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Annual Report 2021

Activities of the Wild Chimpanzee Foundation for improved conservation of chimpanzees and their habitat in West Africa



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Summary 2021 and Outlook for 2022

By the president of the Wild Chimpanzee Foundation, Christophe Boesch

Since the West African chimpanzees became officially ‘critically endangered’ in September 2016, it became clear to us, the WCF, that the fight for the conservation of this sub-species had to become a constant and high priority. This spurred our motivation and we were able to increase efforts to create protected areas in Liberia and Guinea for the remaining wild chimpanzee populations. While the potential conflicts between development and conservation are on-going, WCF works hand in hand with the local authorities to reach harmonious solutions to permit the short-term needs for rapid development with the long-term ones for sustainable solutions in favour of the local communities. They are the ones experiencing first-hand the negative impacts of climate change, deforestation and desertification.

2021 resembled 2020 because of the global COVID-19 pandemic directly affecting the activities with delayed funding and the need of restrictions to protect our staff and partners. While we had become acquainted with the situation, we were able to work, mainly developing the creation of protected areas in Liberia and Guinea, thereby enhancing the survival of chimpanzee populations in West Africa. The projects initiated with local communities to manage protected areas in the three countries has been reinforced, as the data showed a positive impact on the fauna and habitats. WCF thus employed more community members, including both women and men. New initiatives were installed and enforced by instructing the employees in SMART technologies.

In Liberia, the WCF continued its collaboration with the Forestry Development Authority (FDA) to manage the Grebo-Krahn National Park, and promote the creation of the Krahn-Bassa National Park where elephants and chimpanzees are still abundant. WCF generalised the new biomonitoring approach with camera traps (developed in Taï National Park - Côte d'Ivoire), to the Grebo-Krahn National Park in Liberia (as well as to the Moyen-Bafing National Park in Guinea). This method permits to detect more wildlife species present in an environment and allows for the quantification of population size with a larger number of animal species than was possible with the classic line transect method. This method became of major interest to the local authorities, keen to adopt it.

In Guinea, the Moyen Bafing National park was officially created in May 2021 with a presidential decree. WCF has intensified the collaboration with the local communities due to the specific context of this park with the challenge of over 36'000 people living in it. WCF continued efforts to manage the fires within the park with the help of over 8'700 community members. We obtained first evidence that this effort resulted in an increase in the connectivity of the high value conservation areas within the park.

New for the WCF Guinea team was the start of a transboundary EU-project with Sierra Leone and our partner from the Tacugama Chimpanzee Sanctuary, aiming at implementing a large landscape, including the existing Outamba-Kilimi National Park in Sierra Leone and the new, to be created,

Penselli-Soyah-Sabouyah National Park in Guinea. Due to the construction of a railway line to export Iron Ore from Simandou, this project represents a special challenge in mitigating the impacts on the fauna there.

In Côte d'Ivoire, the WCF will maintain the continuously required efforts to protect the remaining natural habitat with its chimpanzees and other threatened wildlife. In addition, we implemented an entire park-wide monitoring with the new camera trap method in Taï National Park with the Office Ivoirien des Parcs et Réserves and resolved some methodological issues. The outcome, if confirmed, would see a doubling in the number of chimpanzees inhabiting the park than previously assumed.

In 2022, in Guinea, the WCF will invest much effort in the creation of the new park near the border with Sierra Leone and the challenges to work with a big mining company implementing a railway line, avoiding this to become immediately a complete barrier for the wildlife. The collaboration with the authorities of the Office Guinéen des Parcs et Réserves as well as of the Bureau Guinéen des Etudes et Evaluations Environnementales will be essential. Our effort to include the local communities, and especially the women, through new agro-ecological and agro-forestry practices has encountered a very enthusiastic echo and we will make use of the momentum. Especially the shea-butter production with women was a great success and combines in an exemplary manner conservation with communities, as the trees producing the shea nuts grow mainly naturally in the open forest of the park and are very sensitive to bushfire: The women become the ambassadors for preventing this destructive factor.

In Liberia, the negotiations for the finalisation of the creation of the Krahn-Bassa National Park faced some delays and we hope to complete the gazettment process in 2022, making it the largest national park of the country. The WCF ecolodge in Sapo National Park was officially opened in December 2021 and is operational with a strong support and involvement of the local communities. The WCF community eco-guards were for some months only able to patrol the buffer zone of the park, and sadly the illegal miners re-entered the park due to this absence. We hope to solve this issue rapidly with FDA for the best of this oldest national park of the country.

In Côte d'Ivoire, the WCF, after opening the ecotourism project in May 2021, had to close it again due to an Omicron epidemic affecting part of the Taï population. The biomonitoring will continue and our objective to develop a more precise method will be continued and published in a scientific journal. We will continue to support the SODEFOR in protecting the Cavally Classified Forest.

WCF will support and intensify its collaboration with three chimpanzee research projects, urgently needed to ensure the conservation of the important chimpanzee populations in the Taï National Park, Côte d'Ivoire, in Loango National Park, Gabon, and in the Moyen-Bafing National Park, Guinea. A new research project on chimpanzee with the Universities of St Andrew and Harvard has started in January and it is hoped to become a successful and new long-term research site.

See below the detailed annual activity reports of Côte d'Ivoire, Liberia and Guinea.



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Annual Report 2021 – WCF Côte d'Ivoire



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Acronyms

CCF -	Cavally Classified Forest
CTDS -	Camera Trap Distance Sampling
CSO -	Civil Society Organisation
IDEF -	Initiatives pour le Développement Communautaire et la Protection de la Forêt
IUCN -	International Union for the Conservation of Nature
MINEF -	Ministère des Eaux et Forêts
NOFNA -	Notre Forêt, Notre Avenir
OIPR -	Office Ivoirien des Parcs et Réserves
OIREN -	Observatoire ivoirien pour la gestion durable des ressources naturelles
NGO -	Non-Governmental Organisation
SE -	Standard Error
SODEFOR -	Société pour le Développement des Forêts
TNP -	Taï National Park
WCF -	Wild Chimpanzee Foundation

Executive summary

The Wild Chimpanzee Foundation (WCF) aims to protect wild chimpanzees and their natural habitats, and is active in three countries: Côte d'Ivoire, Liberia and Guinea where various conservation, education and awareness raising activities are carried out.

This year, WCF-Côte d'Ivoire has developed activities in the **Taï National Park (TNP)** for its protection and in the **Cavally Classified Forest (CCF)** to ensure its sustainable management by fighting against deforestation.

In **TNP**, the analysis of **camera trap** videos continued, and an ethogram was established in order to identify the reactions of animals to the camera, and thus limit the bias in the estimation of their density and abundance. Considering the reactions of individual animals to the cameras revealed important differences among the different species present in the forest and eliminating the ones directly influenced by the cameras can result the abundance estimate altered by a factor of 2 to 3.

A new method based on the **Spatial Monitoring and Reporting Tool (SMART)** was implemented to complement community patrols in the **research and ecotourism area in TNP**. Two teams collected SMART data, including signs of large mammal presence and illegal activities.

In the **CCF**, **monitoring** continued in 2021 with **five missions** supported by the WCF ecoguards. These missions allowed SODEFOR to **rehabilitate 2992 ha of illegal plantations**. The ecoguards were able to record the presence of several mammal species classified on the IUCN red list (at least five species of primates, duikers and other mammals), including the West African chimpanzee, classified as critically endangered, which demonstrates the importance of protecting this classified forest.

Experience sharing and **capacity building of 18 people** from ten non-governmental organizations (NGOs) conducting **independent monitoring (IM) of forests** in Côte d'Ivoire continued with a reminder of good data collection practices, expansion of the scope of IM to include gold mining activities, wildlife management, cocoa commercialization, custom sawing, etc. Following this reinforcement, a consortium of four NGOs conducted external IM missions around the CCF. A **round table**, which gathered **34 participants**, opened up a new dialogue between the NGOs conducting external IM in Côte d'Ivoire and the government representatives. This led to the validation of an **action plan** to facilitate the implementation of external IM and to capitalize on its results for the next five years.

Awareness raising sessions conducted at the ecomuseum in Taï, in schools and villages neighbouring the TNP reached **2399 participants**, with an emphasis on the prevention of zoonoses (COVID-19).

The reopening of the **ecotourism site** since May 1, 2021 has allowed **104 tourists** to enjoy new facilities. A new tourist tour (1-day tour) was created and tested in October and welcomed its first tourists in November 2021.

Finally, the partner villages of the ecotourism project have received increased support, as have the women of the communities, who have been trained in permaculture and whose products will help the project.

1. Biomonitoring

1.1. Biomonitoring in Taï National Park

Since 2019, the WCF and the Office Ivoirien des Parcs et Réserves (OIPR) have implemented a new program based on self-triggering cameras to overcome the shortcomings of the line transect biomonitoring method. After the installation and removal phase of the cameras, which lasted one year over the 2019-2020 period, approximately 59'000 videos were analysed. Capture rates, naïve occupancy (presence of animals on transects according to the total number of transects), and spatial distribution maps were produced for 17 ungulate species, 8 primate species, 11 carnivore species, 3 pangolin species, 8 rodent species, and 11 bird species.

Density and abundance can technically be estimated for 49 species. Thus, between January and June 2021, the density and abundance of eight species were analysed with various software programs including Distance Sampling® and R®. These concern six species of ungulates (Maxwell's duiker, Jentink's duiker, yellow-backed duiker, zebra duiker, pygmy hippopotamus, forest elephant), one carnivore (leopard), and one primate (chimpanzee).



*Snapshot of a pygmy hippopotamus
(Choeropsis liberiensis)*

However, significant biases have been noted in the estimation of the abundance of these species. This bias is mainly related to the reaction behaviour of the animals (attraction or flight) towards the camera, which has been the subject of recent publications (Bessone *et al.*, 2020; Cappelle *et al.*, 2021).

For example, we noticed that pygmy hippopotamus (pictured above) and Jentink's duiker (pictured opposite) were attracted to the camera and were regularly observed between 0 and 2m from cameras, unlike the Maxwell's duiker which did not seem to react to the camera. Thus, in order to solve this problem and to guarantee the reliability of the estimates, we established an ethogram (a catalogue of behavioural units of an animal) for the species concerned.



Snapshot of a Jentink's duiker (Cephalophus jentiki)

Based on this ethogram, videos of four species (chimpanzee, pygmy hippopotamus, Maxwell's and Jentink's duikers) were reanalysed after removing those with an obvious reaction to the camera. Subsequently, we determined the density and abundance of the four species by following the two-level process presented by Howe *et al.* (2019). The results are presented in Table 1.

Table 1. Results of density and abundance analyses of four species

Species	Best model	CV%	Density (hint/km ²)			Abundance		
			Estimates	Confidence intervals		Estimates	Confidence intervals	
Maxwell's' duiker	Uniform	12%	21,17	17,73	24,60	113 468	92 417	137 122
Jentink's duiker	Hazard rate	18%	0,26	0,19	0,37	1 389	691	1 329
Pygmy hippopotamus	Uniform	26%	0,23	0,14	0,35	1 255	731	1 764
Chimpanzee	Hazard rate	43%	0,23	0,09	0,45	1 236	472	2 505

The analysis of the videos showed that animals react differently to the camera. Thus, statistical analyses were performed to determine if factors such as the distance between the animal and the camera, the time of day when the animal reacted to the camera (for nocturnal species: Jentink's duiker and pygmy hippopotamus - visual signals), as well as the duration of the observation, could influence the animals' reaction. The entirety of these analyses will be the subject of a scientific publication, which is currently in preparation by Houa and colleagues.

1.2. Monitoring the research and ecotourism area in TNP

Each year, the WCF collects information on key species and monitors the presence of evidence of illegal activity in the ecotourism and research area in the TNP. In 2021, the method has evolved and a new team was recruited. Both teams were trained with the support from OIPR to collect data with the Spatial Monitoring and Reporting Tool (SMART) data and conduct reconnaissance walks (*recces*). The area to be surveyed represented 496 km², divided into a grid of 153 cells to be visited by one of the teams, of which 138 have been completed. Due to their location in a flooded area, 15 transects could not be completed. Community ecoguards covered 1187 km, recording more than 2090 data points: 1183 signs of monkeys' presence, 122 for chimpanzees, 360 signs of illegal activity, and 425 other keystone species data points were recorded.

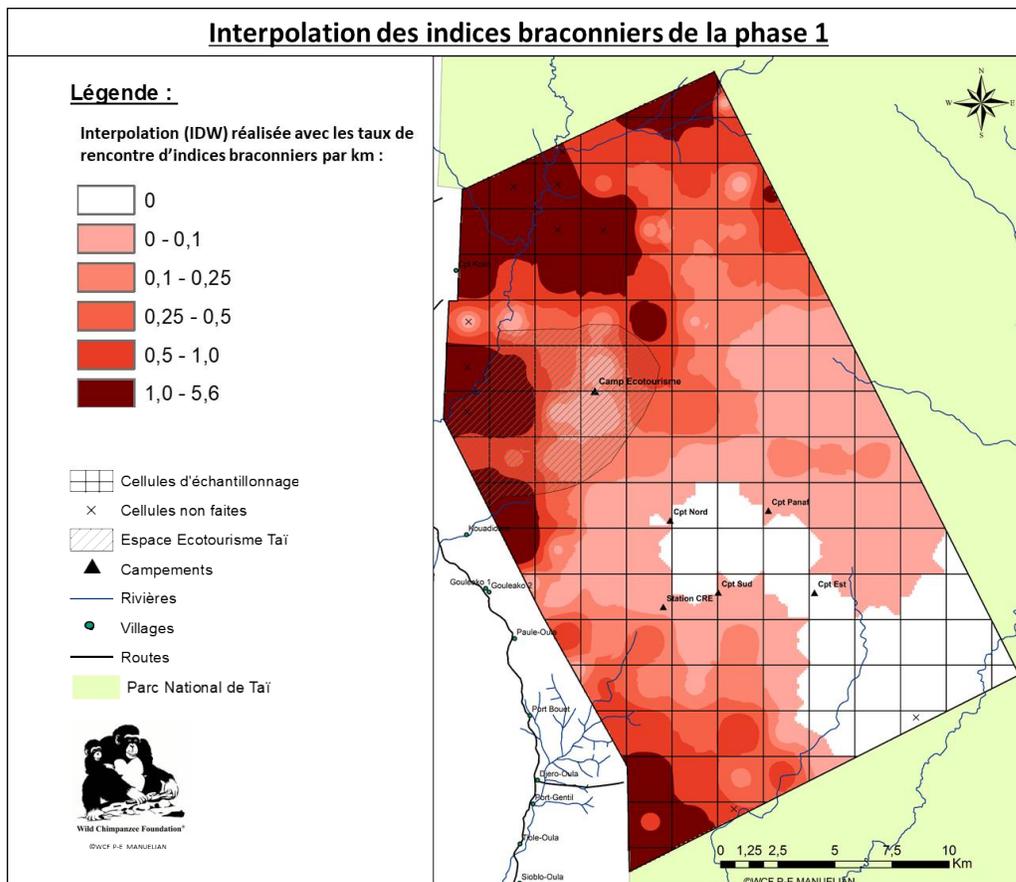


Figure 1 : Evidence of illegal activities in the research and ecotourism area in Taï National Park obtained by interpolation (IDW) via ArcGIS

The western edge is the most affected by poaching, given that it has the highest encounter rates. Very little illegal activity was observed close to the Taï Chimpanzee Project (TCP) research camps, probably because the presence of the TCP camps greatly reduces the presence of poachers. The overall encounter rate for signs of illegal activity surveyed per kilometre travelled is 0.45, which is similar/slightly lower than the encounter rate determined by OIPR for the Taï National Park in 2019-2020.

1.3. Monitoring the ecotourism site of Djouroutou

Between June and August 2021, WCF supervised the chimpanzee habituation and anti-poaching missions in the Djouroutou ecotourism area of the TNP. In total, 32 chimpanzees were observed in the monitored community, of which 18 were individually identified by the ecoguides. The average contact time with chimpanzees was 8 hours 49 minutes per day. Each day, the guides followed and accompanied the chimpanzees until they climbed the trees and made their night nests.



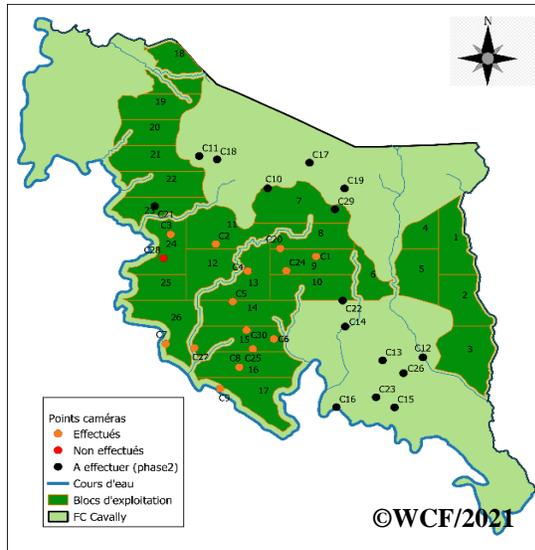
Anti-poaching team at the chimpanzee ecotourism camp in Djouroutou

Patrols were conducted in the anti-poaching zone, using the chimpanzee camp as the base campsite. The patrol effort amounted to 141 km and the team covered 75.68% of the defined area (the anti-poaching zone included parts of the ecotourism zone and the north of the Hana River). The particular richness of the ecotourism site was confirmed during the patrols by the presence of 11 species of animals classified as threatened by the IUCN (red colobus, king colobus, pygmy hippopotamus, *etc.*). Illegal activities observed (0.20 signs/km) were related to poaching and gold mining.

1.4. Monitoring in Cavally Classified Forest

Between May and July 2021, wildlife monitoring and surveillance missions were conducted in the Cavally Classified Forest (CCF). On May 4, 2021, a partnership agreement between SODEFOR and WCF was signed for the implementation of a wildlife study using camera traps. 25 point transects were sampled between May and July 2021 with cameras. After processing and analysing the data, 29 animal species were identified. Among these species, five species are classified as threatened on the IUCN red list. These are three species of mammals, namely the West African chimpanzee (*Pan troglodytes verus*) which is critically endangered (CR), and 2 endangered species (EN); namely the pygmy hippopotamus (*Choeropsis liberiensis*) and the Jentink's duiker (*Cephalophus jentinki*). The other threatened species are bird species that are both classified as Vulnerable (VU). These are Shelley's screech owl (*Bubo shelleyi*) and white-breasted guinea fowl (*Agelastes meleagrides*). Wildlife monitoring efforts and surveillance missions should be continued in the CCF, which has a diversity three times lower than that found in the Taï National Park, a biodiversity hotspot for West Africa.

WCF was able to support SODEFOR for 80 days of regular patrols that helped them to rehabilitate 2992 ha in the CCF. The various satellite image analysis programs have confirmed the downward trend in deforestation in the CCF over the whole year. Despite encouraging results, the wildlife remains extremely threatened. We observe thousands of poaching signs that leave the already greatly diminished biodiversity in the forest with no chance of survival. Since 2017, the ecoguards destroyed 3000 traps and collected more than 2500 gun shells.



Location of camera traps placed in Cavally Classified Forest



Installed camera trap

1.5. Improving forest governance through independent monitoring

1.5.1. Capacity building workshop for civil society organizations

A capacity building workshop for civil society organizations (CSOs) was held from April 12 to 16, 2021 in Abidjan to share and exchange experiences of CSOs that have already conducted independent monitoring (IM) missions in order to improve the conduct of ongoing missions and to plan other missions in the Taï administrative division (*département*) within six weeks of the workshop. These workshops were an opportunity to highlight the constraints related to IM, to present forestry, wildlife and artisanal gold mining regulations, and to exchange good practices in data collection. The Terms of Reference (ToR) for the external IM missions on illegal gold panning and the fight against deforestation linked to cocoa production and commercialization in the CCF were developed before taking into account certain recommendations aimed at amending the 2019-forestry code.



M. Anderson Diedri from IDEF sharing his experience (left). Workshop participants (right).

1.5.2. External independent monitoring missions

Several external independent monitoring (IM) mission themes were proposed during the capacity building workshop for CSOs doing IM in Côte d'Ivoire: Illegal pit sawing, poaching, illegal cocoa production and commercialization, and gold panning. Finally, a case of detention and processing of custom-made timber was observed in Guiglo (May 29, 2021), and the IM team (NOFNA, IDEF, WCF, Green Answers, OIREN) reported the case to the appropriate authorities (the Regional Direction of Water and Forests – DREF, the Forest Police Director, and the prosecutor). A report was drawn up by the DREF in order to follow up on the prosecutor's information. A unit from the Forest Police returned to the site on June 9, 2021 and issued a statement of seizure and violation. Despite the slow response that led to frequent substitution or disappearance of evidence, legal authorities reacted to the denunciations of the NGOs. The three NGOs involved are now able to collect credible and verifiable information.

In parallel, the WCF has collaborated with the High Authority for Good Governance (HABG) for the elaboration and the edition of a thematic note allowing popularization of the current regulation about the fight against corruption. This note was validated by the HABG on July 22, 2021 and printed in 150 copies.

1.5.3. Roundtable on the implementation of independent monitoring

The round table on the implementation of independent monitoring in Côte d'Ivoire at the Novotel in Abidjan, on June 23, 2021 brought together 34 participants from the Ministry of Water and Forests (MINEF), the Ministry for the Promotion of Good Governance, Capacity Building and the Fight against Corruption, the High Authority for Good Governance, SODEFOR, the private sector (logging companies), the European Union and FAO, as well as civil society. The purpose of the roundtable was to facilitate the implementation of IM in Côte d'Ivoire, to review participants' expectations and to propose solutions in an action plan.



Roundtable on the implementation of independent monitoring in Côte d'Ivoire

1.5.4. Closing workshop for the project to improve forest governance through independent monitoring

The meeting took place the July 27, 2021 in a hybrid format (remote and face-to-face). Thirty participants presented the results achieved in the framework of the WCF project funded by the FAO-EU FLEGT program. This event was an opportunity to validate the IM action plan developed during the roundtable of June 23, 2021.

2. Awareness raising

During the whole year, the awareness agent, Mr Guillaume SEA, met the different communities in the villages and camps along the CCF and the TNP. Several topics were discussed this year, such as the WCF's actions and the projects carried out in the region. A large campaign on zoonoses was conducted, with a focus on prevention of COVID-19. Finally, still in connection with zoonoses, an awareness raising campaign focused on disease transmissions was carried out for women restaurant owners (who potentially cook bushmeat). In total, 1539 people participated in the awareness raising sessions including 573 women.

WCF offers free environmental education at the eco-museum in Taï, which welcomed 638 visitors including 269 women this year. This space, open to all, allows students, but also all the residents of the TNP to come and enjoy free activities related to nature protection. Among these visitors, more than 200 pupils from the primary school of Taï came to answer questions from the chief sector of Taï and Guillaume.

In May 2021, WCF worked with schools in Taï and led two awareness sessions in the classrooms with 112 pupils attending. Additionally, seven “green” classes were organized during the year in the TNP. In total, 110 pupils had the chance to discover the Taï National Park.



Green class at TNP with the students of Les Boyas College (June 2021)

3. Alternative livelihoods

3.1. Taï ecotourism

After many months of closure due to the global COVID-19 crisis (since March 2020), the Taï ecotourism site reopened on May 1st, 2021. This decision was made during the tripartite meeting between OIPR, TFL and WCF, subject to the application of a strict sanitary protocol. The Taï ecotourism site welcomed 104 tourists from May 1st to December 31st, 2021. Nine journalists from different media outlets (Le Figaro, RTI and Arte) came to report on the ecotourism site. A photographer came to film the ecoguides preparing for the ranger challenge. Europeans were the primary visitors at the ecotourism site in 2021 (76%), followed by Africans (15%, mainly Ivorian tourists and visitors linked to a workshop). The Europeans were mostly expatriates in Côte d'Ivoire who take advantage of family visits to come to Taï National Park. Americans represent 4% of visitors (remaining 5% not reported).

64% of the tourists agreed to fill the satisfaction survey resulting in a satisfaction rate of 93,6%. Hoteliers in Taï village had the lowest satisfaction rate. Thus, the WCF has been working with Taï City Hall and the hoteliers to improve the tourists' reception and experience.

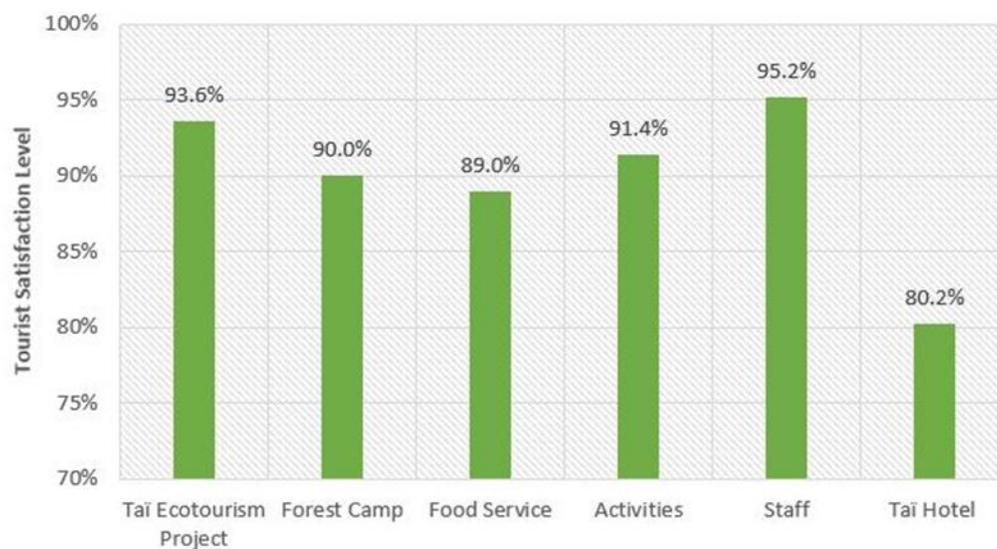


Figure 2. Reported tourist satisfaction levels for each of the service components of the tourist experience

3.1. Primate habituation for ecotourism

In 2021, the habituation of mangabeys and red colobus continued, and the search for chimpanzees intensified. The number of individuals in the group of mangabeys habituated to human presence varies according to the number of males that come and go in search of a group and a social place

see Figure 3). Currently, the group consists of about 65 individuals (maximum 70 observed in April and minimum 60 in August).

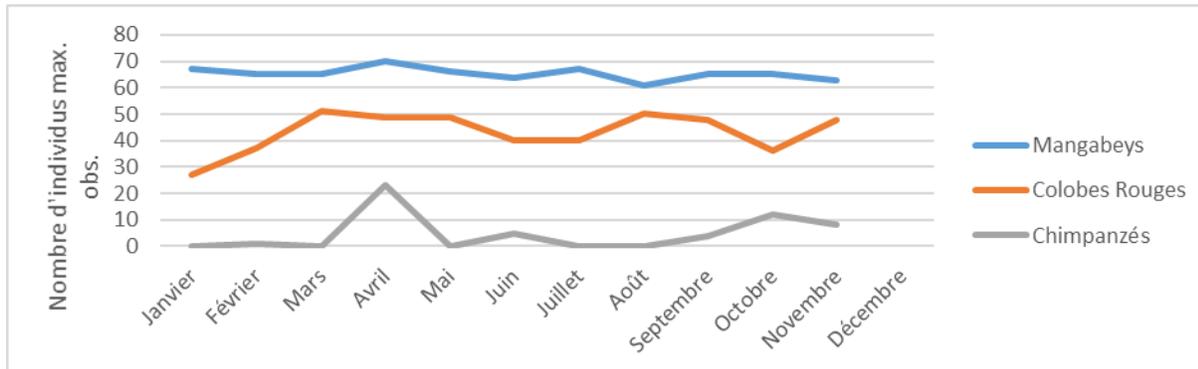


Figure 3. Maximum monthly number of individuals observed in primate groups at the Tai Ecotourism site in 2021

In May, the change of the alpha male was observed: it is now Belem who leads the group. Geographically, the mangabeys' territory has changed slightly: the group is strongly influenced by the production of *Anthonota fragrans* and *Ricinodendron heudelotii* fruits from June to August, and later by the production of *Saccoglotis gabonensis* and *Nauclea xanthoxylon* fruits in September, found more abundantly about 2km northwest of the ecotourism camp.

The red colobus group habituated to human presence was monitored on average five days per month in 2021. Being an arboreal species, present in a small territory, it is not necessary to follow the group every day. The group is composed of 40 individuals on average.

This year, two chimpanzee groups were identified: one to the east of the ecotourism camp (about 7km). This appears to be a large group, and relatively well protected by its position "inside" the park. Another group was identified to the west of the camp, and 23 individuals were observed in April 2021. This group is potentially more at risk because of its proximity to the periphery of the park, but this group is seen much more often close to the tourist camp. Therefore, the WCF chose this group to be monitored.



Camera trap photo of a female and infant in the western sector of the ecotourism camp

3.2. Taï ecotourism camp

Many changes have been made to the ecotourism camp in 2021, to benefit both the tourists and the ecoguides. Pruning work has made the ecoguide camp more secure, as has the covering of tents with tarpaulins, allowing ecoguides to keep their tents dry, even in the rainy season. On the tourist side, a fourth safari tent was installed as well as a new bathroom. Modifications have been made so that each tent is independently housed and has its own bathroom. In order to increase comfort, 5m high water towers were installed, as well as the purchase of new equipment.



Ecoguide camp (left) and tourist camp (right)

3.3. Development of the 1-day tour

The 1-day tour is a forest walk to support national and local tourism by allowing a wider range of tourists (with a smaller budget) to visit the park as well as bringing schools from the surrounding villages to discover the park's fauna and flora.

The circuit is 5.1 km long and was secured with bridges to facilitate passage. Four bridges were installed and the trail was cleared in order to be able to trial the route with the WCF team in October 2021. Following these entries into the forest, equipment was purchased such as compasses, and the official opening is scheduled for January 2022. However, 15 tourists have already had the opportunity to discover the new 1-day tour.



Bridges installed on the 1-day tour (left), first bridge at the entrance of the park (middle), fourth bridge (right), and the installation of ropes to improve the passage of the visitors.

3.4. Cultural experience at Gouleako and Daobly

The ecotourism project in Gouleako village has suffered from the COVID-19 pandemic and the subsequent closure of ecotourism for over a year. The project is struggling to recover, which led the WCF to organize several meetings with the village to identify new actors and develop new activities. The village is currently rehabilitating the tourist huts.



Tourist huts in Daobly

In Daobly, the village was particularly motivated and built three traditional huts. WCF's support consisted of preparing the village to welcome tourists. Several meetings were held to discuss menus, proposed activities, and how to interact with tourists. The Daobly tourist association has given itself a name: BGOLOUE, which means "round hut" (after the traditional hut architecture).

3.5. Permaculture project

One of the WCF objectives is to improve the living conditions of local communities while preserving the nature. Five groups composed mainly of women were trained in permaculture in 2020 just before the COVID-19 outbreak that slowed down the follow up of the activities on the ground. After the training, the groups started their permaculture fields with several difficulties: lack of materials and seeds adapted to the western Ivorian climate. WCF therefore supported them and a monthly follow up was carried out with each group. The missing materials were purchased and handed over in June 2021. WCF worked with an Ivorian seed company to bring the best seeds to the groups, who were able to benefit from the rainy season (June to September) to plant them. The project is now bearing fruits and vegetables. The Taï ecotourism project will buy parts of their fruits and vegetables for the tourists from the permaculture groups.



Zaipobly women's group in their permaculture field (left). Cucumbers and okra from the Ponan permaculture group (right)

4. Acknowledgements

WCF-Côte d'Ivoire would like to thank its financial and technical partners as well as the administrative and political authorities of Côte d'Ivoire. The WCF especially thanks the “Office des Parcs et Réserves de Côte d'Ivoire” and “Société de Développement des Forêts” for their collaboration in the execution of all projects around and in the Taï National Park and the Cavally Classified Forest. We thank the Ministry of Foreign Affairs for facilitating the WCF missions in Côte d'Ivoire and are grateful to the other partners in Côte d'Ivoire whom we wish to thank for their collaboration and support: the Ministry of Water and Forests, the Ministry of Justice and Human Rights in particular the High Authority for Good Governance, the Ministry of Security and Civil Protection, in particular the National Police and Gendarmerie, the Mairie de Taï, the NGO NOFNA and Alma Production.

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Acronyms

ACDI/VOCA-	Agricultural Cooperation Development International/ Volunteers in Overseas Cooperative Assistance
Ape TAG -	Ape Taxon Advisory Group
BMSC -	Biomonitoring Sub-Committee
CENFOR -	Center for Environment, Forest Conservation and Research
CSPPA -	Cestos-Senkwehn Proposed Protected Area
COP -	Conference of the Parties
EAGLE -	Eco Activists for Governance and Law Enforcement
EPA -	Environmental Protection Agency (Liberia)
EU -	European Union
FDA -	Forestry Development Authority (Liberia)
FFI -	Fauna and Flora International
FIFES -	Forest Incomes for Environmental Sustainability
FTI -	Forestry Training Institute
GKNP-	Grebo-Krahn National Park
KBPPA -	Krahn-Bassa Proposed Protected Area
LCRP -	Liberia Chimpanzee Rescue and Protection
LESC -	Law Enforcement Sub-Committee
LINTA -	Liberia National Tourism Association
LiWiSa -	Libassa Wildlife Sanctuary
LLA -	Liberia Land Authority
LNP -	Liberia National Police
MIA -	Ministry of Internal Affairs
MICAT -	Ministry of Information, Cultural Affairs and Tourism
MoJ -	Ministry of Justice
MoU -	Memorandum of Understanding
NaFAA -	National Fisheries and Aquaculture Authority
NGO -	Non-Governmental Organisation
RIDA -	Rural Integrated Development Agency
RSPB -	Royal Society for the Protection of Birds
SCNL -	Society for the Conservation of Nature of Liberia
SMART -	Spatial Monitoring and Reporting Tool
SNP -	Sapo National Park
UOF -	Universal Outreach Foundation
WABiLED -	West Africa Biodiversity and Low Emissions Development
WCF -	Wild Chimpanzee Foundation
WCTF -	Wildlife Crime Task Force

1. Executive Summary

In Liberia, the Wild Chimpanzee Foundation (WCF) continues to be active through national initiatives and with a direct presence in the southeast of the country: In and around **Grebo-Krahn National Park (GKNP)** and **Sapo National Park (SNP)**, as well as **Krahn-Bassa Proposed Protected Area (KBPPA)** and **Cestos-Senkwehn Proposed Protected Area (CSPPA)**.

In 2021, the activities in these areas, all implemented in close collaboration with the Liberian Forestry Development Authority (FDA), focused on the **community ecoguard program**, **livelihood support** (in collaboration with Universal Outreach Foundation), **awareness** (in collaboration with Eddie Theater Production), **ecotourism** (in collaboration with Libassa Ecolodge), **infrastructure development** (in collaboration with Rural Integrated Development Agency) and other pre-gazettement activities for Krahn-Bassa Proposed Protected Area, such as **participatory land use mapping** (in collaboration with the Liberia Land Authority and the Ministry of Internal Affairs).

On a national level, WCF has been working in close collaboration with FDA, the Society for the Conservation of Nature of Liberia (SCNL) and the Royal Society for the Protection of Birds (RSPB) to support **community ecoguard programs** at Lake Piso Multiple Sustainable Use Reserve, Gola Forest National Park, Foya and Wonegizi Proposed Protected Areas, and East Nimba Nature Reserve.

Further collaboration with FDA, the Environmental Protection Agency (EPA), the Ministry of Justice (MoJ), the Liberian National Police (LNP), Liberia Chimpanzee Rescue and Protection (LCRP), Fauna and Flora International (FFI), and Libassa Wildlife Sanctuary (LiWiSa) allowed WCF to support initiatives combating wildlife crime, in particular through the activities of the **Wildlife Crime Task Force**.

A continuous **community volunteer program with women ex-bushmeat sellers** with FDA and Eddie Theater Production was conducted in bushmeat market areas in Monrovia and Paynesville.

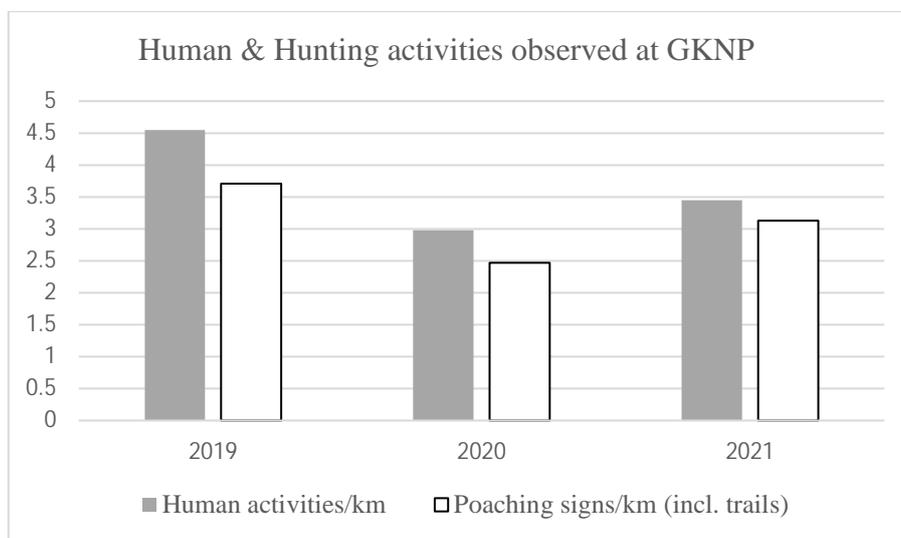
WCF continued to coordinate the **Law Enforcement and Biomonitoring Sub-Committees of the Liberia Species Working Group**. Finally, WCF also continued to provide internship opportunities for students from the Forestry Training Institute and other academic institutions.

WCF's major activities in Liberia from January to December 2021 are outlined below:

2. Community Ecoguard Program at Grebo-Krahn National Park, Krahn-Bassa Proposed Protected Area, Sapo National Park, Cestos-Senkwehn Proposed Protected Area and nationally

From January to December 2021, the seven community ecoguard teams at **Grebo-Krahn National Park (GKNP)** conducted **42 forest patrols**, covering a total number of 95 grid cells (each grid cell being 4x4km) with repeated visits to most grid cells and a total distance covered of 1285.88 km. The number of days spent on forest patrol was 305, with a total of 1,603 person days. The teams made 1,169 wildlife observations, including observations of all key species, such as western chimpanzee, forest elephant, pygmy hippopotamus and leopard.

The teams observed **4,443 signs of illegal human activities**, including 4,029 signs of hunting (with hunting trails). With an encounter rate of **3.45 signs of human activities per kilometer**, and 3.13 signs of hunting per kilometer, compared to 2019, the rate for human activities has reduced by 24.2% and the rate for hunting signs has reduced by 15.6%. However, compared to 2020, when encounter rates were 2.98 signs/km for human activities and 2.47 signs/km for hunting activities, the number of human activities showed an increase of 13.6% and 21.1%, respectively. Major threats observed by the teams were poaching, mining, chewing stick extraction and an increased pressure on the park through farming activities, in particular cocoa farming with an increased influx of cocoa farmers from Côte d'Ivoire. This is an alarming situation which has been addressed with FDA and partners. Spatial Monitoring and Reporting Tool (SMART) reports have been regularly produced and the information has been shared with FDA, in order to allow for the planning of law enforcement missions with the joint security. Due to the lack of funding, no law enforcement patrol has been conducted in GKNP in 2021.



Encounter rates (signs/km) of human and hunting activities observed in Grebo-Krahn National Park from 2019 to 2021

After the forest patrols, the community ecoguard teams held **90 awareness meetings** in the communities adjacent to GKNP. During the meetings, a total of **1,200 community members** were sensitized, including 470 women and 730 men. These awareness meetings allow for a dialogue between community ecoguards and local community members to discuss illegal encroachment within the park and strategize approaches to discourage future illegal activities.



Community ecoguard teams at Grebo-Krahn National Park, conducting awareness with local communities

From January to December 2021, the four community ecoguard teams in **Krahn-Bassa Proposed Protected Area (KBPPA)** carried out **eight forest patrols**. The reduced number of patrols is linked to the ongoing pre-gazette activities at KBPPA in which the community ecoguard teams or their FDA team leaders have been strongly involved, thus not allowing them to conduct their regular patrols. During the community ecoguard patrols, the teams covered a total distance of **361.78 km**, during 90 patrol days or 473 person days. During the patrols, the teams observed **1,036 signs of human activities** (of which 86% or 896 were hunting related, incl. trails) resulting in an encounter rate of **2.86 signs/km**. This is a 42% decrease from 2020, when an encounter rate of 4.79 signs/km was recorded. In 2021, the community ecoguard teams made **155 wildlife observations**, including observation of all key species, such as western chimpanzee, forest elephant, pygmy hippopotamus, Jentink's duiker, and western red colobus. After the forest patrols, the teams held **ten awareness meetings** in the surrounding communities, where **117 people** were sensitized (31 women, 86 men).



Community ecoguards on patrol and awareness at Krahn-Bassa Proposed Protected Area

With the exception of **six forest patrols**, covering a distance of **223.08 km**, with **169 wildlife observations** and **729 human activities** observed (incl. 479 hunting signs) and some ecotourism-related activities, the 12 community ecoguard teams at **Sapo National Park (SNP)** remained largely inactive in 2021. A refresher training was conducted for six teams in August 2021, after the FDA Conservation Department and FDA's lead partner for SNP decided that contrary to the other (proposed) protected areas in Liberia, the community ecoguard teams should not patrol inside SNP, but only in the buffer zone. This led to some conflict with local communities who claimed not to be aware of the buffer zone and who raised concern about the high level of illegal activities and the large number of illegal miners who have returned to SNP since the number of forest patrols had reduced. FDA and its lead SNP partner do not have any documentation about the buffer zone and in September 2021, it was decided that FDA shall share key information and messages with regard to the buffer zone, which could be shared by the community ecoguards during awareness meetings. However, until the end of 2021 these messages were not formulated, and based on instruction from FDA the community ecoguard program at SNP could not resume.



Refresher training for six community ecoguard teams at Sapo National Park in August 2021

In December 2021, a **first community ecoguard training session** was held at **Cestos-Senkwehn Proposed Protected Area (CSPPA)**. A total of 22 community members were trained and at the end of the training, three teams were formed comprising 12 community members (incl. three women). The teams will start patrolling in January 2022.



Participants in the first community ecoguard training for Cestos-Senkwehn Proposed Protected Area conducted in December 2021

On the **national level**, WCF, in close collaboration with RSPB and SCNL continued to support **community ecoguard programs** at Lake Piso Multiple Sustainable Use Reserve, Gola Forest National Park, Foya Proposed Protected Area, Wonegizi Proposed Protected Area, and East Nimba Nature Reserve.

In 2021, a strong focus was on **capacity building for the FDA community ecoguard unit**, which currently comprises three FDA staff. Furthermore, support focused on the distribution of some additional materials for digital data collection (smartphones) and training in the (digital) data collection with SMART, with CyberTracker and SMARTmobile apps. During the second half of 2021, assessments of the community ecoguard teams were led by RSPB, SCNL and WCF, in order to give recommendations for future activities and assess the capacity of FDA staff, who are supposed to plan and supervise the community ecoguard activities.

3. Support for local communities

The support for community members around GKNP, KBPPA, SNP, and CSPPA comprises various activities, from direct support through the payment of monthly stipends to **fish farming, beekeeping, agriculture, skill-based training, infrastructure support and community-based ecotourism**.

- **Direct financial support:** Community members (44, including 17 women) serving as community ecoguards (28 at GKNP, 16 at KBPPA) are receiving regular stipends. A further 60 community ecoguards (incl. one woman) were trained and are available for patrols at SNP, pending approval from FDA. At CSPPA, 12 new community ecoguards (three women, nine men) will start patrolling in January 2022. Through SCNL, 40 community ecoguards are supported by a WCF-coordinated project at Gola Forest National Park. Additional community members are benefitting when participating in the forest patrols as porters, cooks and guides.
- **Aquaculture:** While WCF's project supporting fish farming activities at GKNP officially ended in December 2020, WCF continued to visit the fish farming communities and to give maximum possible support in the absence of dedicated funds. Two fish farming technicians visited the three communities involved in fish farming and gave technical support for pond maintenance, fish care etc. Based on a request from WCF, an EU-funded rice and fish farming project assessed the fish farming projects around GKNP and started working with one of the communities.
- **Beekeeping:** WCF's partner Universal Outreach Foundation (UOF) continued their extension visits to the beekeepers at GKNP (223 beekeepers) and KBPPA (84 beekeepers). At KBPPA, a group of 20 additional beekeepers was trained in Solo Town, Rivercess County, in June 2021. UOF and their partner Liberia Pure Honey continue to buy the honey from local beekeepers at a very good price (above the local market price). While this continues to create substantial benefits for beekeepers around GKNP and new beekeepers continue to join the program, the harvests at KBPPA are only slowly starting.



Participants in the beekeeping training on Solo Town in June 2021 are learning the construction and installation of beehives

- **Agriculture projects:** While the funding for the support of the agricultural activities (lowland rice and cassava) at GKNP finished in August 2020, WCF continued to engage the trained women and to carry out regular monitoring visits. A few of the rice and cassava mills provided to the ten women's groups needed repairs and maintenance, which WCF did to support the continuation of activities. Furthermore, WCF has been collaborating with SCNL

who have been implementing a cassava, rice, and vegetable farming project targeting 300 farmers around GKNP during the second half of 2021.

- **Infrastructure:** During the first half of 2021, WCF Liberia, in close collaboration with the local NGO CENFOR, rehabilitated and maintained hand pump water wells in Bao Town, Yeoh Town, and Matuah around GKNP. Likewise, two hand pump water wells were rehabilitated at Jallay Town, SNP. Following an initial basic assessment in 2020 and following additional awareness raising activities during the first months of 2021, WCF and local contractors met with communities around KBPPA to make detailed assessments of needed infrastructure, such as schools, toilets, clinics, roads, and bridges. WCF also worked with MTN Lonestar, to assess possibilities for network installation at selected sites around KBPPA. WCF supported the rehabilitation of the school staff building in Kumah Town at KBPPA. Since October 2021, WCF is working with the local NGO Rural Integrated Development Agency (RIDA) to construct four hand pump water wells around KBPPA (Jellue Town, Wiah Town, Sarfee Village, Solo Town) and one at GKNP (Zroo Town).



Rehabilitated staff building for school at Kumah Town (before painting) and newly constructed hand pump water well in Solo Town, close to completion, KBPPA

- **Community-based ecotourism:** In 2021, WCF has conducted several activities to assist the local communities unlock the Sapo National Park tourism potential. Construction of the Sapo Ecolodge commenced was completed, with three chalets, two tent platforms, a dining platform, and two additional washrooms. The Sapo Ecolodge will provide attractive accommodation for tourists near SNP and shall be co-managed by FDA, WCF and the local communities. Moreover, the ecolodge will stimulate local empowerment by generating revenue to benefit the forest-fringe communities. WCF developed a Memorandum of Understanding with FDA, which is pending to be signed and shows WCF's long-term commitment to support ecotourism activities at SNP, with strong support for local communities, in particular women. Three local community members have been employed as security guards for the Sapo Ecolodge for the whole of 2021 and four local women have received intense hospitality and catering training at Libassa Ecolodge in April and November 2021. They are the first members of the future women's conservation enterprise that will be strongly involved in the management of the Sapo Ecolodge. In order to improve the skills of tourist guides, birdwatching training for ten community members and FDA rangers was conducted in December 2021.



Sapo Ecolodge constructed at the edge of Sapo National Park (SNP)



Four women from SNP receiving hospitality and catering training at Libassa Ecolodge



Birdwatching training for local tourist guides conducted at the Sapu Ecolodge in December 2021

Following the example of WCF's community-based ecotourism project at Taï National Park in Côte d'Ivoire, WCF supported the training of a cultural troupe at SNP, which will allow tourists to enjoy a variety of (traditional) cultural programs in the future. In April and in December 2021, Eddie Theater Production trained a group of 18 community members from around SNP. The cultural program now includes several dramas, storytelling, dancing, and drumming. Some members of the cultural troupe also received training in the repair of drums.



The Sapo Cultural Troop trained to perform various programs to tourists in the future

On 11 December 2021, an official opening ceremony of the Sapo Ecolodge was held at the SNP headquarters and at the Sapo Ecolodge, in the presence of the FDA management, county and local authorities, community members, Sapo-based FDA staff, partners, and the WCF team with the WCF President and the WCF West Africa Director. The official program included speeches, presentation of the ten community members already involved in the ecolodge activities, cultural performances, cutting of the ribbon, and a tour of the ecolodge. All participants in the ceremony were greatly impressed and excited about the excellent potential for ecotourism that will be promoted through the Sapo Ecolodge.



Opening ceremony for the Sapo Ecolodge on 11 December 2021, with the FDA Managing Director Hon. C. Mike Doryen and the WCF President Prof. Christophe Boesch, cutting the ribbon (left), WCF, FDA, and partners (middle) and cultural performance (right)

4. Pre-gazettement activities at Krahn-Bassa Proposed Protected Area

In 2021, various activities were implemented to support the **gazettement of Krahn-Bassa Proposed Protected Area (KBPPA)** as a national park. Throughout 2021, FDA and WCF, with support of the Ministry of Internal Affairs (MIA) and the Liberia Land Authority (LLA) conducted series of **awareness missions**, accompanied by **radio announcements and talk shows** around KBPPA, to inform communities about the future creation of the national park and to coordinate **the participatory land use mapping** with local communities. The first part of the mapping was done from March to May 2021, a second part in October-November 2021. So far, ca. 60% of the proposed boundary has been mapped with local communities, in order to identify any potential land use conflicts.

In total, **74 consultation meetings** were held around KBPPA in 2021, sensitizing **2,316 people**. The majority of the participants were in support of the government’s and partners’ plans for the KBPPA becoming a fully protected area. However, concerns were discussed about alternative livelihoods, employment, infrastructure development, and technical issues such as the location of the future park, the demarcation of the boundary line, the name of the park, and agricultural land use. Major challenges are faced through the activities of logging companies actively lobbying against conservation activities in local communities and of the FDA Community Forestry Department which continues to accept community forest applications overlapping with KBPPA.



Community members displaying their land use maps created in the participatory land use mapping meetings at Krahn-Bassa Proposed Protected Area

Additional sensitization of local communities and authorities around KBPPA was conducted through **awareness theater with Eddie Theater Production**, both live and via radio broadcasts. In March the radio version of the KBPPA drama (“*The Strength of a Woman*”) was broadcast for 30 days on five radio stations to create public awareness on biodiversity, the risks of hunting and eating bushmeat, conservation and the benefits of park creation, and land-use planning. In April, Eddie Theater Production, accompanied by FDA and WCF, performed the drama live in **19 communities** around the KBPPA. In total, **4,851 community members** were sensitized during the theater tour.



Eddie Theater Production performing for community members near Krahn-Bassa Proposed Protected Area

5. Awareness raising

Besides the regular awareness raising meetings conducted by the community ecoguards and the awareness activities at KBPPA, additional programs and events were promoted in Monrovia and Paynesville.

In February, March and October 2021, the **ex-bushmeat sellers drama team**, supported by Eddie Theater Production, performed at all major bushmeat market areas in Monrovia and Paynesville. The team was met with great enthusiasm and several women traders in the markets stopped working in the bushmeat trade because of this intense awareness activity. FDA and WCF have worked with **34 women bushmeat sellers who serve as community volunteers** by raising awareness about protected species and the wildlife law in the various market areas. Out of this group, 27 women have abandoned the bushmeat business, while seven were still found to sell bushmeat and therefore were excluded from the community volunteer program.



Group of women ex-bushmeat sellers trained as community volunteers and forming the ex-bushmeat sellers drama team,



Market awareness with Ex-bushmeat sellers drama team and FDA in Monrovia and Paynesville

On 20 February and 3 March 2021, **World Pangolin Day** and **World Wildlife Day** were celebrated, respectively. The programs involved government representatives, speakers from several conservation organizations and students from various high schools. At both occasions the ex-bushmeat sellers drama team performed pieces on protected species and the National Wildlife Conservation and Protected Area Management Law.

On 25 September 2021, WCF organized the wildlife and ecotourism group for the **World Tourism Day** celebration in collaboration with the Liberia National Tourism Association (LINTA), the Ministry of Information, Cultural Affairs and Tourism (MICAT), FDA, the Forestry Training Institute (FTI), and other conservation partners. This event helps to further promote wildlife and nature conservation in Liberia.



World Tourism Day celebration on 25 September 2021, promoting wildlife and nature conservation through a parade and fair.

On 27 October 2021, WCF in collaboration with LCRP supported the two Liberian focal persons for the **Regional Action Plan for the Conservation of Western Chimpanzees** for holding **the launch event for the plan in Monrovia**. The meeting involved all relevant stakeholders from the Liberia government, the diplomatic corps, NGOs, academic institutions, and the private sector. The event allowed not only to give an overview of the status of chimpanzees and their threats, but also to give a detailed idea about the activities required by the action plan. During the event, participants signed a pledge committing themselves to support the implementation of the action plan.



Launch of the Regional Action Plan for the Conservation of Western Chimpanzees on 27 October 2021, with group photo (left) and the signing of the pledge, here done by Hon. Harrison Karnwea, FDA Board Chairman

6. Coordination of Biomonitoring and Law Enforcement Sub-Committees of the Liberia National Species Working Group

WCF continued to coordinate the **Biomonitoring and Law Enforcement Sub-Committees of the Liberia National Species Working Group**, hosted by the FDA. Three meetings were held for the Law Enforcement Sub-Committee (LESC) in March, May and September 2021, and significant progress was made with regard to the review of the National Wildlife Conservation and Protected Area Management Law in collaboration with FDA, the National Fisheries and Aquaculture Authority (NaFAA), Conservation International, and LCRP. Since September 2021, the revised law is with FDA for final approval.

The support for various law enforcement activities and awareness by the LESL continued, and a major milestone was the **signing of a Memorandum of Understanding (MoU)** between FDA and the Ministry of Justice (MoJ) which shall allow for more efficient law enforcement.

For the **Biomonitoring Sub-Committee (BMSC)**, finally FDA appointed two focal persons and planning meetings were held in order to review the tasks of the BMSC and plan upcoming meetings.

7. Combatting Illegal Wildlife Trade

In close collaboration with FDA, the Environmental Protection Agency (EPA), MoJ, the Liberian National Police (LNP), Liberia Chimpanzee Rescue and Protection (LCRP), FFI, and Libassa Wildlife Sanctuary (LiWiSa) WCF continued to support initiatives combating wildlife crime, in particular through the activities of the **Wildlife Crime Task Force (WCTF)**. The establishment and operations of the WCTF, spearheaded by the Wildlife Confiscation Unit of the FDA, has led to a **significant increase of wildlife confiscations, arrests of suspects, and conviction of those who were found guilty of wildlife crime**. WCF is providing regular logistic and technical support to the WCTF, and together with FFI is working on the upgrade of the existing national wildlife crime database.

In February, WCF, in collaboration with FDA and FFI, supported a **two-day training workshop on wildlife law enforcement for joint security, judiciary, FDA, and market vendors** in Greenville, Sinoe County. Presentations and discussions, among others, covered an introduction to the LESL, WCTF and FDA Confiscation Unit & Transboundary Law Enforcement Technical Working Group, national wildlife conservation and protected area law, evidence collection, report writing, and procedures for confiscation and arrests. Attendees participated in a group exercise on how to improve arrest and prosecution rates in Liberia. A panel discussion on how to achieve a more vigorous law enforcement network and outcomes in the southeastern region ended the workshop.



Participants in the wildlife law enforcement training in Greenville, Sinoe County

In December 2021, the **Wildlife Confiscation Unit of the FDA received training** in (undercover) investigation techniques from Eco Activists for Governance and Law Enforcement (EAGLE), with support from WCF. These techniques shall help the unit to be more successful in their investigations, including the investigation of organized crime networks, and to increase the number of arrests linked to wildlife crime.

A major event in May 2021 was the **launch of the new chimpanzee sanctuary run by Liberia Chimpanzee Rescue and Protection (LCRP)**. The chimpanzee holding facility was funded and realized through the WCF-coordinated project “*Strengthening local communities and the law enforcement network to combat wildlife and forest crime in Liberia*”. The new chimpanzee sanctuary will allow for more professional care of confiscated chimpanzees in the future.

From October to December 2021, WCF received **ten students from FTI for an internship program focusing on a bushmeat market survey** in Monrovia and Paynesville. Analysis of the survey is underway and results from this survey will be compared with a similar survey conducted in 2019, to evaluate the impact of awareness and law enforcement in the various market areas. The interns were trained to conduct three questionnaires; one targeting bushmeat consumers, a second for bushmeat sellers, and another for targeting live (wild) animal sellers. No attempted sales of live animals were observed; hence, no data was collected on the live animal trade. Twenty-three markets that were known to have bushmeat vendors were visited, some of which had previously been targeted by FDA law enforcement and awareness activities. A total of **163 interviews** were completed; 127 with market bushmeat sellers, and 36 with restaurant workers where bushmeat is served in meals. The questionnaire targeted demographic information about the sources of bushmeat and perceptions how the trade is changing. Members of the community (n= 627) were asked about their opinions, preferences, and habits around bushmeat consumption. While most people surveyed had been eating bushmeat for their entire lives, many are reportedly open to consuming less bushmeat, following concerns for zoonoses (particularly ebola virus). Almost all respondents (97.5%) stated that they would like to be better informed about wildlife law and protected species.

8. Capacity building

In 2021, WCF continued to **train internship students** from the FTI and other academic institutions. In total **19 interns** (incl. six women) were hosted by WCF and participated in the various field and office activities. One intern fully focused on administrative tasks.

In April 2021, the Administration and Finance Manager conducted a **two-day QuickBooks training session** for all WCF administration & finance staff, in order to ensure that the team will be able to efficiently use this accounting software in the future.

In May 2021, the WCF team and affiliates (community ecoguard team leaders, Sapo tourist guides, community members engaged with the Sapo Ecolodge) received **first aid training** from medical professionals from the Martha Tubman Memorial Hospital in Zwedru. The three-day course covered comprehensive first aid treatment, with a focus on injuries that may occur whilst in the field.

In September and October 2021, WCF’s communication officer and seven local community members from around GKNP received **filmmaking training by Earthbeat**, in order to produce videos for a competition in the framework of the Climate Conference COP 26. The video of Marthaline Garley, a community ecoguard from Grebo-Krahn National Park, was shortlisted and was shown at the COP 26 in Glasgow.



Certificate for Marthaline Garley, a community ecoguard at Grebo-Krahn National Park, whose video was shortlisted for the COP 26

9. Acknowledgements

The WCF Liberia team is grateful to its partners in Liberia, in particular the Forestry Development Authority, who has been by WCF’s side for the implementation of all projects.

Other partners in Liberia with whom projects have been implemented and whom we wish to thank, in no particular order, are: Environmental Protection Agency, Ministry of Internal Affairs, especially represented through the Superintendents in Grand Gedeh, River Gee, Sinoe and Rivercess Counties, Ministry of Information, Cultural Affairs and Tourism, Ministry of Justice, Liberia National Police/Transnational Organized Crime Unit, Interpol, Forestry Training Institute, University of Liberia, Paynesville and Monrovia City Cooperations, Society for the Conservation of Nature of Liberia, Royal Society for the Protection of Birds, Fauna and Flora International, Liberia Chimpanzee Rescue and Protection, Libassa Wildlife Sanctuary, CENFOR, RIDA, Universal Outreach Foundation, FIFES / ACDI/VOCA, Liberia National Tourism Association, and Urias S. Goll.

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Annual Report 2021 – WCF Guinea



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Acronyms

CBG	Compagnie des Bauxites de Guinée
CF	Classified Forest
CG	Corridor Grid
CVCD	Comité Villageois pour le Développement et la Conservation (village committee)
DS	Distance Sampling
FMNR	Farmer Managed Natural Regeneration
GAC	Guinea Alumina Corporation
GIE	Groupement d'Intérêt Economique (Economic Interest Group)
HVCF	High Value Conservation Forest
MBNP	Moyen-Bafing National Park
MEDD	Ministry of Environment and Sustainable Development
NASA-FIRMS	National Aeronautics and Space Administration, Fire Information for Resource Management System
NER	Natural Ecological Regeneration
NGO	Non-Governmental Organization
NPAA	National Protected Area Authority
OGPR	Office Guinéen de Parcs et Réserves (Guinean Office of Parks and Reserves)
OKKPSS	Outamba-Kilimi-Kuru-Penselli-Soyah-Sabouyah
PDL	Plan de Développement Local (Local Development Plan)
PPP	Public-Private Partnership
PSSNP	Penselli-Soyah-Sabouyah National Park
SECR	Spatially Explicit Capture-Recapture
SMART	Spatial Monitoring and Reporting Tool
TCS	Tacugama Chimpanzee Sanctuary
UCOMB	Unité de Coopération pour l'Offset Moyen Bafing
UC	Union Communale (Municipal Union)
VLMP	Village Land Management Plan
WCF	Wild Chimpanzee Foundation
WDPA	World Database on Protected Areas

1. Executive summary

In 2021, WCF Guinea has pursued sustainable management activities of the Moyen-Bafing National Park (MBNP) and has initiated a new transboundary project in the Outamba-Kilimi-Kuru-Penselli-Soyah-Sabouyah (OKKPSS) landscape.

In the Moyen-Bafing National Park, important progress has been made to ensure the integrity of the park. On May 4th 2021, the presidential decree was signed officialising the **creation of the Moyen-Bafing National Park**. WCF Guinea trained **196 state actors** involved in law enforcement on natural resource management, illegal wildlife crime, and patrolling techniques, and conducted **127 surveillance patrols** (total of 19,359 kilometres) resulting in arrests, seizures, and prosecutions for illegal logging and bushmeat hunting activities. More than **80% of the High Value Conservation Forests were protected from wildfire damage** during the 2020-2021 fire season, with a total of 488 km of firebreaks created and the involvement of **8,750 community members**. In addition, an important upscaling of forest regeneration effort has taken place with **661.48 hectares** of land identified to date, of which 568.5 ha are already benefiting from regeneration efforts.

Multiple camera trap grid designs are installed throughout the MBNP: (i) **Distance Sampling** design to estimate wildlife populations within the park, (ii) **Spatially Explicit Capture-Recapture** design to identify all chimpanzee individuals and groups living in two areas and to monitor chimpanzee population dynamics, and (iii) **corridor grids** to evaluate forest corridor-use between classified forests and wildlife population estimates therein.

In 2021, **4,332 community members** were actively participating in the management of the MBNP through a multilevel committee structure: 48 village committees, 13 municipal unions, 15 municipal consultative assemblies, and one park-wide committee. Important progress has been made in the socioeconomic development of local communities: **1,520 people** are organized into **64 cooperatives** for vegetable gardening, apiculture, shea butter production, and agriculture. **Total sales (of onions, honey, and shea butter) reached 404,499,500 GNF (~USD 42,690)**. The onions, honey from Kenyan beehives, and shea butter produced in the MBNP were all labelled as eco-responsible products. A total of 65 Farmer Managed Natural Regeneration fields from which 3,162 trees were preserved, are maintained by community members. In 2021, WCF created a **pastoralism and livestock program** to respond to the environmental degradation caused by over-grazing of cattle and to human-wildlife conflicts (i.e. cattle killed by wildlife).

Hundreds of radio broadcasts, posters and signs were created to share information about the MBNP. To inform the wider public (nationally and internationally), we used different communication channels such as national TV, social media, websites, and produced a documentary film. New activities were implemented in 2021: (i) **Cercles d'écoute** ("listening circles") which are essentially focus groups in which people listen to radio broadcasts and discuss the topics, reached **2,486** people in 92 villages, (ii) the **theatre tour** which was conducted in 15 villages (participation of **10,556** people) during which key messages about park management were shared, and (iii) the **Club PAN program** which was implemented in 10 schools and benefitted **896** children.

The transboundary OKKPSS project funded by the European Union was launched in June 2021. WCF is working in close collaboration with the Guinean Office of Parks and Reserves (OGPR), and with Tacugama Chimpanzee Sanctuary (TCS) and the National Protected Area

Authority (NPAA) in Sierra Leone for the **sustainable management of this key transboundary forest landscape area**. Since the launch of the project, WCF has been working in partnership with OGPR towards the common goal of **establishing the Penselli-Soyah-Sabouyah National Park**. The creation of the park will follow the same process as that of the creation of the MBNP, and a mandate authorizing the baseline studies in the zone is already signed by the Minister of the Environment. Five preliminary surveillance patrols were conducted in 2021, but activities will proceed at an accelerating pace from January 2022 as the WCF ecoguards and field officers dedicated to the project are now all recruited and trained.

2. Moyen-Bafing National Park

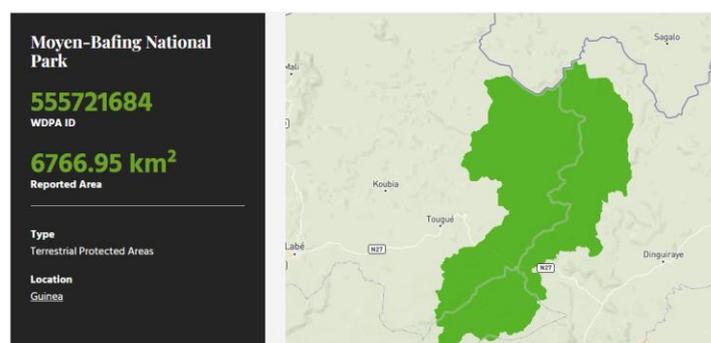
2.1. Creation of the Moyen-Bafing National Park

In late 2020, the draft of the presidential decree for the creation of the Moyen-Bafing National Park (MBNP) was submitted to the Ministry of the Environment. In March 2021, the draft was in the hands of the Minister of the Environment, and on April 1st 2021, the creation of the MBNP was included in the meeting agenda of the inter-ministerial council that advises the President of the Republic (*Conseil des Ministères*). Finally, **on May 4th 2021, the decree for the creation of the MBNP was signed by the President of the Republic**. Since the official creation of the park, the WCF Guinea communication team has developed a strategy to spread the news nationally and internationally:

- 1) The decree was presented and explained in French and local languages (Peuhl and Malinké) to all stakeholders (administrative authorities, elected representatives, and local communities) in the five prefectures of the park (Koubia, Mamou, Dabola, Dinguiraye and Tougué);
- 2) An announcement was written and posted on social media and different websites;
- 3) Radio broadcasts were created to reach a broad audience, and
- 4) A documentary film was produced highlighting the steps of the park creation process.

Now that the presidential decree officialising the creation of the Moyen-Bafing National Park has been signed, the main objective of WCF Guinea is to help with the **establishment of a park management unit through a Public-Private Partnership (PPP) contract**. The draft of the PPP has been submitted to the Ministry of Environment and Sustainable Development (MEDD, *Ministère de l'Environnement et du Développement Durable*) and the process regarding the PPP contract will be pursued next year.

The MBNP was integrated into the **World Database on Protected Areas (WDPA)** in November 2021, see <https://www.protectedplanet.net/555721684>.



Moyen-Bafing National Park registered in the World Database on Protected Areas

2.2. Surveillance and law enforcement activities

A total of **127 patrols** (average of 10.6 patrols per month, range = 8-12) led by teams comprised of mixed WCF ecoguards and OGPR agents (5-6 people per team) were conducted from January to December 2021. The six management zones of the Moyen-Bafing National Park (Dara, Laffa Boubhè, Kansangui, Felo Koundoua, Kela and Ndire Yangueya) were covered along with five connecting classified forests (CFs: Sincery, Souarela, Tinkisso, Woundou-Nord, and Woundou-South). A total of **19,359 km** were patrolled. On average, **62% of the MBNP and the CFs** were covered each quarter (min: 50.4%, max: 80.6%). The objective of the surveillance patrols was to monitor and record all observations on wildlife and illegal activities, as well as to enforce the law through seizures and arrests by state officers.



Observation of a chimpanzee nest by WCF female ecoguards

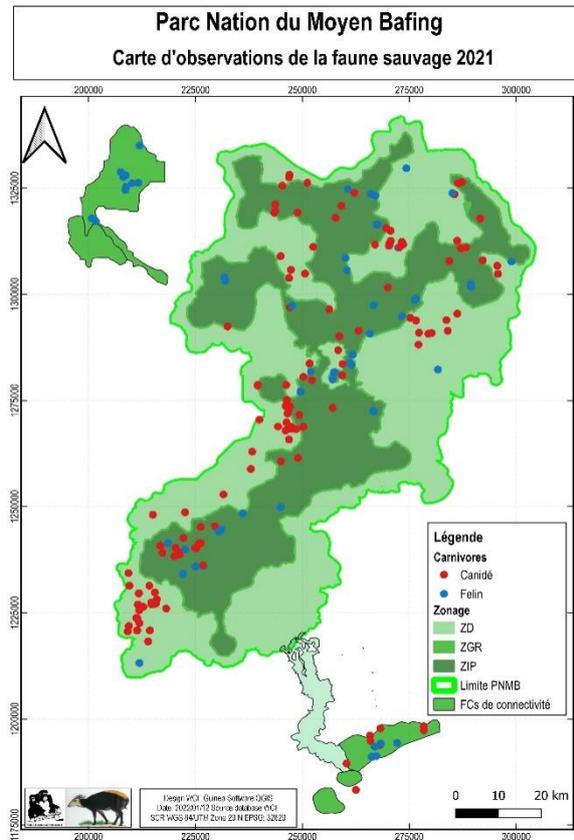
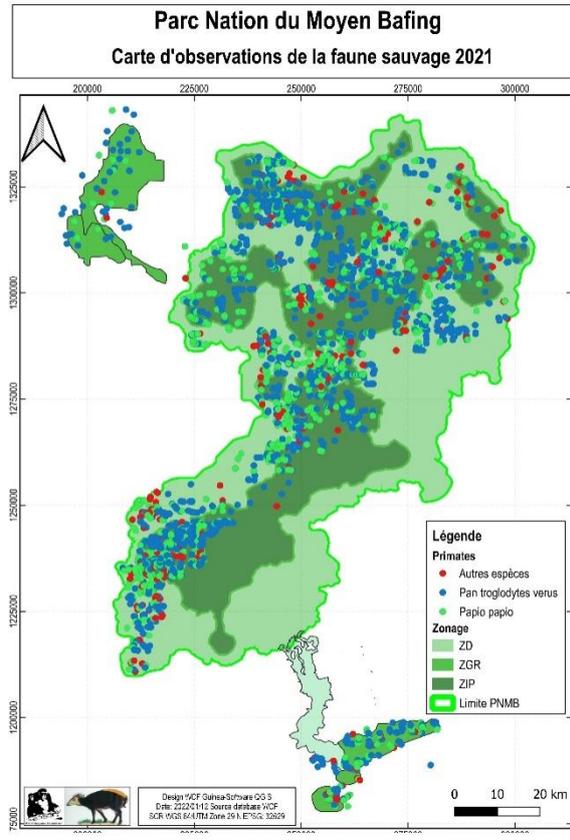
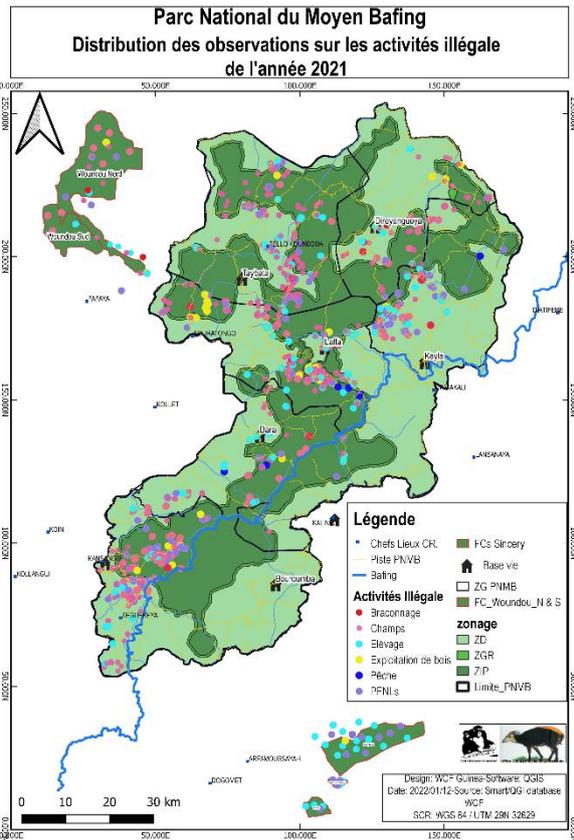
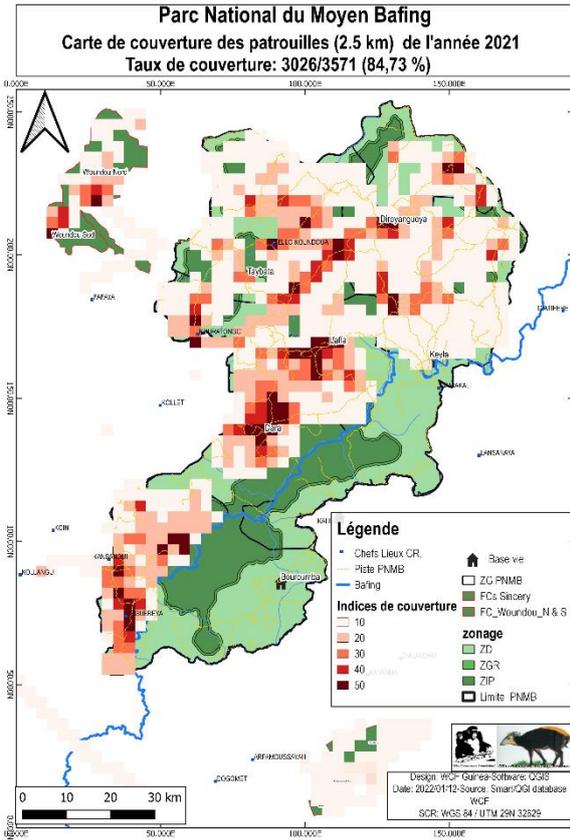
A total of **26,665 observations of wild animals** were recorded in 2021, from which 1,238 were direct observations and 36 mammal species were detected. The encounter rates for each species are presented in Table 1. The common warthog (*Phacochoerus africanus*) was the species with the highest encounter rate (0.63 signs/km) followed by the chimpanzee (*Pan troglodytes verus*, 0.33 signs/km), the Guinea baboon (*Papio papio*, 0.19 signs/km), and the crested porcupine (*Hystrix cristata*, 0.09 signs/km). Animal signs were mainly recorded in the strict reserve zone (ZIP: *Zone Intégralement Protégée*) and in the resource management zone (ZGR: *Zone de Gestion des Ressources*).

A total of **2,834 signs of illegal activities** were recorded in 2021. Among these illegal activities, agriculture was the main threat (average of 0.06 signs/km for the four quarters), followed by the exploitation of non-timber products and farming (0.03 signs/km), and logging (0.02 signs/km). The highest encounter rate for illegal activities was during the second quarter (0.20 signs/km), and the lowest during the third quarter (0.10 signs/km). This might be explained by periodic illegal activities. Indeed, during the first quarter, the temperature in the MBNP is generally low, leading people to search for more firewood. Moreover, several wildfires started in the area following as a result of the drought. During the second quarter, some people start tilling for new annual crops and use timber for their fences. The second quarter corresponds to the dry season when cattle herds forage far from the villages.

In 2021, **seven arrests** accompanied by seizures were made by *Brigade* agents, OGPR agents, and *Cantonnement* agents both within and outside the MBNP: two cases of hunting and illegal possession of firearms, four cases of illegal logging, and one case of wildfire creation. To discourage illegal activities in the MBNP, the OGPR agents destroyed 24 hunting camps and three fishing dams.

Table 1. Direct and indirect observations of medium- to large-sized mammals recorded between January and December 2021 during ecoguard missions.

	Common name	Scientific name	Dir Obs	Ind Obs	Total Obs	Enc. rate (sign/km*100)
1	African clawless otter	<i>Aonyx capensis</i>	2	2	4	0.02
2	Marsh mongoose	<i>Atilax paludinosus</i>	0	4	4	0.02
3	Brush-tailed porcupine	<i>Atherurus africanus</i>	0	15	15	0.08
4	Caracal	<i>Caracal caracal</i>	3	19	22	0.11
5	Yellow-backed duiker	<i>Cephalophus silvicultor</i>	15	52	67	0.35
6	Red-flanked duiker	<i>Cephalophus rufilatus</i>	20	141	161	0.83
7	Common duiker	<i>Sylvicapra grimmia</i>	23	34	57	0.29
8	Black duiker	<i>Cephalophus niger</i>	3	28	31	0.16
9	Sooty mangabey	<i>Cercocebus atys</i>	42	28	70	0.36
10	Campbell's monkey	<i>Cercopithecus campbelli</i>	6	11	17	0.09
11	Side-striped jackal	<i>Canis adustus</i>	25	402	427	2.21
12	Vervet monkey	<i>Chlorocebus pygerythrus</i>	38	105	143	0.74
13	Green monkey	<i>Chlorocebus sabaeus</i>	104	136	240	1.24
14	Cape genet	<i>Genetta tigrina</i>	14	46	60	0.31
15	King colobus	<i>Colobus polykomos</i>	4	3	7	0.04
16	Rock hyrax	<i>Procavia capensis</i>	1	3	4	0.02
17	Patas monkey	<i>Erythrocebus patas</i>	29	191	220	1.14
18	Hippopotamus	<i>Hippopotamus amphibius</i>	0	47	47	0.24
19	Roan Antelope	<i>Hippotragus equinus</i>	0	14	14	0.07
20	Giant forest hog	<i>Hylochoerus meinertzhageni</i>	3	62	65	0.34
21	Crested porcupine	<i>Hystrix cristata</i>	2	1827	1829	9.45
22	White-tailed mongoose	<i>Ichneumia albicauda</i>	0	21	21	0.11
23	Kob	<i>Kobus kob</i>	0	14	14	0.07
24	Waterbuck	<i>Kobus ellipsiprymnus</i>	0	58	58	0.30
25	Scrub hare	<i>Lepus saxatilis</i>	9	29	38	0.20
26	Spotted-necked otter	<i>Hydricteis maculicollis</i>	1	1	2	0.01
27	Western chimpanzee	<i>Pan troglodytes verus</i>	74	6319	6393	33.02
28	Lion	<i>Panthera leo</i>	0	3	3	0.02
29	African leopard	<i>Panthera pardus</i>	2	47	49	0.25
30	Guinea baboon	<i>Papio papio</i>	515	3235	3750	19.37
31	Common warthog	<i>Phacochoerus africanus</i>	266	11843	12109	62.55
32	Maxwell's duiker	<i>Philantomba maxwellii</i>	5	32	37	0.19
33	Red river hog	<i>Potamochoerus porcus</i>	12	282	294	1.52
34	African buffalo	<i>Syncerus caffer</i>	2	45	47	0.24
35	Greater cane rat	<i>Thryonomys swinderianus</i>	0	20	20	0.10
36	Bushbuck	<i>Tragelaphus scriptus</i>	18	308	326	1.68



Coverage and intensity of patrols conducted in six of the eight zones in the Moyen-Bafing National Park and classified forests in 2021, with darker red colour representing the grid cells with higher patrol efforts (top left) and spatial distribution of illegal activities (top right), primate (bottom left) and canid and felid presence signs (bottom right) recorded during ecoguard missions.

2.3. Law enforcement capacity building

A total of 13 training workshops were organized by WCF for different state actors in 2021:

- 1) From January 29th to February 9th 2021, a series of **five capacity building workshops** were organized on natural resource management for different state actors in the five prefectures of the MBNP (total of 54 participants). The goal of these workshops was (i) to present the illegal activities recorded by ecoguards while on surveillance patrols during the last two years in each of the five prefectures, (ii) clarify the role of each technical service involved in the management of wildlife and forestry resources, (iii) clarify the process of granting logging and hunting permits, and (iv) clarify the national quota system used to determine the harvest limits of timber products.
- 2) From the 6th to the 9th of July 2021, a **capacity building workshop on illegal wildlife crime** was organized benefiting a total of 84 state agents: 14 magistrates, 36 *Brigade* agents, 13 OGPR agents, and 21 *Cantonnement* agents. The goal of this workshop was to (i) increase knowledge and understanding of illegal wildlife crime, (ii) increase and improve the collaboration between the different services involved in order to make informed decisions, and (iii) to ensure that the *Brigade* is operational and proficient in fighting wildlife crimes;
- 3) **Seven training workshops on patrolling techniques** (GPS, CyberTracker, SMART, etc.) and **legal provisions on the protection of the environment** were organized for 48 OGPR agents, six *Brigade agents*, and four *Cantonnement agents*. The goal of these workshops was to render the OGPR agents and other state agents operational and proficient in the surveillance and management of natural resources, and to increase their knowledge of wildlife protection legislation, court procedures, and the fauna and flora codes.

For part of the law enforcement capacity building of state actors, a total of 233 OGPR agents and six *Brigade* agents joined the surveillance patrols conducted in the MBNP with the WCF ecoguards from January to December 2021.



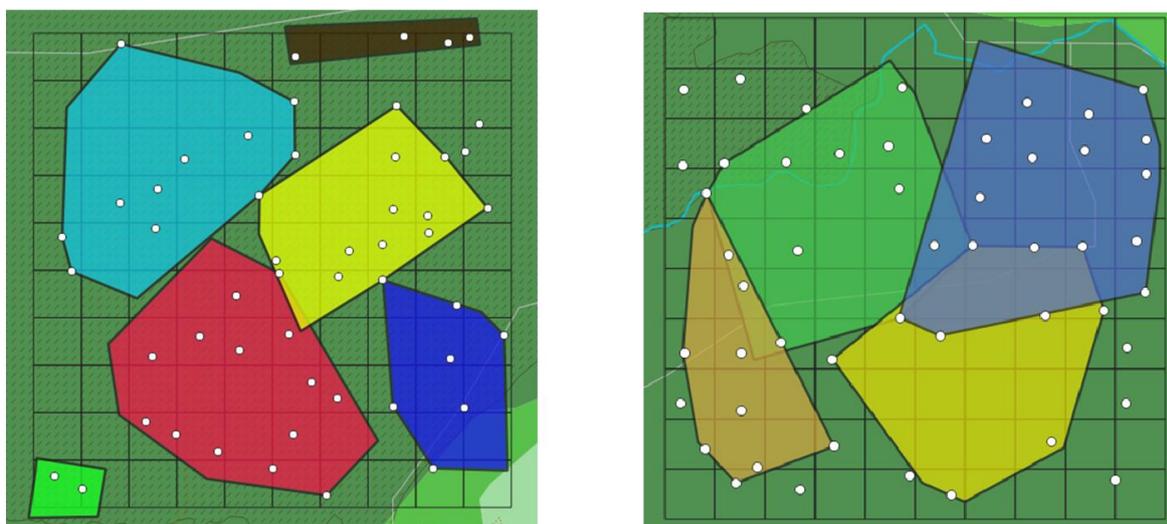
OGPR agents at the end of their capacity building workshop

2.4. Wildlife biomonitoring

The WCF biomonitoring for the Moyen-Bafing National Park has been refined over the past years to provide improved precision of wildlife population estimates, as compared to the more traditional line transect methodology. Multiple camera trap grid designs have been installed throughout the park:

- 1) **Distance Sampling design** (DS; 215 camera traps) to estimate wildlife populations within the entire park. Cameras are rotated throughout the park every 6-8 months between three sectors (northwest, northeast, and south) following a habitat-stratification approach;
- 2) **Spatially Explicit Capture-Recapture** (SECR; 106 camera traps) to identify all chimpanzee individuals and groups living in two areas of the park (Bakoun and Koukoutamba) and to be able to monitor chimpanzee population dynamics;
- 3) **Corridor Grids** (CG) to evaluate forest corridor use between classified forests and wildlife populations therein: 30 camera traps to evaluate corridor use between two classified forests within the park (Bakoun and Boula) and 31 camera traps to evaluate corridor use between the park and the Woundou Classified Forest located outside of the MBNP.

The Spatially Explicit Capture-Recapture (SECR) analysis allowed the identification of **eight chimpanzee groups** (with all adults individually identified) and their respective home ranges in Bakoun (north of the park, four groups) and Koukoutamba (south of the park, four groups) areas. Another **two chimpanzee groups were detected in the periphery of Bakoun**, but additional data is needed to have a full understanding of their group composition, the individual chimpanzees and their full home range. This information will constitute the baseline data that will be used to monitor the chimpanzee population dynamics in the MBNP.



Preliminary home ranges of six chimpanzee groups in the Bakoun area (left) and four chimpanzee groups in the Koukoutamba area (right)

Table 2. Composition of the four fully identified chimpanzee groups in the Bakoun area and preliminary composition of the four chimpanzee groups in the Koukoutamba area

Life stage	Bakoun				Koukoutamba			
	G1	G2	G3	G4	G1	G2	G3	G4
Adult female	10	15	7	10	9	14	5	2
Adult male	10	13	11	11	18	13	2	7
Adolescent female	4	5	5	7	-	-	-	-
Adolescent male	4	6	3	5	-	-	-	-
Adolescent unknown	0	1	0	0	-	-	-	-
Juvenile female	2	4	2	1	-	-	-	-
Juvenile male	4	2	3	0	-	-	-	-
Juvenile unknown	0	2	0	1	-	-	-	-
Infant	9	13	7	6	-	-	-	-
Total	43	61	38	41	27	27	7	9

2.5. Forest regeneration and wildfire management

In 2021, WCF has transitioned entirely away from the tree transplantation approach to employing solely **Natural Ecological Regeneration (NER)**, given its superior efficacy as a reforestation method. An important upscaling of the NER efforts has taken place in consultation with local communities and often at their request. To date, a total of **661.48 hectares** of land have been identified (of which 443 ha were identified in 2021) and 568.48 ha are already benefiting from the forest regeneration efforts.

Given the importance of managing wildfire risk to the viability of the NER sites, program activities are aligned to the dry/fire season calendar, beginning in October/November and ending with the onset of rains in May/June. With the participation of **8,750 community members**, **488 km of firebreaks** were created around NER sites and important forests to prevent the further loss of forest cover.

During the 2020/2021 fire season, 2,011 fires were detected in the MBNP (Source: NASA-FIRMS), of which 1,145 were detected during the late fire season. A total of **1,231 people** divided in groups of 10 ± 8 persons (WCF Guinea agents and local communities) participated in the firefighting activities. Analyses of burned areas throughout the MBNP indicate that 35.6% of the MBNP was burned during the 2020/2021 fire season (Source: NASA-FIRMS): 18% corresponded to the development zone (ZD), 2% to the resource management zone (ZGR), and 16% to the strict reserve zone (ZIP) of the park.

Wildfire control measures are currently focused on the preservation of priority forested areas (gallery and open forests) and more than **80% of the High Conservation Value Forests** were protected from wildfire damage during the 2020/2021 fire season. In addition, a total of **1,518 people in 94 villages** participated in awareness sessions on the management of wildfires.



Firebreak created in the village of Badala

2.6. Community consultative management framework

Efforts to protect wildlife and sustainably manage natural resources require the cooperation and the participation of local communities living in the park. Since 2018, WCF has been creating an organizational framework following a spatial hierarchy that allows for transparent and participative management. Between 2018 and 2020, 19 village committees were created, and important progress has been made in 2021, bringing a total of **4,332 community members** actively participating in the park management through a multilevel committee structure:

- **48 village committees** (CVCs) involving 3,749 people;
- **13 Municipal Unions** (UC) involving 361 people, and 15 municipal consultative assemblies are already established involving 546 people;
- **One park-wide committee** (*Faitière*) involving 37 people.

In 2021, 14 village committees benefitted from training in basic financial management, association management, and agroecological techniques. Moreover, an annual work plan and monitoring and evaluation tools were developed for the village committees to evaluate and improve their performance; eight village committees were evaluated in 2021.

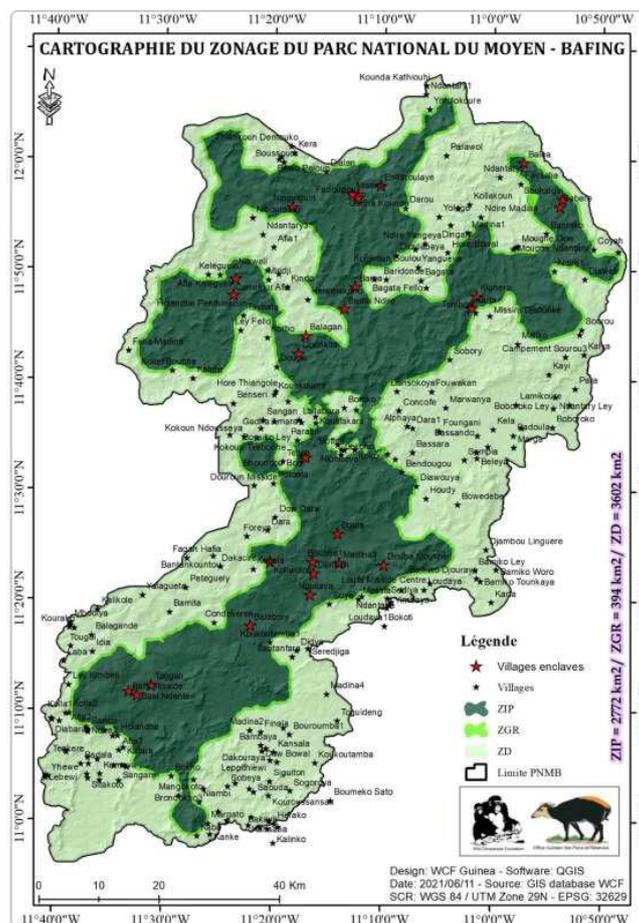
A complaint and grievance mechanism system is functional and integrated into the three committee levels: at the village level with the CVCs, at the communal level with the UCs and at the park-wide level with the *Faitière*. This mechanism is intended to emphasize conflict resolution at the village level through the involvement of local resources, such as the CVCs. From 2020 to 2021, the number of complaints received has decreased by more than half: **from 40 in 2020 to 18 complaints in 2021**.

Work with the village committee CVCs, continued throughout the year with progress made in advancing the development of **natural resource management plans** for each of the village territories (Village Land Management Plan, VLMP). As a first step in the VLMP development process, a participative mapping exercise is conducted, which ensures that community members fully understand their use of space: **11 additional participative maps were created in 2021** (total of 31 maps to date). The next step in the process of developing the VLMP is to discuss with the communities how and where the zoning of the national park may impact their use of natural resources. The **Zoning Plan of the MBNP has been finalized in 2021**, and this will now allow the VLMP process to proceed at an accelerating pace in the months to come.



Meeting with local communities to introduce the key concepts of VLMP (left) and participatory mapping exercise (right)

The governance and territorial planning of the 15 communes of the MBNP, which are conducted through their **Local Development Plans** (PDLs, *Plans de Développement Local*), must now take the Moyen-Bafing National Park into consideration (officially since the presidential decree was signed on May 4th 2021). To do so, technical and financial support is currently provided to communities by WCF in the revision and updates of their PDLs. These 15 PDLs should integrate both the activities and the zoning of the MBNP.



Finalized zoning plan of the Moyon-Bafing National Park, indicating the location and extent of the strict reserve (ZIP), the natural resource management zone (ZGR) and the least restrictive zone, the development zone (ZD)

2.7. Socioeconomic development of communities

This year, important progress was made in the socioeconomic development of local communities with the creation of cooperatives, also called economic interest groups (GIE, *Groupement d'Intérêt Economique*). To date, **1,520 people** are organized into **64 cooperatives** benefiting from WCF support to improve livelihoods in various sectors:

- 26 GIE “vegetable gardening - shea butter”
- 2 GIE “vegetable gardening”
- 4 GIE “shea butter”
- 15 GIE “apiculture”
- 17 GIE “agriculture”

WCF provided technical, material, and training support to all members of the GIEs to improve the quality and quantity their production. The harvest this year consisted notably of:

- Market gardening: 15.4 tons of onions, 1.2 tons of tomatoes, 3.95 tons of eggplants, 1.7 tons of pepper, and 1.8 tons of okra produced;
- Apiculture: 11,560 litres of honey produced from traditional beehives and 360 litres of honey produced from eco-responsible Kenyan beehives;
- Shea butter: 10.8 tons of shea kernels were collected and 3.7 tons of shea butter were produced.

In 2021, total sales (of onions, honey, and shea butter) reached 404,499,500 GNF (~USD 42,690). The first edition of the harvest festival was organized in Bellakouré where all the vegetable gardening products produced in the MBNP were displayed and sold.

The onions, honey from Kenyan beehives, and shea butter produced in the MBNP were all **labelled as eco-responsible products** in 2021. The honey is notably registered as an eco-responsible product in the Court of First Instance of Kaloum and was labelled by the “*Organisation Africaine de la Propriété Intellectuelle*” (OAPI).



The 2021 shea butter output



Maintenance of a Kenyan beehive



Honey harvest from a Kenyan beehive



Honey of the MBNP



Onions of the MBNP



Shea butter of the MBNP

Given that fire has traditionally been used to clear agricultural fields following the slash-and-burn approach, a strong link exists between wildfire management and traditional agricultural activities. As a complement to NER efforts, which occur on uncultivated lands, the **Farmer-Managed Natural Regeneration (FMNR)** approach prescribes that a certain density of trees is maintained and/or regenerated in cultivated fields. Currently, **65 FMNR fields**, corresponding to 33.5 hectares and from which 3,162 trees were preserved, are maintained by community members and supported by WCF. In 2021, 1,556 kilos of rice, 7,791 kilos of peanuts, 1,893 kilos of fonio, and 120 kilos of corn were harvested in the FMNR fields.

In 2021, a **pastoralism and livestock program** was created to respond to the environmental degradation caused by over-grazing cattle and human-wildlife conflicts (i.e. cattle killed by wildlife). Two cattle pens have been implemented in the park:

- A 1125-m² cattle pen for ten livestock farmers and 122 cows;
- A 2100-m² cattle pen for 14 livestock farmers and 380 cows.



Cattle pen implemented in the MBNP

2.8. Awareness raising and education

Since 2018, an intensive and continuous community outreach program was implemented in the MBNP area. In 2021, WCF implemented new and improved activities such as:

- **Cercles d'écoute** (“listening circles”): focus groups in which people listen to and enter discussions on radio broadcasts created and communicated by WCF Guinea have reached 2,486 people in 92 villages;
- **Theatre tour**: the troupe “*Arc-en-Ciel*” was selected to conduct theatre performances in 15 villages of the MBNP (participation of 10,556 people) during which key messages about park management were shared (forest ecology, rain/water cycle, human-wildlife conflict, laws protecting endangered species, etc.);
- **Club PAN program** was implemented in ten schools and benefitted 896 children during the 2020-2021 school year.



Performance on human-leopard conflict



Club PAN lesson given to schoolchildren

The WCF communication team developed other outreach activities using different communication channels such as TV, radios, websites, etc. **Hundreds of radio broadcasts, posters, signs, and news/press releases were created** to share information about wildlife, the MBNP and its activities. A **documentary film** presenting the MBNP was produced in English with French subtitles and provides a summary of the process of creating the park.



Outreach material created with an anti-poaching message and celebration of the World Chimpanzee Day in Guinea

2.9. Chimpanzee Offset Project

The creation and management of the Moyen-Bafing National Park are based on the principle of ecological compensation for the negative impacts caused by mining activities that affect chimpanzee populations outside the park. This **Chimpanzee Offset Project** is financially supported by two mining companies: the Guinea Alumina Corporation (GAC) and Compagnie des Bauxites de Guinée (CBG) which finance the protection of the MBNP to compensate for the estimated 73-143 chimpanzees likely to be impacted by their mining projects.

The management of the MBNP follows an Action Plan of seven objectives whose main activities and results are presented in the above sections (2.1 - 2.8), but the ultimate goal is to ensure a **Net Gain for the Chimpanzee Offset**.

Our preliminary internal evaluation of the chimpanzee population demography in the MBNP showed that the *The Biodiversity Company* (TBC) feasibility study of the CBG and GAC Chimpanzee Offset¹ was overly optimistic about the recovery potential of the population². Our preliminary analysis showed that the time needed to reach the net gain for the chimpanzees would potentially be much longer than the originally 20 years suggested. The reasons that might explain the difference are as follow:

- Animal population growth follows a logistic growth curve that has an S-shaped curve (sigmoid). As competition increases and resources become increasingly scarce, populations reach the carrying capacity of their environment, causing their growth rate to slow nearly to zero. In their pre-feasibility study, TBC assumed that chimpanzee populations follow a linear constant growth, which is incorrect, and have therefore underestimated the time needed to reach a net gain;
- Moreover, the population growth of wild chimpanzees is slow due to a low reproductive rate: (i) age of first reproduction around 15 years old, (ii) the interbirth interval is long at around 5 years, and (iii) chimpanzees exhibit a relatively low survival rate in the first 5 years. Despite these known facts, the TBC pre-feasibility study assumed a chimpanzee growth rate much higher than what has been observed in wild chimpanzee populations, thereby underestimating the time needed to reach the net gain;
- Finally, the TBC pre-feasibility study assumed chimpanzee population growth would start at day one, however, the deforestation in the MBNP is one of the highest documented in Guinea (WCF Biomonitoring 2016) and will require some time to show improvement.

WCF Guinea is currently pursuing the demographic study of the Moyen-Bafing chimpanzee population to provide a more accurate estimation of the net gain.

¹ Starkey M, Escalas A, Keita MK, Smuts R, van Bochove J, Mitchell R. (2016). Chimpanzee Offset Implementation Strategy and Pre-Feasibility Study for the CBG Expansion Project. The Biodiversity Consultancy, Cambridge, UK.

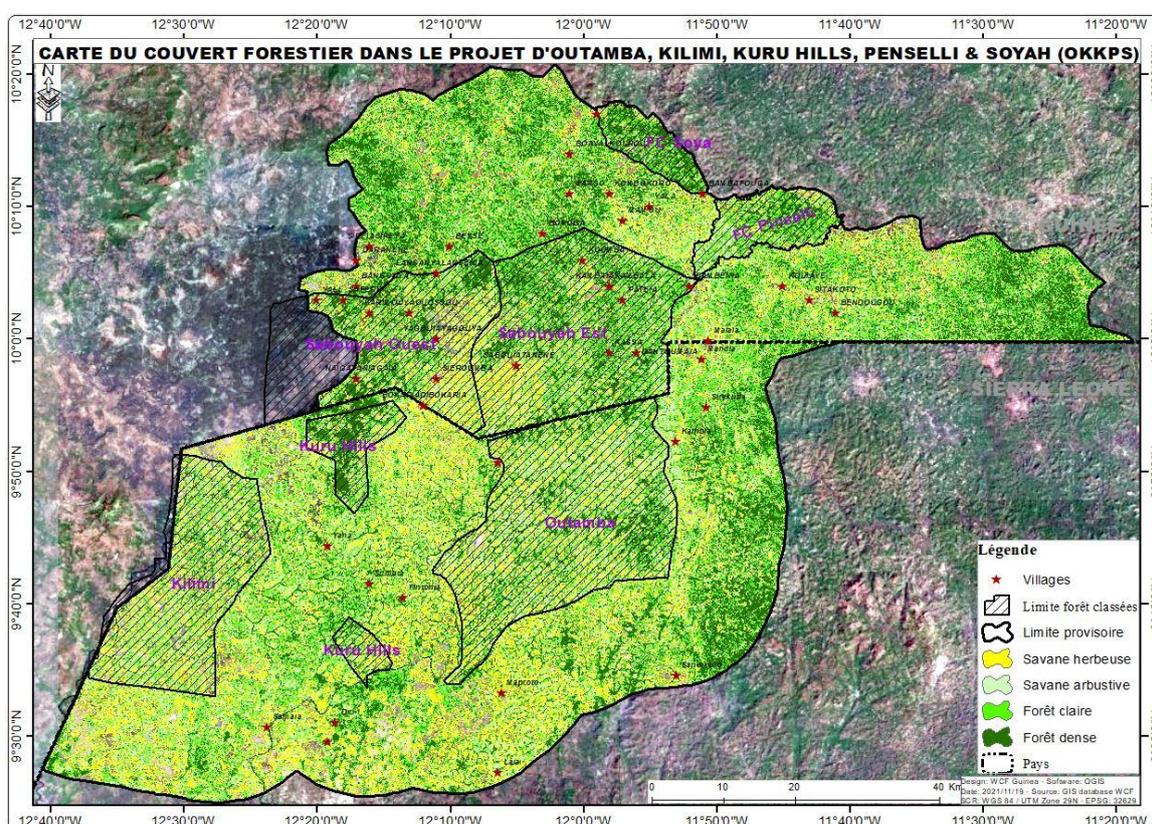
Escalas A, Smuts R, Starkey, M. Keita MK, Campbell, G. (2016). Chimpanzee Offset Pre-feasibility Study and Strategy for the GAC Bauxite Project. The Biodiversity Consultancy, Cambridge, UK.

² In a reversal of the biological approach, the TBC study states at the start that net gain will be reached in 20 years, and then detailed the conditions that would allow this to be the case. Sadly, by doing so, some basic demographic knowledge and facts about chimpanzees have been distorted or ignored.

3. Outamba-Kilimi-Kuru-Penselli-Soyah-Sabouyah (OKKPSS) Landscape

The OKKPSS project (Outamba-Kilimi and Kuru-Hills in Sierra Leone and Penselli, Soyah and Sabouyah in Guinea) funded by the European Union was launched in June 2021. The goal of this transboundary project is to protect and sustainably manage this key landscape area for which WCF is the lead partner, in collaboration with the Guinean Office of Parks and Reserves (OGPR, *Office Guinéen des Parcs et Réserves*) in Guinea, and with Tacugama Chimpanzee Sanctuary (TCS) and the National Protected Area Authority (NPAA) in Sierra Leone.

As the OKKPSS project is a transboundary project, many discussions and exchanges are ongoing with our Sierra Leonean partners to harmonize the operational plan and coordination of the project. WCF and OGPR's executives visited Freetown and Outamba-Kilimi National Park in Sierra Leone from November 3rd to 7th 2021.



OKKPSS landscape (Guinea & Sierra Leone)

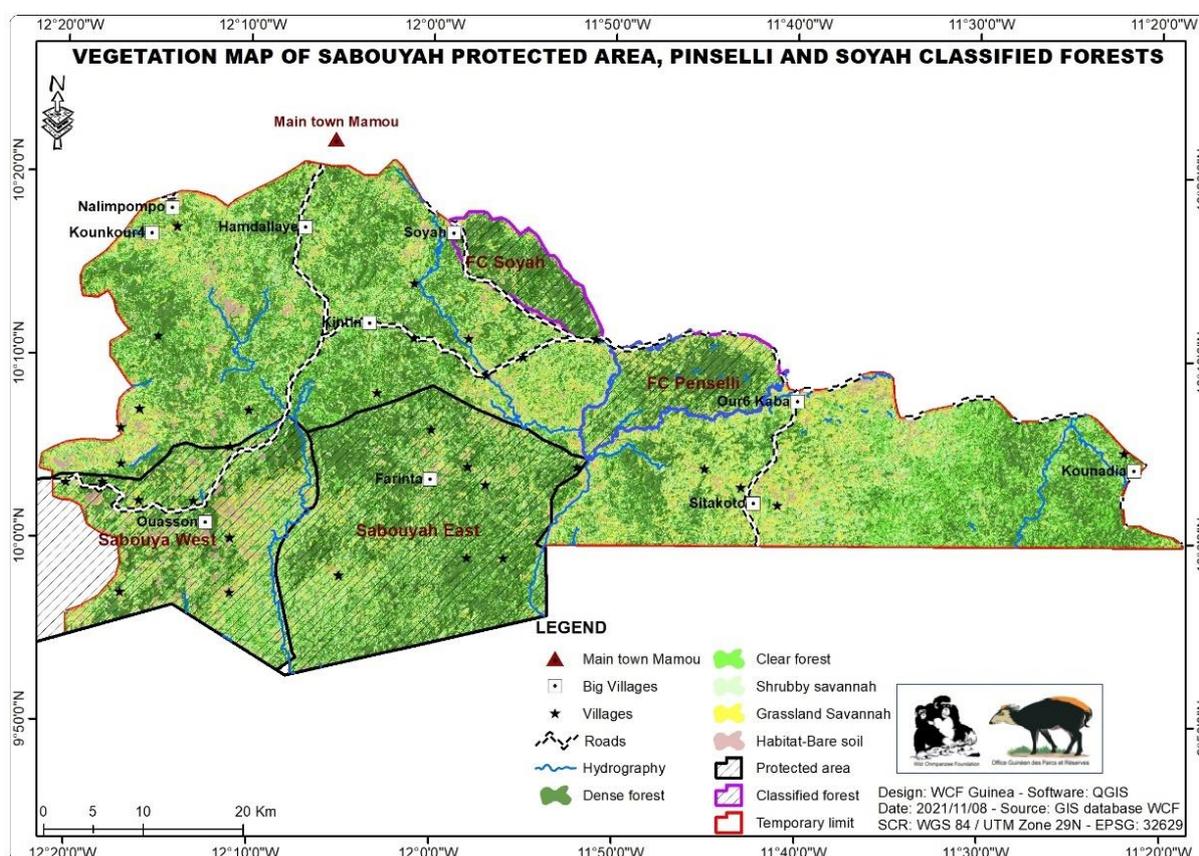
3.1. Creation of the Penselli-Soyah-Sabouyah National Park

Since the start of the project, WCF has been working in partnership with OGPR towards the common goal of **establishing the Penselli-Soyah-Sabouyah National Park** (PSSNP, provisional boundaries: 3,028 km²). The creation of the Penselli-Soyah-Sabouyah National Park will follow the same process as for the creation of the Moyen-Bafing National Park:

- November 2021: two meetings were organized in Conakry with WCF and OGPR to elaborate and agree on the creation process of a new national park in the area of Penselli-Soyah-Sabouyah. **A project note was drafted**;

- December 9th 2021: a workshop was organized to present the PSSNP project to all stakeholders. **All stakeholders approved the project note** which was then transmitted to the Ministry of Environment and Sustainable Development (MEDD, *Ministère de l'Environnement et du Développement Durable*);
- December 31st 2021: **the Minister signed a mandate authorizing all the baseline studies to be conducted** (inventories of the fauna and flora, socio-economic, demographic, anthropologic studies, etc.) in the zone of Penselli-Soyah-Sabouyah.
- A launching workshop will be organized in January 2022 to present the project to all stakeholders in the area such as the Prefects, Mayors, Chiefs of Districts, etc.

In parallel, exchanges with the different actors present in the zone of Penselli-Soyah-Sabouyah are ongoing to facilitate the sustainable and fair development of the environment, especially regarding the railway construction connecting the Simandou iron ore mines with a harbour south of Conakry.



Provisional limits of the proposed Penselli-Soyah-Sabouyah National Park

3.2. Surveillance and law enforcement activities

Since the launch of the OKKPSS project, five preliminary patrols led by teams comprised of WCF ecoguards and OGPR agents (coming from the MBNP) were conducted in the zone of Penselli-Soyah-Sabouyah between July and November 2021. **1218.17 km** were patrolled. The objective of the patrols was to carry out the first assessments of the fauna and illegal activities.

The 16 WCF ecoguards dedicated to the OKKPSS project, as well as all field officers were recruited and trained in December 2021, which will allow the surveillance activities to proceed at an accelerating pace from January 2022 with **four patrols planned per month** (four teams comprised of four WCF ecoguards and one OGPR agent).

A total of **727 observations of wild animals** were recorded during these five patrols, from which 45 were direct observations, corresponding to 27 mammal species. The encounter rates for each species are presented in Table 3. The common warthog (*Phacochoerus africanus*) was the species with the highest encounter rate (0.23 signs/km) followed by crested porcupine (*Hystrix cristata*, 0.07 signs/km), red river hog (*Potamochoerus porcus*, 0.06 signs/km), chimpanzee (*Pan troglodytes verus*, 0.04 signs/km), and African forest elephant (*Loxodonta cyclotis*, 0.03 signs/km).

A total of **338 signs of illegal activities** were recorded. Among these illegal activities, agriculture was the main threat (0.12 signs/km), followed by farming (0.07 signs/km), logging (0.06 signs/km), and non-timber exploitation and poaching (hunting campsites, 0.02 signs/km).

Table 3. Direct and indirect observations of medium- to large-sized mammals recorded during the five ecoguards missions conducted in the Penselli-Soyah-Sabouyah area.

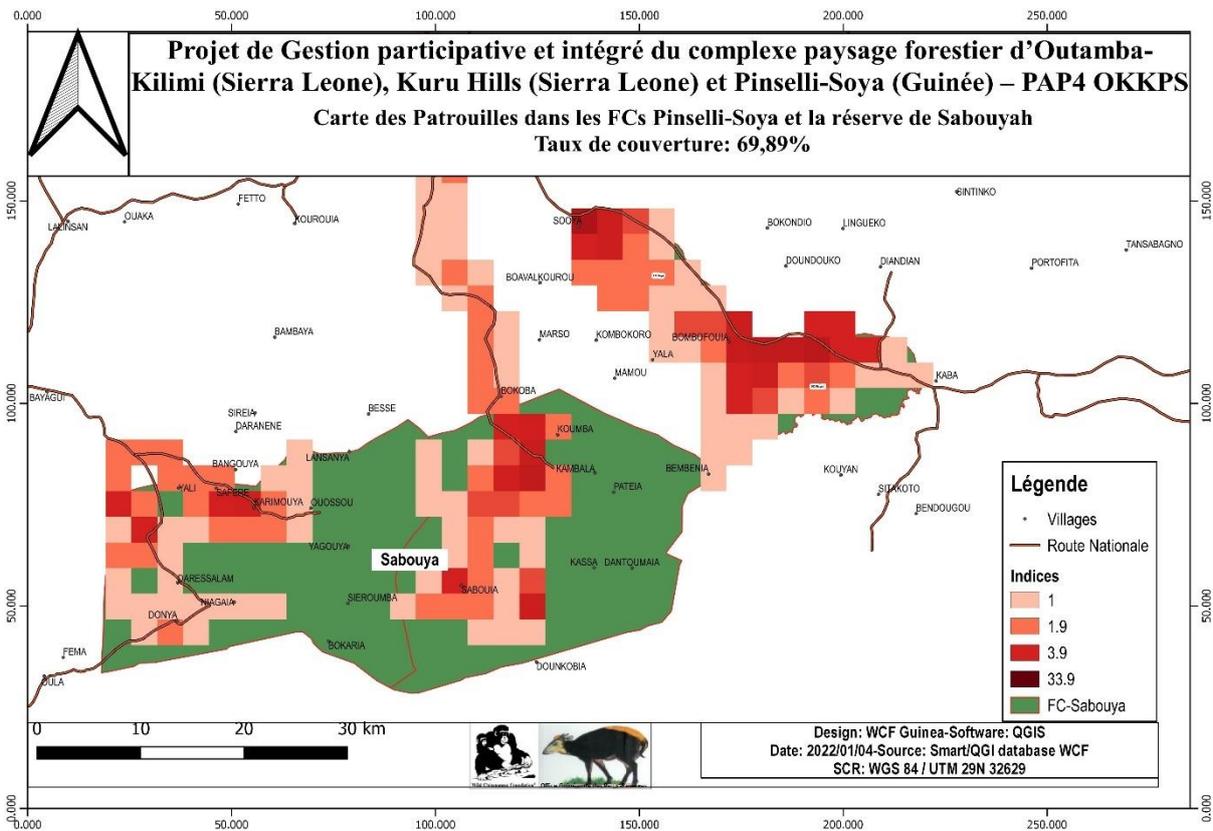
	Common name	Scientific name	Dir Obs	Ind Obs	Total Obs	Enc. rate (sign/km*100)
1	African clawless otter	<i>Aonyx capensis</i>	1	1	2	0.16
2	Brush-tailed porcupine	<i>Atherurus africanus</i>	0	10	10	0.82
3	Marsh mongoose	<i>Atilax paludinosus</i>	2	7	9	0.74
4	Yellow-backed duiker	<i>Cephalophus silvicultor</i>	1	5	6	0.49
5	Red-flanked duiker	<i>Cephalophus rufilatus</i>	2	19	21	1.72
6	African civet	<i>Civettictis civetta</i>	1	1	2	0.16
7	Black duiker	<i>Cephalophus niger</i>	0	3	3	0.25
8	Sooty mangabey	<i>Cercocebus atys</i>	6	6	12	0.98
9	Side-striped jackal	<i>Canis adustus</i>	0	2	2	0.16
10	Green monkey	<i>Chlorocebus sabaeus</i>	7	16	23	1.89
11	Northern lesser galago	<i>Galago senegalensis</i>	1	0	1	0.08
12	King colobus	<i>Colobus polykomos</i>	0	2	2	0.16
13	Patas monkey	<i>Erythrocebus patas</i>	6	12	18	1.48
14	Grey-cheeked mangabey	<i>Lophocebus albigena</i>	3	0	3	0.25
15	Hippopotamus	<i>Hippopotamus amphibius</i>	0	4	4	0.33
16	Roan Antelope	<i>Hippotragus equinus</i>	0	4	4	0.33
17	Crested porcupine	<i>Hystrix cristata</i>	0	90	90	7.38
18	African forest elephant	<i>Loxodonta cyclotis</i>	0	37	37	3.04
19	Western chimpanzee	<i>Pan troglodytes verus</i>	3	49	52	4.27
20	Guinea baboon	<i>Papio papio</i>	2	20	22	1.81
21	Common warthog	<i>Phacochoerus africanus</i>	0	277	277	22.73
22	Maxwell's duiker	<i>Philantomba maxwellii</i>	1	1	2	0.16
23	Red river hog	<i>Potamochoerus porcus</i>	0	69	69	5.66
24	African buffalo	<i>Syncerus caffer</i>	4	23	27	2.22
25	Common eland	<i>Tragelaphus oryx</i>	0	2	2	0.16
26	Bushbuck	<i>Tragelaphus scriptus</i>	0	22	22	1.81
27	Monitor lizard	<i>Varanus spp.</i>	5	0	5	0.41



Elephant traces in the Sabouyah zone



Antelope tracks in the Sabouyah zone



Coverage and intensity of the five patrols conducted in the Penselli-Soyah-Sabouyah area, with darker red colour representing grid cells with higher patrol efforts (light pink cells: less than one kilometre patrolled; dark red grids: more than 33.9 kilometres patrolled)

Illegal logging activities were recorded during the first patrols conducted in July 2021:

- **250 wood planks** (2 metre long) and one Sierra Leonean Toyota vehicle were seized near Mègne Kouré (1 km from the border);
- **469 wood planks** (2 metre long) were discovered between N'bendiyah and Maréla Districts;
- **745 wood planks of Ceiba trees** (4 metre long) were discovered in Patheyah District;
- A **warehouse** was discovered between Tanènè and Dantoumayah Districts but the wood planks had already been moved elsewhere;
- A **route for timber exploitation** and **180 wood planks** were discovered between Tanènè and Dantoumayah Districts.

One training workshop was organized by WCF in July 2021 on **patrol techniques** (GPS and CyberTracker) for 13 OGPR agents working in the Penselli-Soyah-Sabouyah area. The goal was to render the OGPR agents operational and proficient in surveillance and natural resource management.

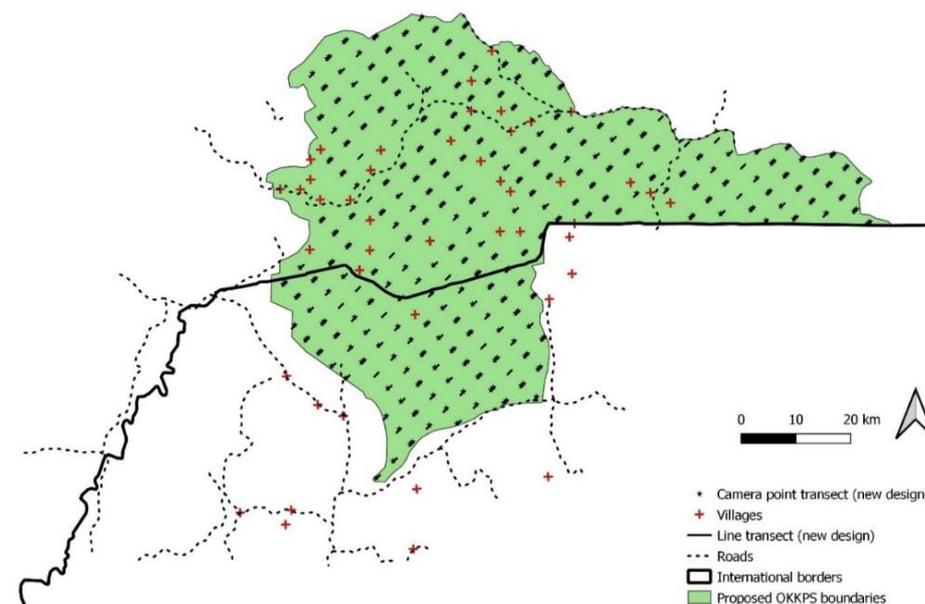
3.3. Wildlife biomonitoring

Wildlife surveys using systematic line transects and camera traps will be conducted in the OKKPSS landscape to gain information and confirm the importance of the conservation value of the area. In addition, having a precise estimation of the wildlife population inhabiting the PSSNP will be crucial to determine the optimal zoning plan of the future park.

After exchanges between WCF and TCS, the scientific protocol is now finalized and harmonized between the two countries. The OKKPSS landscape will be surveyed with:

- **242 transects** (3.3 km long): 77 in Sierra Leone and 165 in Guinea;
- **368 camera traps** following a habitat stratification: 103 in Sierra Leone (gallery forests = 27, open forests = 25, and shrubby savannahs = 51) and 265 in Guinea (gallery forests = 96, open forests = 86, and shrubby savannahs = 83).

A joint biomonitoring training course will be organized from February 1st to 14th 2022 and the wildlife surveys will commence as soon as the training ends.



Design of the OKKPSS wildlife surveys

4. Acknowledgements

The WCF Guinea team is grateful to their long-term partner, the Guinean Office of Parks and Reserves (OGPR, *Office Guinéen des Parcs et Réserves*), and all the agents of the Ministry of Environment and Sustainable Development (MEDD, *Ministère de l'Environnement et du Développement Durable*) who contributed to the creation of the Moyen-Bafing National Park in 2021 and are now working towards the creation of the Penselli-Soyah-Sabouyah National Park.

We are also grateful to the Biodiversity Offset partners: Guinea Alumina Corporation (GAC), *Compagnie de Bauxite de Guinée* (CBG), the offset coordination team (UCOMB, *Unité de Coopération pour l'Offset Moyen-Bafing*), and the members of the Intermediate Technical Panel (ITP) for their financial and technical support of the MBNP Project.

We are very thankful to our donors, without whom none of our projects would be possible: European Union, SOS - IUCN (Save Our Species - International Union for Conservation of Nature), Rainforest Rescue, Darwin Initiative, ARCUS Foundation, Zurcher Tierchutz, and Zoo Leipzig.