increase in jobs and populations in the department, resulting in an increase in basic needs, with a likelihood of increased pressure on wildlife in the MU, an area bordering Ouessou, in the absence of new projects to support wildlife management.
- On the other hand, limitations in the budgets of conservation partners in the North Congo landscape such as WCS, a limitation of the budgets of the ministry in charge of forests, and can produce a budget limitation in surveillance and anti-poaching actions.
- Law 37-2008 of 28/11/2008 on wildlife management is currently in force, however implementation requirements have not been drafted. IFO and other forest managers are still implementing requirements of former Law 49/83. It is expected that implementation requirements for Law 37-2008 will be defined in the coming years which may have some impact on wildlife management within the MU.

Management activities (clause 6.3.1)	Performance indicators (clause 6.3.2)	Medium-term consequences (clause 6.3.3)	Impact
Monitoring of the emblematic fauna on the IFO concession (by inventories by transects every 5 years)	-Density of gorillas, chimpanzees and elephants IFO concession (individuals/ha)	Knowledge of populations for wildlife management system assessment	1.6 Conservation of species diversity
EFIR logging in accordance with rotation	-Withdrawal per ha -Impacted surface	Habitat availability within the management unit for priority species or rare and threatened species is ensured with selective exploitation and limitation of exploitation impacts	
Establishment of integral conservation areas and protection series	- Number of hectares in integral conservation - Number of hectares in protection	Maintaining habitat availability within the Management Unit for priority species or rare and threatened species	
Satellite-based forest cover monitoring	-Global Forest Watch monitoring data- To determine relevance	Monitoring of possible areas of deforestation	
Combating illegal activities Ecoguard patrols Internal monitoring patrouilles	-Number of ecoguards -Kilometers traveled -Number of seizures of weapons/booby traps and reports of offences	Reducing poaching to maintain populations of priority species	

4: Selection of outcome indicators

List of Impacts/Outcome indicators/targets

<p>Impact 1</p> <p>ES 1.6 Conservation of species diversity</p>	<p>Action: Monitoring of the emblematic fauna on the IFO concession (by inventories by transects every 5 years) Indicator-Densities gorillas, chimpanzees and elephants IFO concession (individuals/ha)</p> <p>Action: EFIR logging in accordance with rotation Indicator - Withdrawal per ha in the 5-year period (over the whole concession) Indicator - % of total IFO area affected by harvesting activity in the 5-year series (trails, log yards, trails and skidding trails)</p> <p>Action: Establishment of integral conservation areas and protection series Indicator - Number of hectares in conservation and integral protection</p> <p>Action: Satellite-based monitoring of forest cover Indicator - Global Forest Watch monitoring data for the Ngombe perimeter</p> <p>Action: Combating illegal activities Indicator- Number of ecoguards Indicator-Kilometres travelled Indicator-Number of seizures of weapons/booby traps and PV of offences</p>	<ul style="list-style-type: none"> • Populations of priority species stable or increasing • Abstraction per ha. <2 feet/ha • % of total area affected by harvesting activity (< 0.5 %) on the MU • Number of hectares in conservation and integral protection = 308,000 • Number of hectares permanently deforested less than 5% of the MU and followed by temporary forest loss (<0.5% of the protection and production series / year). • ≥ 25 eco-guards • ≥ 5000 km in sensitive areas (Nb_Patrouille_distance_annee) • 80 – 150 (Faune_follow-up Programme)
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<p>7.1 For each proposed impact, the organization shall select one or more outcome indicators according to the requirements stipulated in the 'Outcome indicators required' column of Annex B</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
<p>Findings:</p> <p>As shown above, the selected indicators are suitable and in line with Annex B.</p>	
<p>7.2 The organization shall select outcome indicators that are consistent with the outcomes from the theory of change developed according to Step 3</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
<p>Findings:</p> <p>As shown above, the selected indicators are adequate and consistent with the ToC.</p>	
<p>7.3 For the selection of outcome indicators, the organization may: 7.3.1 Select outcome indicators from the examples provided in Annex B; or 7.3.2 Alternatively, based on evidence of relevance to the outcomes, select outcome indicators that are not provided as examples in Annex B.</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
<p>Findings:</p> <p>All outcome indicators are related to the two areas identified in Annex B:</p> <ul style="list-style-type: none"> • Abundance or viability of focal species or rare and threatened species • Habitat availability within the management unit for focal species or rare and threatened species 	
<p>7.4 For each outcome indicator chosen, the organization shall specify a verifiable target that represents a desired future value for the outcome indicator. Applicability NOTE: SLIMF are not required to comply with clause 7.4.</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>

Findings:

IFO has specified a verifiable target that represents current and future desired value for outcome indicators. See table above.

7.5 The organization shall justify the choice of the verifiable target.
Applicability NOTE: SLIMF are not required to comply with clause 7.5.

Yes

No

Findings:

IFO has demonstrated that existing management activities implemented to protect focal species have been effective. This was achieved through the population study conducted in 2014 and the follow up comparison study completed in 2015 that compared the 2007 inventory results with 2014 results which should show an increase in Gorilla and Chimpanzee population and stable elephant population on the MU. Continuing these activities combined with monitoring will allow IFO to continue to demonstrate the ES impact.

Step 5: Methods (it is recommended that you describe this step in approximately 500 words for all the clauses)

<p>8.1 To measure the values of the selected outcome indicator(s), the organization shall either:</p> <p>8.1.1 Choose an applicable methodology from FSC-GUI-30-006 <i>Guidance for Demonstrating Ecosystem Services Impacts</i>; or</p> <p>8.1.2 Use another methodology that conforms to the following eligibility criteria.</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
<p>8.1.2.1 The methodology is suitable for the local context and the outcome indicator to be measured</p>	<p>The ESCD provides the following justification:</p> <p>Since the 2000s, studies of large mammals in large forest areas of Central Africa have used distance sampling along linear transects (Buckland et al. 2001) and reconnaissance walks called "recces" (Walsh et al. 2001). Standard texts were produced to guide the design of sampling, training and field protocols. To date, the results of surveys across the area have been used as a recommendation for landscape design and to assess the status of great apes (Oates et al. 2007b; Walsh et al. 2008) and elephants (IUCN/African éléphant range States 2010) on the Red List as well as for IUCN7 action plans.</p> <ul style="list-style-type: none"> • Buckland et al. 2001; Hedges 2012; Hedges and Lawson 2006; Hedges et al. 2012; Kühl et al. 2008; Maisels 2010; Maisels and Aba'a 2010; Maisels et al. 2008a; Maisels et al. 2008b; Strindberg 2012; Strindberg et al. 2004 • Blake et al. 2008; Rainey et al. 2010; Stokes et al. 2010; Yackulic et al. 2011 • 7 Dunn et al 2014, IUCN and ICCN 2012; IUCN 2014, Morgan et al. 2011; Oates et al. 2007a; Plumptre et al. 2010; Tutin et al. 2005).
<p>8.1.2.2 The methodology is credible, based on best available information (e.g. there are publications that support the use of the methodology; it has been validated through previous use; it has been endorsed by experts)</p>	<p>The ESCD provides the following justification:</p> <p>See details in Maisels, F., Strindberg S., 2014., Study of wildlife and human impact in the forest landscape of Ngombé Ntougou-Pikounda, Republic of Congo. Feb-Oct 2014. WCS Congo Report, 72 p</p>
<p>8.1.2.3 The methodology is objective and replicable, i.e. it yields similar results when applied by different observers in the same site under similar conditions</p>	<p>The ESCD provides the following justification:</p> <p>The most frequently used program for both study design and data analysis is the DISTANCE software (Thomas et al. 2010). The use of these methods ensures that data can be compared across time and space, and standard texts have been produced to guide sampling design, training and field protocols.</p>

Step 5: Methods (it is recommended that you describe this step in approximately 1,000 words)

<p>8.2 The organization shall describe the methodology used to measure the values of the selected outcome indicator(s), in terms that are clear enough to facilitate evaluation</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
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Findings:

The ESCD describes the following methodology used to measure the values of selected outcome indicators:
 The sampling design was conducted using the results of the 2007 study to guide the sampling intensity for this cycle. The original design of the strata was based on three existing forest concessions (Ngombé, Ntokou and Pikounda), but without prior knowledge of the abundance or distribution of fauna in each stratum. In 2014, and at the request of the forestry company, we subdivided the strata into three zones with assumed low, medium and high levels of hunting; and whether these areas were dedicated to exploitation, whether it had already taken place, or whether they were part of the new Ntokou-Pikounda National Park (created in 2012). Stratification based on known or expected density of fauna reduces heterogeneity and improves accuracy. In addition, to further improve accuracy, the number of replicates (transects) in each stratum was set to a minimum of 20, and preferably at least 30. The VC target for great ape nests was set at 15%; and for elephant droppings at 20%.

The 2014 study provided a higher sampling density than the original 2007 study, which greatly improved the accuracy of population and spatial distribution estimates. Due to a change in the southern boundary of the IFO concession since 2007, and the creation of the Ntougou Pikounda National Park, the 2007 data were retrospectively re-stratified to allow a similar comparison of the main strata across the two studies.

Images included in the ESCD show the arrangement of transects in the 2014 study, on the left, and in the 2007 study, on the right.

<p>8.3 The organization shall describe the collection and analysis of data, including:</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
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<p>8.3.1 The data sources that were used (literature, interviews, field measurements, modelling, etc.)</p>	<p>Brief description: See details in Maisels, F., Strindberg S., 2014., Study of wildlife and human impact in the forest landscape of Ngombé Ntougou-Pikounda, Republic of Congo. Feb-Oct 2014. WCS Congo Report, 72 p</p>
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<p>8.3.2 Sampling methods, including frequency and/or intensity</p>	<p>Brief description: See maps in clause 8.2 of the ESCD, for the sampling device over the entire area (Ngombe plus Ntougou-Pikounda concession) The final result in the 2014 study gave a total distance of 427 kilometers along 192 transects. The sampling design was conducted using the results of the 2007 study to guide the sampling intensity for this cycle. A total of 193 transects in the various strata were plotted (Image 2014 in clause 8.1). In 2007, the transects were one kilometer long. In order to maximize the likelihood of encountering signs of fauna on transects (rather than in reconnaissance walks between transects), effort (length) per transect was increased. Our CV target was 15-20%, which means that in terms of effort required for each stratum, transects</p>
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	<p>could be 2 or 2.5 km long (2km in areas less likely to be hunting areas, and more likely to have high densities of elephants and/or great apes).</p> <p>A new wildlife study is being carried out in 2023.</p>
<p>8.3.3 Any equipment used to measure the outcome indicator</p>	<p>Brief description: Each team included: a team leader, an assistant to the team leader, a compass, a transect cutter, and a small group of porters (locally recruited). Machetes, pruning shears, notebook/inventory sheets, possibly topofil to follow the distance on the transect if it is not staked, GPS, barda equipment (tarpaulins, cots, mosquito nets, backpacks, sleeping bags, pots, etc.), computer (data analysis and report writing). DISTANCE program for data analysis.</p>
<p>8.3.4 A summary of any data analysis performed</p>	<p>Brief description: See ESCD for detailed summary of data analysis performed to compare the two studoes conducted in 2007 and 2014. The results of the data analysis are as follows:</p> <p>The 2007 and 2014 wildlife studies described in the above clauses were conducted in a larger territory than the IFO concession. The detailed results with the statistical coefficients of 2007 and 2014 and by stratum are available in Annex I. Below are the results for the entire landscape studied and for the IFO concession.</p> <p>Results - Density of great apes throughout the landscape In 2014 - 5.07 great apes/ km 2, including 4.86 gorillas/ km 2 and 0.59 chimpanzees/ km2 . This translates into 82,618 great apes, the majority of which are gorillas (78,753 individuals). In 2007 - 5.79 great apes/ km2, which corresponds to 93,697 individuals of which 81,793 were gorillas.</p> <p>Results - Density of great apes in the IFO concession In 2014 - 6. 54 great apes/ km2, of which 6. 12 gorillas/ km2 and 0. 67 chimpanzees/ km2 . This translates into 71,793 great apes, the majority of which are gorillas (78,753 individuals). In 2007 - 5. 62 great apes/ km 2, including 4.99 gorillas/ km 2 and 0.60 chimpanzees / km 2, which corresponds to 61,746 individuals, the majority of which are gorillas.</p> <p>Results - Density of elephants in the whole landscape In 2014, the density of elephants was 0.26/ km2, and the number of elephants was 4,142. In 2007, the density of elephants was 0. 31/ km2, and the number of elephants of 4,992.</p> <p>Results - Density of elephants in the IFO concession In 2014, the density of elephants was 0.2 7/ km2, and the number of elephants was</p>

2,956.
 In 2007, the density of elephants was 0.30/ km², and the number of elephants of 3,299.

Step 6: Measurement and comparison of the value of the selected outcome indicator(s)

Measure	Comparison
<ul style="list-style-type: none"> • 2014 densities gorillas, chimpanzees and elephants IFO concession (individuals/ha) (new study implemented in 2023) • Withdrawal per ha and % of IFO MU affected by harvesting in the 5-year period (over the whole concession) • Current number of hectares in conservation and protection 308,000 ha. • Current year Global Forest Watch monitoring data • Current reporting year for number of ecoguards, number of kilometers traveled, number of seizures of weapons/booby traps and reports of offences. 	<ul style="list-style-type: none"> • Results from 2007 population study and comparison report in 2015 • Comparison to results from previous 5-year period. • Number of hectares in conservation and protection at time of acquisition of MU concession license • Previous year Global Forest Watch monitoring data • Previous reporting year for number of ecoguards, number of kilometers traveled, number of seizures of weapons/booby traps and reports of offences.

9.1 The organization shall measure the present value of each selected outcome indicator Yes No

Findings:

Action: Monitoring of the emblematic fauna on the IFO concession (2014 data, new wildlife study is being conducted in 2023)

Indicator - Densities gorillas, chimpanzees and elephants IFO concession (individuals/ha)
 6.54 great apes/ km²
 0.27 elephants / km²

Action: EFIR logging in accordance with rotation

Indicator - Withdrawal per ha in the 5-year period (over the whole concession) - 0.7 feet/ha
 Indicator --% of total IFO area affected by harvesting activity in the 5-year series - 0,19%

Action: Establishment of integral conservation areas and protection series

Indicator - Number of hectares in conservation and integral protection- 308,000 ha.

Action: Satellite-based monitoring of forest cover loss

Indicator - Global Forest Watch monitoring data - 0,0%

Action: Combating illegal activities

Indicator - Number of ecoguards

Indicator - Kilometres travelled

Indicator - Number of seizures of weapons/booby traps and reports of offences

2021 results:

- Number of eco-guards: 28
- 6,828 km covered by eco-guards on foot patrols
- Number of weapons seized: 41 (large and small hunt)
- Number of cables destroyed: 12,581
- Number of PVs and CIs = 88

9.2 The organization shall, according to the specifications in the 'Comparison' column of Annex B, compare the present value of each outcome indicator with the specified value

Yes No

Findings:

IFO has compared present value with one previous measure for each outcome indicator, see section 10 below.

9.3 When Annex B specifies the comparison of the present value of the outcome indicator to at least one prior measurement, the organization shall show in this comparison all previous measurements for which data is available.

Yes No

Findings:

IFO has compared present value with one previous measure for each outcome indicator, see section 10 below.

9.4 The organization shall implement Clauses 9.1–9.2 at least every five years, unless more frequent measurements are required by the methodology used.

Yes No

Findings:

With exception of focal species population densities, outcome indicators are measured/monitored annually. Given the effort and cost to implement population inventories across more than one million hectares this study was last conducted in 2014. At the time of the audit IFO had signed a contract for project funding to undertake a new wildlife study of the focal species that can be compared to the 2014 data.

Step 7: Statement of results (it is recommended that you describe this step in approximately 500 words for all the clauses)

10.1 For each proposed impact, the organization shall provide evidence that the present value of the selected outcome indicators meets the required result specified in the column 'Required result' of Annex B. Yes No

Findings:
The ESCD provides results of comparison that demonstrates that the required results have been achieved. See data above and below.

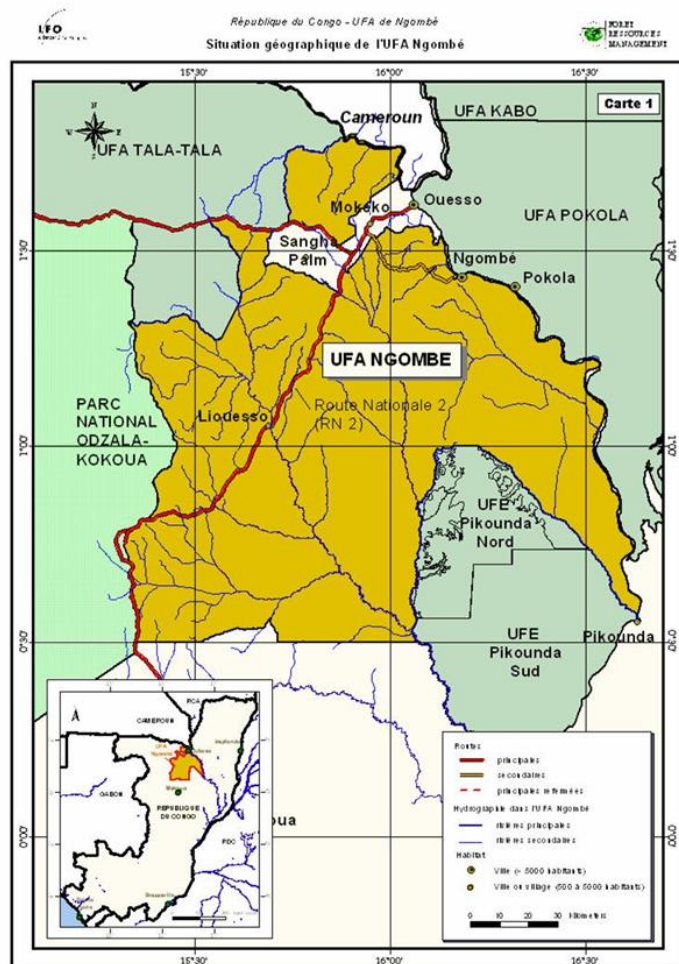
Impact (Clause 6.1)	Outcome indicator (Clause 7.1)	Present value of the outcome indicator (Clause 9.1)	Value of the comparison (Clause 9.2)	Required result (Annex B)	Results (Clause 10.1)
1.6 Conservation of species diversity	Indicator-Densities gorillas, chimpanzees and elephants IFO concession (individuals/ha)	In 2014, the great ape population in the IFO concession was estimated at 82,618 individuals	In 2007, the great ape population in the IFO concession was estimated at 71,793 individuals.	Populations of priority species stable or increasing	Result achieved.
	Indicator-Densities gorillas, chimpanzees and elephants IFO concession (individuals/ha)	In 2014, the elephant population in the IFO concession was estimated at 2,956 individuals	In 2007, the elephant population in the IFO concession was estimated at 3,299	Populations of priority species stable or increasing	Result achieved.
	Withdrawal per ha in the 5-year period (over the whole concession)	0.7 vines/ha in the 5-year historical series	0.7 vines/ha in the 5-year historical series	The condition is stable or improving	Result achieved.
	% of total IFO area affected by harvesting activity in the 5-year series	0,19%	0,5%	The condition is stable or improving	Result achieved.

	Global Forest Watch monitoring data	0,21%	0,5%	The condition is stable or improving	Result achieved.
	Number of ecoguards, Kilometres travelled,	28 eco-guards 6,828 km	≥ 25 eco-guards ≥ 5000 km in sensitive areas (Nb_Patrouille_distance_annee)	The condition is stable or improving	Result achieved.
	Weapon/Booby trap seizure number and offence reports	Art. 88 PV/ Seizures	80 – 150 (Faune_follow-up Progrepp_Programme)		
10.2 For each proposed impact, the organization shall describe how the results from Clause 10.1 contribute to the likelihood of achieving the proposed verifiable targets in the future Applicability NOTE: SLIMF are not required to comply with clause 10.2.				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Findings:					
Verifiable target 1 Populations of priority species stable or increasing				<p>The results show that measures taken by IFO:</p> <ul style="list-style-type: none"> • Implementation of reduced impact selective logging, with very low volume/ha removals, • Establishment of a significant conservation area network, • Monitoring of forest loss, and • Robust anti-poaching activities <p>Have resulted in increasing or stable populations of the three focus species, Gorillas, Chimpanzees and Elephants on the MU.</p>	

Part D: Management information

Location of the management unit

Coordinates of the management unit:



Source : base de données CARPE, base de données PRU, Plan de l'Unité de Management.

IPD - PRU, Nov. 2007, Ref. de l'unité_03 - Situation géographique.

Type of certification

Please tick all the options that apply to the management unit

Tenure management:

- Community Public/state Private
 Concession Indigenous Low intensity Small producer

Tenure ownership:

- Community Public/state
 Private Indigenous

Type of certificate:

- Individual Management group

Characteristics of the certificate

Please give the following information:

Management unit(s) (name): **UFA Ngombé – 1 MU**

Management unit area (in hectares): **1,159,643**

Number of members (if applicable): N/A

Part E: Trademark requirements

Trademark requirements	
<p>T1. For the sale of physical forest products with ecosystem services claims, FM/CoC and CoC certificate holders shall add the specific ecosystem services claim(s) with the corresponding code indicated in Annex B (e.g. ES1.1) to sales and/or delivery documents of the product, in addition to the FSC claim, and its certificate code, including in all cases the forest management certificate code(s) for the forest(s) from where all ecosystem services claims originate.</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
<p>Findings:</p> <p>There are no plans to sell physical forest products with ecosystem service declarations at this time.</p>	
<p>T2. Only FSC 100% products with ecosystem services claims can be promoted as such.</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
<p>Findings:</p> <p>There are no plans to sell physical forest products with ecosystem service declarations at this time.</p>	
<p>T3. For all sponsorships of FSC ecosystem services, FM and/or FM/CoC certificate holders shall fill in the form in Annex D of the ES procedure and submit it to their certification body, which will publish an updated summary of all sponsored ecosystem services impacts on the FSC database of registered certificates (info.fsc.org). The form in Annex D may be submitted without the name of the sponsor if the sponsor prefers to remain anonymous.</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
<p>Findings:</p> <p>No sponsorships have been made under this scheme at the moment.</p>	