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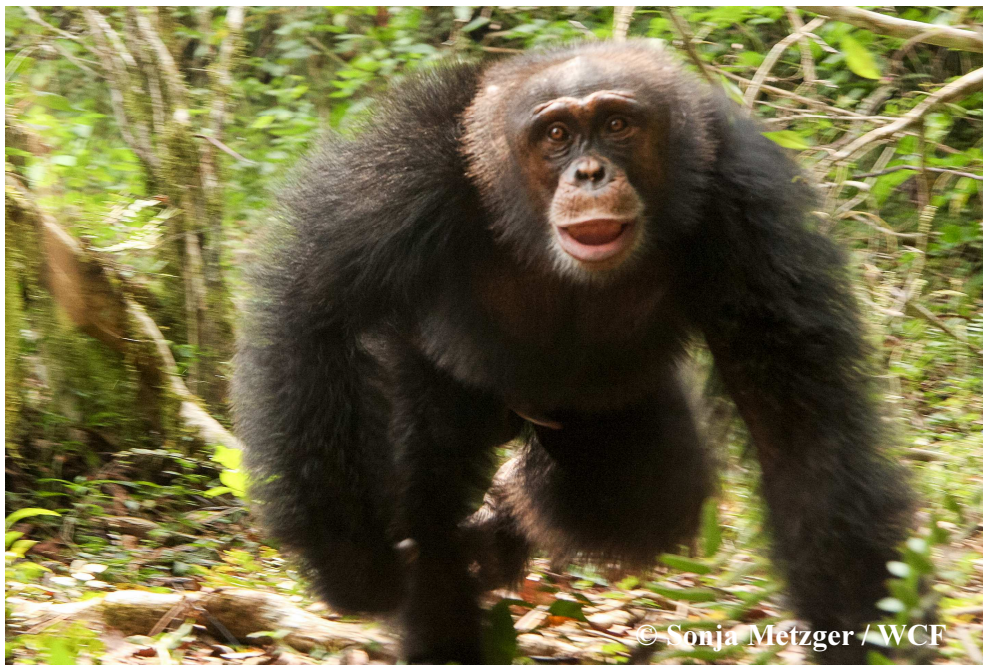
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Annual Report 2017

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



February 2018

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List of Acronyms

APDRA – Association Pisciculture et Développement Rural en Afrique tropicale humide
BGEEE – Bureau Guinéen d'Etudes et d'Evaluations Environnementales
CAEZA – Coopérative Agricole Espoir de Zagné
CASO – Coopérative Agricole Soleil de Taï
CBG – Compagnie des Bauxites de Guinée
CCF – Cavally Classified Forest
Club P.A.N. – Club for People, Animals and Nature
COOPAHZ – Coopérative Agricole de Zagné
CPE – Cellule des Projets Environnementaux
CRADD – Centre de Recherche et d'Action pour le Développement Durable
CSO – Civil Society Organization
DUBAL – Dubai Aluminium
EEM – Environment Effects Monitoring
EGA – Emirates Global Alumina
ERM – Environmental Resources Management
ERU – Emergency Response Unit
ESMP – Environmental and social management plan
EU – European Union
FDA – Forestry Development Authority
FLAG – Field Legality Advisory Group
FLEGT – Forest Law Enforcement, Governance and Trade
FMC F – Forest Management Contract F
GAC – Guinea Alumina Corporation
GIZ – Deutsche Gesellschaft für Internationale Zusammenarbeit
GKNP – Grebo-Krahn National Park
HBNP – Haut-Bafing National Park
IFC – International Finance Corporation
IM – Independent Mission
IO – Independent Observation
IUCN – International Union for the Conservation of Nature
LAAC – Liste des arbres autorisés à la coupe
KfW – Kreditbank für Wiederaufbau
MAP – Multi Agri-systems Promoters
MINEF – Ministère des Eaux et Forêts
MBNP – Moyen-Bafing National Park
NGO – Non-Governmental Organization
OGUIPAR – Office Guinéen de Parcs et Réserves
OIPR – Office Ivoirien des Parcs et Réserves
PGES – Plan de Gestion Environnementale et Sociale
PKBCA – Proposed Krahn-Bassa Conservation Area

SEIA – Social and Environmental Impact Assessment
SMART – Spatial Monitoring and Reporting Tool
SNP – Sapo National Park
SODEFOR – Société pour le Développement des Forêts
STBC – Société de Transformation du Bois du Cavally
TBC – The Biodiversity Consultancy
TCP – Taï Chimpanzee Project
TGSFC – Taï-Grebo-Sapo Forest Complex
TNP – Taï National Park
UNEP – United Nations Environment Program
UNESCO – United Nations Educational, Scientific and Cultural Organization
WCF – Wild Chimpanzee Foundation
WVS – World Vision Senegal
ZIP – Zone Intégralement Protégée

Strategic Plan of the Wild Chimpanzee Foundation

Goal	Protection of wild chimpanzees and their habitat								
Strategic Objectives	Strengthen support for conservation of chimpanzees and their habitat			Strengthen protection of chimpanzee habitat		Strengthen conservation of chimpanzees and sustainable management of their habitat			Research
Project Objectives	Raised awareness	Alternative benefits for local people	Increase environmental interest in policy decisions	Follow population trends	Improved park management	Sustainable funding for park management	Sustainable logging practices	Sustainable mining practices	Understand processes affecting population trends
Activities	Environmental education	Alternative sustainable livelihoods	Advocacy	Monitoring	Law enforcement	Ecotourism	Monitoring logging practices	Monitoring mining practices	Research
	Theatre	Micro-projects	Lobbying by decision makers	Impact of conservation actions	Creation of new Protected Areas	Entrance fee	Impact of logging practices	Impact of mining practices	Chimpanzee fatal disease studies - zoonose
	Film / newsletter	Training of locals	Awareness meetings	Impact of human activities (e.g. logging)	Park patrols, ecoguards	Animals habituation	Best practices management plan	Mitigation and offset mangement plan	New monitoring tools (e.g. SMART)
	Club P.A.N.	Employment for locals	Consultancy to promote environment issues	Impact of bushmeat hunting	Management plan	Nature trails	Capacity building	Capacity building	New evaluation tools
	Discussion rounds	Ecotourism			Law application in courts	Local culture	FLEGT process	IFC Standards	Camera trapping
	Ecomuseum	Certified cocoa program			Social-economic surveys				APE data base
									Capacity building

2017 General Conclusion and Outlook for 2018

By the President of the Wild Chimpanzee Foundation, Prof. Christophe Boesch

2017 was a year with motivating achievements for WCF, in contrast to 2016 being sadly marked by the IUCN downgrading the West African chimpanzees (*Pan troglodytes verus*) from “endangered” to “critically endangered”. The main success in 2017 was the official creation of two national parks spearheaded by the work of the WCF: The Grebo-Krahn National Park in Liberia, and the Moyen-Bafing National Park in Guinea which is known to host about 5’000 chimpanzees. Especially, this latter holds the potential to become a real sanctuary for the future survival of the species in West Africa. In parallel, the WCF was officially mandated by the Guinean Government and two mining companies, Compagnie des Bauxites de Guinée and Guinea Alumina Corporation, to implement the set-up phase for the creation of the Moyen-Bafing National Park. This set-up phase encompasses also to apply the environmental and social standards of the International Finance Corporation (IFC), a branch of the World Bank Group, and it holds thereby the promise of becoming a national park with sufficient funding for the near future.

These achievements during the year 2017 confirm WCF’s mission to protect and enhance the largest population of chimpanzees and their natural habitat. Being active in three West African countries, WCF has continued to develop and implement activities ranging from setting-up up conservation areas, enhancing education of people to conservation issues, promoting alternative livelihoods, and lobbying for the implementation of sustainable practices at all possible levels. The year 2017 was also important regarding the financial situation of the foundation by securing two large grants, one by the USAID for the transboundary Tai-Grebo-Krahn-Sapo Forest Complex in Côte d’Ivoire/Liberia over two years, and one by the private sector in Guinea, a grant covering the creation and the conservation activities needed for the Moyen-Bafing National Park, as well as its maintenance in the long-run. This allows much better planning of activities, the necessary involvement and increase of the local teams.

2018 will bring many conservation challenges to be solved, including the uncertainties related to the announced complete change of government in Liberia, as well as the development of a new forest politic in Côte d’Ivoire. At the same time, 2018 will be a year of consolidation, whereby WCF, thanks to the larger financial possibilities, will be able to hire more expertise for the management of larger budgets, hopefully also hire experts not only willing to invest themselves with great motivation and flexibility, but also being committed to capacity building and organization on the management- as well as on the grass-root level. It will be a great challenge to succeed in implementing long-term activities over large areas and working with important numbers of local communities, all the same by following the highest international standards.

Executive summary of activities in the Tai-Grebo-Sapo Forest Complex, Liberia and Côte d'Ivoire

Creation of the Grebo-Krahn National Park, Liberia

After fulfilling all requirements and providing a compilation of all documents needed for the **gazettement of Grebo-Krahn National Park (GKNP)** by WCF and the Liberian Forestry Development Authority (FDA), the Act establishing GKNP was passed into law by the Liberian parliament on 22 August 2017, signed by the President of the Republic of Liberia on 9 October 2017 and published on 11 October 2017.

Biomonitoring and law enforcement in the Tai-Grebo-Sapo Forest Complex, Liberia and Côte d'Ivoire

A **biomonitoring survey** in collaboration with FDA was conducted from January to August 2017 in the **Proposed Krahn-Bassa Conservation Area (PKBCA)**. All data collected were digitalized and analyzed by WCF. 3,000 observations of wildlife including threatened species such as critically endangered western chimpanzees, endangered pygmy hippos, and vulnerable forest elephants and pangolins, have been made within the PKBCA. Intense human presence in the forest was also found, with 5.29 signs of human threats per kilometer. WCF has been investigating the biodiversity and its distribution in PKBCA, which is located northwest of Sapo National Park. This data will serve as a baseline for future surveys, will allow comparison with other proposed protected areas in Liberia and, most importantly, will provide knowledge on the presence, distribution and abundance of threatened and endemic forest species to justify the creation of a protected area at Krahn-Bassa.

Research and conservation programs in **Tai National Park** are continuing with the **10th phase of data collection in the research and eco-tourism area**. During this 10th phase, preliminary results obtained from 177 transects surveyed show numerous signs of direct and indirect wildlife presence consisting of 42 direct observations of duikers, 100 groups of monkeys, 149 chimpanzee nests and 54 piles of elephant dung. Several signs of human activities were also recorded on and off transect such as 32 emptied rifle cartridges and 27 gunshots heard.

In this same area, WCF supported a pilot study in collaboration with the Max Planck Institute for Evolutionary Anthropology in Leipzig for the development of a **new biomonitoring method with camera traps**. 200 cameras were set up within **Tai National Park** from October 2016 to July 2017 and more than 94,000 videos have been recorded after 12 missions. A total of 52 different species of birds and mammals have been identified.

WCF has been implementing a Community Eco-guard Program at the Grebo-Krahn National Park (GKNP), using SMART (Spatial Monitoring and Reporting Tool) and recently testing the use of Runbo smartphones for data collection. Two FDA auxiliaries trained by WCF are now supervising 2 Community Eco-guard teams, each including 4 community

members. Data collection was centred on illegal activities and shared with FDA – leading to FDA law enforcement missions after careful planning with WCF. Furthermore, Community Eco-guard teams engage with local communities through awareness raising activities, explaining the value of biodiversity and the GKNP that passed into law on 22 August 2017.

The Sapo Task Force created by FDA following a conflict between FDA and communities at **Sapo National Park (SNP)** earlier in 2017 is aiming at the effective protection of SNP and its sustainable management with the involvement of local communities. In addition to form part of this Task Force, WCF participated in the SNP Multi-Stakeholder conference in July 2017 where a resolution was developed and signed by all stakeholders of SNP that stated a deadline for the voluntary departure of illegal miners from SNP, including a roadmap with many activities leading to the participatory management of SNP.

WCF action intensified in Cavally Classified Forest with the training of new eco-guards that led to the launch of a monitoring program. Data were collected in 4382.17 ha between February and December 2017. Results revealed that 62.17% of CCF are still covered by intact forest, 35.79% were plantations (cocoa mainly), 0.59% were new forest clearings and 1.45% were abandoned plantations. WCF monitored patrols conducted by SODEFOR to rehabilitate the forest: 5 SODEFOR missions were organized that contributed to save 1822.3 ha of forest.

This year WCF developed for the first time a strong **collaboration with 2 community-based NGOs in Taï and Zagné**. The collaboration has been very successful as common investigations led to the arrest of 3 members of an armed group as well as the chief of Gendarmerie involved in organized trafficking leading to destructions in CCF.

Awareness raising campaigns and capacity building in the Taï-Grebo-Sapo Forest Complex, Liberia and Côte d'Ivoire

An amateur theater group including 14 Grand Gedeh community members completed 8 conservation theater performances in 8 communities around Grebo-Krahn National Park in March 2017, where 967 people attended.

After the establishment of GKNP, an **awareness raising meeting was held by FDA, WCF and other partners** (Ambero/GIZ, AHT Group) to inform authorities about the establishment of GKNP and plans for future participatory management including local communities

In December 2017, the **GKNP Multi-Stakeholder conference** was held in Fish Town, River Gee County, where all host communities of GKNP were represented, as well as FDA, other relevant governmental institutions, NGOs and partners. This conference allowed all stakeholders to enter into a constructive dialogue about the establishment and the future of the park, the involvement of communities and their benefits, and how responsibilities will be shared. A resolution was developed and signed by all stakeholders, including priority activities, timelines and responsibilities for a successful management of GKNP. Communities

led by traditional leaders ensured that all illegal activities inside GKNP will be stopped until 15 February 2018 and that they are fully committed to the protection of the new park.

After the premiere of the **theater play "Let's save the Cavally"** on April 14 in Abidjan, a theater tour was held from 19 to 28 April 2017 in 9 villages surrounding Cavally Classified Forest and 5,300 people attended. The SODEFOR chief of CCF was present during the tour and explained the importance of preserving CCF to the audience.

A panel on deforestation in Cavally Classified Forest, organized by the French Embassy in collaboration with WCF, was held on 5 October 2017 after the play "Let's save the Cavally". Among the 400 participants many important political personalities and organizations were present. The same day in the morning before the panel, 625 school students including 500 children from primary school watched the play and asked many questions.

A socio-economic survey was performed at Proposed Krahn-Bassa Conservation Area (PKBCA) from 24 January to 3 March 2017. A total of 455 households were interviewed in 31 communities in the 3 counties where PKBCA is located. The survey shows that access to infrastructures and vital resources was limited for the majority of the population. In addition, the quality of services provided is low according to respondents. All these difficulties have considerably reduced the access to public services by the communities. In general, bush-meat hunting and trade are primary activities in the towns/villages visited. Respondents who declare themselves hunters hunt several times a week and kill approximately 3 to 4 animals per hunt and walk 3-4 hours in the forest before seeing an animal.

Alternative livelihood and sustainable use of natural resources in the Taï-Grebo-Sapo Forest Complex, Liberia and Côte d'Ivoire

The **ecotourism program is being developed in Taï and Djouroutou** and the two sites were able to welcome respectively 60 and 129 tourists during 2017, which represents an increase compared to 2016. The habituation of sooty mangabeys, red colobus and chimpanzees in Taï is underway. A chimpanzee group could be located and guides concentrate their search. The habituation of the mangabey group is marked by the identification of all individuals which currently includes 52 individuals. The identification of red colobus continues but remains difficult because they live mainly in the canopy. The Djouroutou chimpanzee habituation program has improved, and 20 chimpanzees have been identified and monitored daily.

With our mandate for **independent monitoring for the transparent management of Cavally Classified Forest**, we focused this year on editing the reports 3 and 4, as well as on the evaluation and revision of the forestry and logging rules in the classified forests. We held a workshop on the validation of silviculture and logging rules, conducted independent observation missions, and trained national NGOs.

Around Grebo-Krahn National Park, WCF supported the construction or rehabilitation of 17 fishponds and works with 14 fish-farmers in 4 communities. First harvests were done in September and October 2017, creating an income of ca. US\$ 2,300 for 8 fish-farmers and their families.

Executive summary of activities in Guinea

Creation of the Moyen-Bafing National Park and the offset project

The Ministry of Environment, Water and Forests mandated WCF in close collaboration with the Guinean Office of Parks and Reserves (OGUIPAR) in November 2015 to start the necessary measures to create a new Protected Area, the **Moyen Bafing National Park** (MBNP), located along the Bafing River, counting the largest-known population of Western Chimpanzees. In September 2017, the Minister of Environment, Water and Forests signed a **decree to create the Moyen-Bafing National Park** and launch all the activities for the implementation of the necessary steps to obtain a presidential decree of the park's creation in 2 years. During a meeting Paris the same month, **two mining companies officially endorsed the Moyen-Bafing National Park as their chimpanzee offset under the guidance of the IFC** and launched their collaboration with WCF to fulfill the TFC performance standards while implementing the creation of the park. An **Interministerial Commission** has been created by the Ministries of Mines, Hydraulic, and Environment to agree on the conciliation issues of economic development and environment protection. A **national validation workshop** of the provisional boundaries of MBNP brought together all stakeholders.

In 2017, WCF developed important new missions in the framework of the MBNP creation and continued to monitor activities undertaken in 2016:

- A **socio-economic survey** of 600 households in 69 villages allows a better understanding of the populations' characteristics, their livelihoods, and to identify their daily challenges.
- A **second phase of community consultations** is in process to raise awareness, inform and involve administrative/political officials, as well as local populations in the process of creating the MBNP. These consultations also aim at making them aware of the place they will occupy within the future park and what solutions will be proposed to them.
- A **theater awareness raising campaign** was developed, and WCF collaborated with "Touchatout". A dozen of performances were organized.
- The **environmental education and awareness program (Club P.A.N.)** was set up in 6 schools in the Moyen-Bafing region.
- The **environmental studies concerning the monitoring of the chimpanzee nests degradation, the weather and hydrometric monitoring of the rivers** are ongoing.
- The coordination of the **tree nursery** continues with the involvement and ongoing training of villagers at Laafa-Boubé.
- An inventory of animals in the MBNP that are difficult to observe on line transects is in process with the establishment and **monitoring via camera traps**.
- **Natural Assisted Regeneration in Senegal as an incentive for Guinea:** Given the difficulties of reforestation through tree nurseries based on wild seed collections being not only time consuming, with a great loss through extreme dryness or heavy floods, we were attracted to a Natural Assisted Regeneration Project in Senegal by World Vision Senegal. Ch. Boesch, his team and members of OGUIPAR were invited to visit this project in November 2017.

1. Activities in the Tai-Grebo-Sapo Forest Complex, Liberia and Côte d'Ivoire

1.1. Creation of Grebo-Krahn National Park, Liberia

After several discussions and consultations with local communities and Liberian authorities and in close collaboration with the Liberian Forestry Development Authority (FDA), WCF completed all requirements and compilation of the legal documents needed for the pre-establishment of GKNP. After all final documents had been signed by local communities, other relevant stakeholders and authorities. The gazette package was submitted to the FDA Board of Directors in May 2017. The package was endorsed by the Board and sent to the Office of the Liberian President in June 2017. After approval by the President, the gazette package was passed on to the Liberian legislature (Representatives in Lower House and Senators in Upper House) in June 2017. On 15 August the Upper House passed the Act about GKNP into law and sent it for concurrence to the Lower House, which then finally passed GKNP into law on 22 August 2017. The Act establishing GKNP was signed by the President of the Republic of Liberia on 9 October 2017, published and printed into handbill on 11 October 2017. The new GKNP of 96,149.88 hectares lies in the heart of TGSFC, an identified priority transboundary conservation region for the Upper Guinean Forest Ecosystem. It is located in 2 counties (Grand Gedeh in the North and River Gee in the South) and 3 administrative districts (Konobo and Glio-Twabo in the North and Glaro in the South).



Logo of the new Grebo-Krahn National Park in Liberia

1.2. Biomonitoring and Law Enforcement in the Tai-Grebo-Sapo Forest Complex, Liberia and Côte d'Ivoire

1.2.1. Biomonitoring in the Proposed Krahn-Bassa Conservation Area, Liberia

Together with the Liberian Forestry Development Authority (FDA), WCF has been investigating the biodiversity and its distribution in Proposed Krahn-Bassa Conservation Area (PKBCA), which is located north-west of Sapo National Park. This data will serve as a baseline for future surveys, will allow for comparison with other (proposed) protected areas in Liberia and most importantly provide knowledge on the presence, distribution and abundance of threatened and endemic forest species, in order to justify the creation of a new protected area at Krahn-Bassa. Using a line transect survey along 121 transects, the FDA/WCF team

worked with 2 teams of 10 trained community members, focusing on collecting data on the critically endangered western chimpanzee, as well as other large mammal species. At the same time the teams collected human threat data, such as hunting, mining and logging signs. From January to August 2017, the teams completed 5 biomonitoring and 2 nest decay missions. Except from the last mission in June 2017 and the nest decay missions, when only one team went to the field, all other missions were performed by 2 teams, each surveying about 14 transects during a 3-week period. All data were digitized and analyzed by our teams.

In total, 2,958 observations were made confirming the presence of wild animals in PKBCA. 77.79% (i.e. 2,301) concerned mammals, 20.99% (621) were of birds and the rest other species. Of the 58 different species observed, the most numerous classes of animals recorded were the mammals, with 39 mammalian species confirmed within PKBCA. Signs of bovid and carnivores were the most commonly observed for mammals, whilst signs of monkeys, pygmy hippopotamuses, water chevrotains and pangolins were relatively rare. As for anthropogenic activities, 1,259 signs of human activities were recorded, (865 poaching signs and 394 signs of habitat disturbance). Presence of mammal signs is found throughout PKBCA, as they were observed on every transect surveyed. The encounter rate for large mammals in PKBCA was 7.97 signs/km. In Grand Gedeh and Sinoe Counties, there are certain areas of PKBCA which show a high density of large mammal signs. Conversely, on the western side of PKBCA, including areas of Sinoe and River Cess counties, the density of large mammal signs decreases, with the majority of the aforementioned with less than 5 signs/km for large mammals. In total, 10 different primate species were directly observed during the first detailed wildlife survey in PKBCA, including eight different monkey species, chimpanzees, and one species of galago. The overall encounter rate of primate species, excluding chimpanzees, is 0.37 signs/km (Table 1).

Table 1. Numbers of observations and encounter rates of primate species, excluding chimpanzees, in Proposed Krahn-Bassa Conservation Area.

Primate Species				
Primate Species	N° of Direct Observations of individuals	N° of Indirect observations of groups (heard)	N° of Direct Observations of groups (seen)	Encounter Rates (N/km) of all groups*
Diana monkey (<i>Cercopithecus diana</i>)	4	33	2	0.15
Red colobus monkey (<i>Procolobus badius</i>)	9	2	3	0.02
Campbell's monkey (<i>Cercopithecus campbelli</i>)	4	20	2	0.09
Western Black-and-white Colobus monkey (<i>Colobus polykomos</i>)	6	4	3	0.03
Sooty mangabey (<i>Cercocebus atys</i>)	1	8	1	0.04

Lesser spot-nosed monkey (<i>Cercopithecus petaurista</i>)	6	4	2	0.03
Greater spot-nosed monkey (<i>Cercopithecus nictitans nictitans</i>)	3	1	1	0.01
Demidoff's galago (<i>Galagoides demidoff</i>)	1	0	1	<0.01
Olive colobus monkey (<i>Procolobus verus</i>)	1	0	1	<0.01
Total for monkeys	35	72	16	0.37

*Both direct and indirect observations

During the wildlife survey in PKBCA, the number of indirect observations of chimpanzees (nests, nut-cracking sites, vocalizations, drumming, dung and footprints) was 225, while one direct observation was also made, giving an overall encounter rate of 0.95 signs/km. To yield a reliable population density estimate of chimpanzees, any wildlife survey must have a minimum number of 60 observations of chimpanzee nests. During the wildlife survey in PKBCA, 172 nest observations were made, allowing for a population estimate to be made using Distance 7.1 software. The population estimate was calculated using the nest decay rate from Taï National Park of 91.22 days (Kouakou et al. 2009), a nest decay survey was performed in PKBCA and the results will be updated when the decay rate is available. Preliminary results from our nest decay study performed in PKBCA during the survey confirm this result. The density of chimpanzees was calculated to be 0.151 weaned chimpanzees per km². Consequently, their population size was estimated to be of 531 individuals of all ages (range: 321 to 1028 individuals).

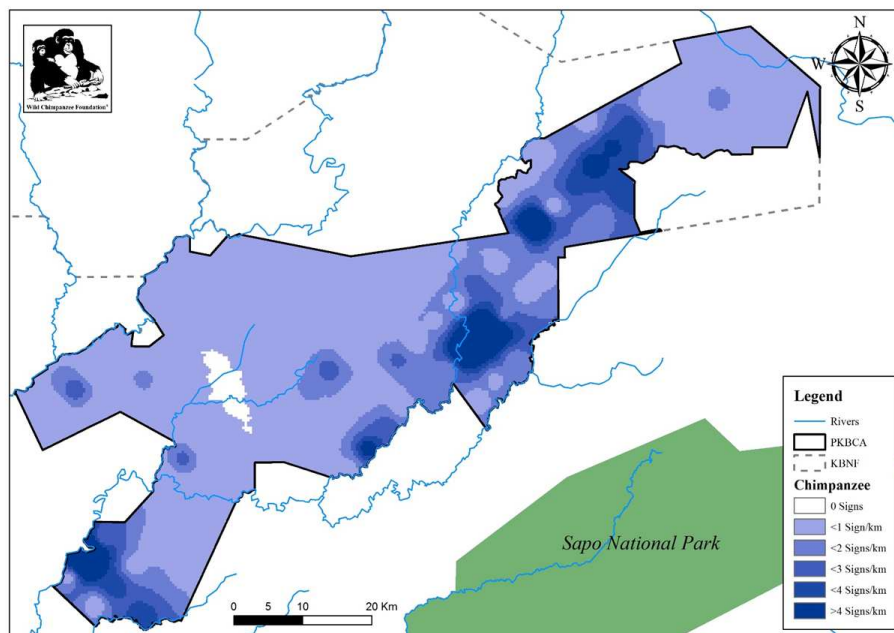


Figure 1: Spatial distribution of chimpanzees observed in Proposed Krahn-Bassa Conservation Area; areas with darker blue indicate areas of higher abundance, the white area could not be surveyed due to flooding

1.2.2. Biomonitoring in priority sites of Taï National Park, Côte d'Ivoire

Since 2009, WCF has carried out a research and conservation program on the Taï research and ecotourism area, called the "anti-poaching project". The end of the collection of monitoring and ecological data of the 10th phase was carried out during this first semester. Phase 9 report is part of a Master's program which was finalized in July 2017 and will be available this year. At the same time, WCF is supporting the OIPR to strengthen surveillance in this area. Data collected on this program have allowed an Ivorian student, Yves Kablan, to publish a paper this year on the effect of anti-poaching patrols on the distribution of large mammals in the Taï National Park. A second paper is in a preparation on how to improve conservation by strengthening surveillance.

Preliminary phase 10 results from the 177 transects surveyed in 2017 show numerous signs of direct and indirect presence of wildlife, consisting of 42 direct observations of duikers, 100 groups of monkeys, 149 chimpanzee nests and 54 piles of stage elephant dung S1 to S3 degradation (4 stages of degradation were defined, however for the calculation of abundance only the first 3 stages are considered). Several signs of human activities were recorded, such as the observation of 32 cases of hunting ammunition and 27 shots heard on transects and off transects. This shows that hunting activities are still present in the area. The analysis will allow a better understanding of the extent of the problem and locate sensitive areas.



Anti-poaching team collecting data in Taï National Park priority areas

1.2.3. Biomonitoring with camera traps in Taï National Park, Côte d'Ivoire

The line transect biomonitoring method has become rather imprecise and limiting in a context where direct or indirect observations (nests, dung) are not sufficient to determine precise variations and abundance. Thus, WCF and the Max Planck Institute for Evolutionary Anthropology in Leipzig, Germany recruited 2 students to develop a new method based on camera traps. This method could estimate the population size of wildlife species, even those that are particularly elusive. 200 camera traps were installed in 200km² of the TNP during October, November and December 2016. Since the beginning of this project, more than 95,000 videos have been obtained. 68 animal species have been identified, among them those presented in Table 2, considered "flagship" species.



Cameras set up by a field assistant and chimpanzee picture taken by a camera trap

Table 2: “Flag-ship” wildlife species captured on camera traps in Taï National Park

Vernacular name	Scientific name	Number of video clips
African elephant	<i>Loxodonta cyclotis</i>	20
Bongo	<i>Tragelaphus eurycerus</i>	46
Jentink duiker	<i>Cephalophus jentinki</i>	482
Leopard	<i>Panthera pardus</i>	269
Pygmy hippopotamus	<i>Choeropsis liberiensis</i>	179
Western chimpanzee	<i>Pan troglodytes verus</i>	329
White-breasted guineafowl	<i>Agelastes meleagrides</i>	479
Zebra duiker	<i>Cephalophus zebra</i>	329
Total		2133

1.2.4. Eco-guard program at Grebo-Krahn National Park and support for FDA law enforcement missions, Liberia

In collaboration with FDA, WCF has been implementing a Community Eco-guard program at the Grebo-Krahn National Park (GKNP), using SMART (Spatial Monitoring and Reporting Tool) and recently testing the use of Runbo smartphones for data collection. WCF has trained two auxiliaries from FDA who are now supervising 2 Community Eco-guard teams, each formed by 4 trained community members. During the field missions, the team focuses on collecting data on illegal activities. Furthermore, the Community Eco-guard teams engage with the local communities through awareness raising activities, explaining the value of biodiversity and the GKNP that passed into law on 22 August 2017. After each mission, the threat data is shared with FDA, potentially leading to subsequent law enforcement missions implemented by FDA, after careful planning with the WCF team. From January to October 2017, 4 Community Eco-guard patrols (3 in the southern and 1 in the northern part) and 1 FDA law enforcement mission were completed. 1 Community Eco-guard mission (northern part) was due to problems existing between FDA and local communities.



Community Eco-guard teams for Grebo-Krahn National Park

1.2.5. Sapo Task Force and law enforcement at Sapo National Park, Liberia

Events at Sapo National Park (SNP) earlier in 2017 led to the formation of the Sapo Task Force by FDA. WCF is part of this Task Force, which is aiming at the effective protection of SNP and its sustainable management with the involvement of local communities. WCF was part of the “SNP Multi-Stakeholder” conference where a resolution was developed and signed by all stakeholders, including FDA, community members, partners and donors. This resolution stated a deadline for the voluntary departure of illegal miners from SNP and includes a roadmap with many activities leading to the participatory management of SNP. From May to August 2017, WCF supported joint forces of FDA rangers and the Emergency Response Unit of the Police who secured the peace at SNP, by providing monthly rations. In

August 2017, WCF supported traditional leaders who were vital in the process of encouraging the illegal occupants/miners to voluntarily leave SNP. Currently, WCF is supporting Community Watch Teams around SNP who are monitoring the access points to SNP and regularly patrol with FDA rangers, to prevent that illegal occupants return.



Illegal settlement called “Camp Beirut” in Sapo National Park

1.2.6. Monitoring the Cavally Classified Forest, Côte d’Ivoire

22 people from villages surrounding CCF were trained by WCF and SODEFOR in January 2017 to collect information on natural resources. At the end 14 eco-guards were selected to support monitoring activities developed by WCF to measure CCF’s state of degradation while recording cultivated land, maintained or abandoned crops, intact forest, presence of mammals, and all indications of illegal activities. Data collected on the 4382.17 ha covered during the whole year have revealed 62.17% of intact forest, 35.79% of plantations (cocoa mainly), 0.59% of forest-clearing and 1.45% of abandoned plantations. The number of abandoned plantations will be a good indicator for assessing the impact of protection measures.



Eco-guards collecting illegal activity data such as plantations in Cavally Classified Forest

Table 3: Illegal activities recorded during WCF monitoring in Cavally Classified Forest

Illegal activities in 2017	Monitoring mission 1	Monitoring mission 2	Monitoring mission3	Total
Cocoa plantation	125	150	186	461
Nursery	20	40	30	90
Cartridge case	31	23	11	65
Trap	14	31	0	45
Clearing	15	18	10	43
Farmers/Poachers/ Gold miners	18	11	4	33
Mineral extraction	5	0	0	5
Yam farms	1	2	1	4

The main threats to CCF remain cocoa plantations, followed by hunting (many traps dismantled, and 12-gauge holsters picked up). Some gold mining was observed. Despite anthropogenic pressures, endangered or vulnerable animals such as chimpanzees, red colobuses and pygmy hippopotamuses were observed during monitoring missions.

SODEFOR has rehabilitated 1855 ha of the forest during 5 law enforcement missions. During the different meetings of WCF and SODEFOR it was agreed that the SODEFOR missions in the forest should be executed monthly to have an effective dissuasion effect in the field.

1.2.7. Local NGOs' actions in Cavally Classified Forest, Côte d'Ivoire

To effectively fight deforestation that threatens CCF, WCF is associated with local NGOs: NOFNA (Our Forest, Our Future), OPRFT (Observatory for the Protection and Reconstitution of Fauna and Tropical Flora) and IDEF (Community Development and Forest Conservation Initiative). They developed and implemented activities in collaboration with SODEFOR (manager of this forest) and stakeholders for the conservation of CCF. Investigations conducted by this coalition of 4 NGOs revealed the existence of several armed groups operating in CCF. A letter has been sent to the Ivorian government, one to the Ministry for internal affairs, to other ministries and state structures, to denounce the presence of an armed gang and the likely complicity of some gendarmes. The first letter was sent on 3 March 2017 and the second on 4 March 2017 to the Director of STBC in addition to the director general of SODEFOR, to denounce corruption of their field agents. Reactions of the High Command of the Gendarmerie, SODEFOR and STBC led to:

- The arrest of 3 persons of the armed gang in CCF
- The arrest of the chief of Taï gendarmerie and his deputy
- The replacement of all the personal of STBC involved in these corruption practices

Investigations still continue to increase transparency and improve forest governance in this sensitive area. The collaboration with these NGOs will be further developed in 2018.

1.3. Awareness raising campaigns and capacity building in the Tai-Grebo-Sapo Forest Complex (Liberia and Côte d'Ivoire)

1.3.1. Awareness raising and community engagement at Grebo-Krahn National Park, Liberia

Besides the regular awareness raising activities implemented by the Community Eco-guard teams, an amateur theater group was trained with 14 community members in Grand Gedeh. After intensive training, the group completed 8 conservation theater performances in 8 communities around GKNP in March 2017 that were attended by 967 people. The theater training and tour were facilitated through the involvement of 2 professional actors from a Liberian theater group (Eddie Theater Production) and staff from the Society for the Conservation of Nature of Liberia (SCNL) who helped especially with logistic arrangements.



Awareness raising play by amateur theater groups around Grebo-Krahn National Park

After the establishment of GKNP, a high-level awareness raising meeting was held with the FDA management (Deputy Managing Director for Operations), local authorities led by the Superintendents of Grand Gedeh and River Gee counties, Representatives, Commissioners and traditional leaders, as well as partners (WCF) and donor representatives (Ambero/GIZ and AHT/KfW) on 18 October 2017 in Zwedru. The aim of this meeting was to inform local authorities about the establishment of GKNP and plans for future participatory management including local communities. FDA, partners and donors presented their ongoing and future projects with an emphasis on benefits for local communities, e.g. through livelihood initiatives. Furthermore, it was decided that a GKNP Multi-Stakeholder conference should be held in December 2017, inviting representatives from all relevant stakeholders, especially from local communities living close to GKNP. In this framework an activity plan was drafted, with FDA, Ambero and WCF, as well as plans for awareness raising with cultural groups, to be coordinated by WCF. These cultural troops visited selected communities in November 2017 to inform them through songs, dancing and announcements about the establishment of GKNP and the upcoming conference.

In December 2017, the GKNP Multi-Stakeholder conference was held in Fish Town, River Gee County, where all host communities of GKNP were represented, as well as FDA, other

relevant governmental institution, NGOs and partners. This conference allowed all stakeholders to enter into a constructive dialogue about the establishment and the future of the park, the involvement of communities and their benefits, and how responsibilities will be shared. A resolution was developed and signed by all stakeholders, including all priority activities, timelines and responsibilities for a successful management of GKNP. Communities led by traditional leaders ensured that all illegal activities inside GKNP will be stopped until 15 February 2018 and that they are fully committed to the protection of the new park.

1.3.2. Theater tour around the Cavally Classified Forest, Côte d'Ivoire

In March 2017 a play was developed by Alma Production (formerly Ymako Teatri) in collaboration with WCF to address deforestation issues in CCF and to engage with the local population. The premiere of the play "Let's save the Cavally", was held on April 14 in Abidjan with the presence of about 100 people including the SODEFOR Executive Director, OIPR Executive Director and WCF President.

Around CCF, a theater tour held from 19 to 28 April 2017 was organized in 9 villages (Akekro, Cocody, Zagné, Ponan, Zaïpobly, CHC, Djidoubaye, Keibly and Taï) and gathered 5,300 people. Many real-life characters were illustrated in the play, such as illegal farmers, community leaders, village chiefs, administrative and political authorities, young people, women and children. The SODEFOR Executive Director was present during the theater tour and clearly addressed to the audience the importance to preserve CCF.

After the theater tour, direct effects were recorded:

- Many illegal farmers in CCF left the forest voluntarily;
- Local residents involved in the illegal sale of forest plots have disassociated themselves from the existing mafia network;
- Local authorities and chiefs congratulated the initiative of the theater tour.



Theater performance close to Cavally Classified Forest

1.3.3. Panel discussion about deforestation in Cavally Classified Forest, Côte d'Ivoire

A panel discussion organized by the French Embassy in collaboration with WCF about deforestation in CCF and was held on 5 October 2017 at the French Cultural Centre in Abidjan after a theater show “Let’s save the Cavally”. Among the 400 participants there were the Belgian Ambassador, the Ivorian Prime Minister's Chief of Staff and the Minister for Water and Forests. Before the discussion, 625 children saw the play, and asked many questions. After that some children decided to create a club to save CCF. The panel allowed each authority to express its opinion about the forest and engage with the audience.



Panel discussion in Abidjan about deforestation in Cavally Classified Forest

1.3.4. Capacity building in Liberia and Côte d'Ivoire

In Liberia: constant capacity building for FDA and community partners as well as WCF staff has taken place throughout all WCF activities in 2017. Computer trainings for WCF staff members and partners from FDA were organized on a regular basis. A review of Microsoft Office skills (Word and Excel) took place in Zwedru office in 2 training sessions in June and August 2017. In July, 4 FDA staff members and one Community Eco-guard member were trained in basic computer skills, including Windows environment, downloading and uploading of files, basic Word, Excel, PowerPoint and DNRGPS software. In August 2017, a 3-week workshop in SMART was held in the Zwedru office with the participation of 3 FDA staff, 2 FDA auxiliaries and 3 WCF staff. The trainees had the opportunity to learn all major tools of SMART software, including data entry, the creation of queries, report templates, and new conservation area. A collaborative learning schedule was developed so that staff members can continuously train their computer skills. In November 2017, a specific awareness raising

workshop was organized for the Community Eco-guards to ensure their messages and understandings are entirely in line with the messages of GKNP conference.

In Côte d'Ivoire: capacity building was organized from 25 to 29 October by WCF for SODEFOR and STBC. This training was about surveillance and anti-poaching methods, the use of GPS and compass, transfer of data collected from GPS to computer and map design. The aim was to improve knowledge to better protect CCF with a sustainable management. From 19 to 22 April, another training workshop was organized by WCF and IDEF. For 4 days, 10 people from NOFNA and OPRFT learned about the investigation techniques.



Training session by WCF for SODEFOR and STBC in Côte d'Ivoire

1.3.5. Socio-economic survey in the Proposed Krahn-Bassa Conservation Area, Liberia

A socio-economic survey was performed at PKBCA from 24 January to 3 March 2017. In total 455 households were interviewed in 31 communities in the 3 counties where PKBCA is located (Grand Gedeh, Rivercess, Sinoe). The collected socio-economic data included participant ethnicity, religion, level of education, number of people in the household, primary and secondary economic activities, and the estimated household income. Additional data were collected related to food consumption habits and meat preferences, perceptions of the bush-meat trade, and conservation issues. Besides a high level of anthropogenic pressure in and around PKBCA, e.g. through hunting for bush-meat, logging and mining activities, this survey also revealed some pet chimpanzees kept in the communities, of which one was confiscated by the FDA, as well as the presence of other primates in all visited communities.

When asked about their primary and secondary economic activities, the majority of respondents (61.98%) across all three counties declared farming as their primary economic activity followed by hunting (12.97%) (Figure 2), and 19.78% declared farming and 36.48% hunting as their secondary activity. Overall, this means, 81.76% of the respondents are currently farming in and around PKBCA, while 49.45 % of respondents are actively hunting, with Sinoe County having the highest proportion of active hunters (56.17%). When asked

directly whether they hunt, more participants declared they did, regardless of it being a primary or secondary activity. One interesting fact to note is that 27.78% of respondents in River Cess classify their primary economic activity as mining, much more than in Sinoe and Grand Gedeh.

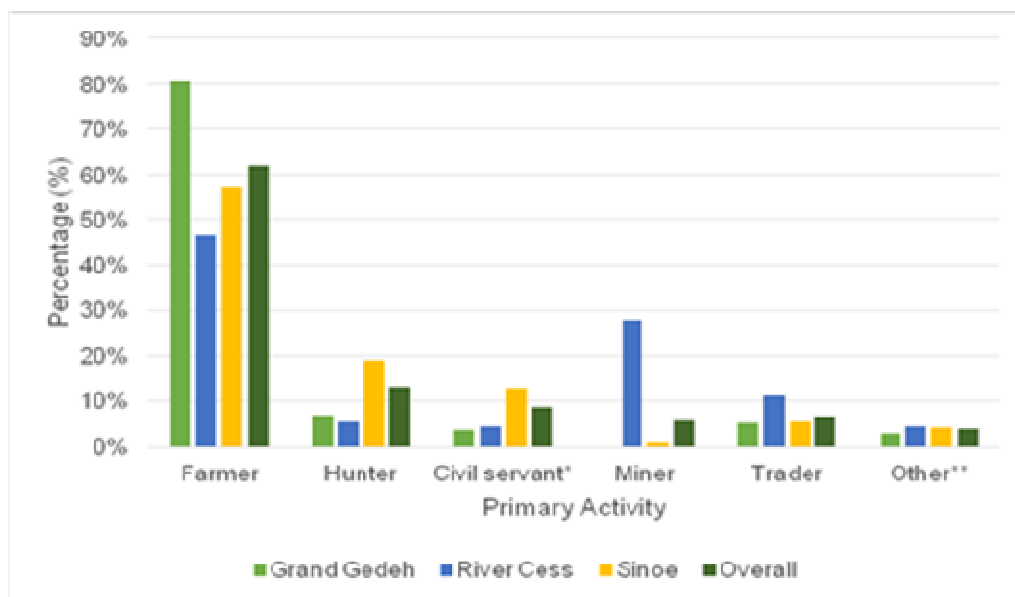


Figure 2. Proportion of respondents' primary economic activity across the overall surveyed area and per county

Participants were asked how they acquire their food: For fruits and vegetables, they farm it mostly themselves (57%). Bush-meat is bought directly from hunters (38.04%), trapped directly on their farms (22.19%) or bought from the market (20.32%). Domestic meat (e.g. chicken, goat, etc.) is most often raised by themselves (52.88%), whereas fish is preferentially bought from the market (58.02%).

1.3.6. Socio-economic surveys in Liberia and Côte d'Ivoire

During the last quarter of 2016, WCF and WWF started a new project including **3 studies** in Liberia and Côte d'Ivoire to caution communities about ecological risks linked to forest destruction and by highlighting sustainable benefits from forest preservation.

The first study collected views of the surrounding population on ecosystem services provided by Cavally Classified Forest and on the benefits of preserving the forest. In December 2016, data were collected in households of 29 villages surrounding CCF. An Ivorian PhD student is working on these data, and the report will be available in 2018.

The second study concerns the pre-evaluation of “Support to community-based law enforcement and alternative community initiatives to mitigate major anthropogenic threats on the largest remaining forest block in West Africa, the TGSFC (Côte d'Ivoire/Liberia)” financed under Bengo, a program from BMZ. Despite delays in the chronogram, a pre-study

was conducted this year. Its aims were (1) to establish a baseline of community's livelihoods, threats on forests, actions undertaken by communities to protect forests, benefits provided by conservation actions, and (2) to evaluate the method to measure the effect of the activities achieved at the end of the project study. A log-frame with indicators concerning current status and target indicators was assessed by a consultant employed by WCF. Some propositions were made to ensure that the outputs defined in the project will be effectively evaluated at the end in 2019, and that the target will be effectively measurable.

The last study was a socio-economic study at the periphery of GKNP in Liberia. Data collection was conducted between 21 February and 24 March 2017 in 22 villages/towns around the new GKNP which, at the time of data collection, had not yet been fully established. We conducted interviews with 226 household heads (husband or wife or both). Objectives of this study are (1) to understand the socio-economic aspects related to these communities; (2) to quantify the dependency/reliance of communities on access to forest resources; (3) to measure the level of sustainability of forest resource use; and (4) to understand the impact of incoming economic migration.



Interview during the socio-economic study around Grebo-Krahn National Park, Liberia

In relation to the primary economic activity, the respondents declared to do farming (55%), hunting (25%), fishing (15%), business (2%). 1.3% of them declared to be civil servants while 1 % declared to receive money from their family. The 24% of respondents who declared to be farmers declared hunting as the secondary activity. Local communities who live around of GKNP harvest forest resources directly and use them since generations. However, for them, these forest resources are overexploited, nowadays.

In addition, for 82.3% of respondents, non-timber forest products (NTFPs) (bush pepper, bush cabbage, bush candle, bush yam, bitter kola etc.) can be found in the area that were once used for subsistence (just for the given village), but are now used commercially (sold on the markets). Local communities estimate that availability of forest resources has declined over

the past 15 years, based on the fact that the time it takes to walk to reach the different resources in the forests has considerably increased. Our results showed that there was a significant difference between the time it takes today to reach the resources in the forests (average 1.7 hrs), as compared to before (1989; average 0.5 hr) and after the war (2003; 1 hr).



Extraction of non-timber forest products as sources of additional income: bush pepper drying in a household visited during the study around Grebo-Krahn National Park, Liberia

1.3.7. Support for, and involvement in national initiatives, Liberia

WCF is part of a very active network of international and national conservation and development NGOs and government bodies, being an active and/or leading member of the following groups that meet at a regular basis:

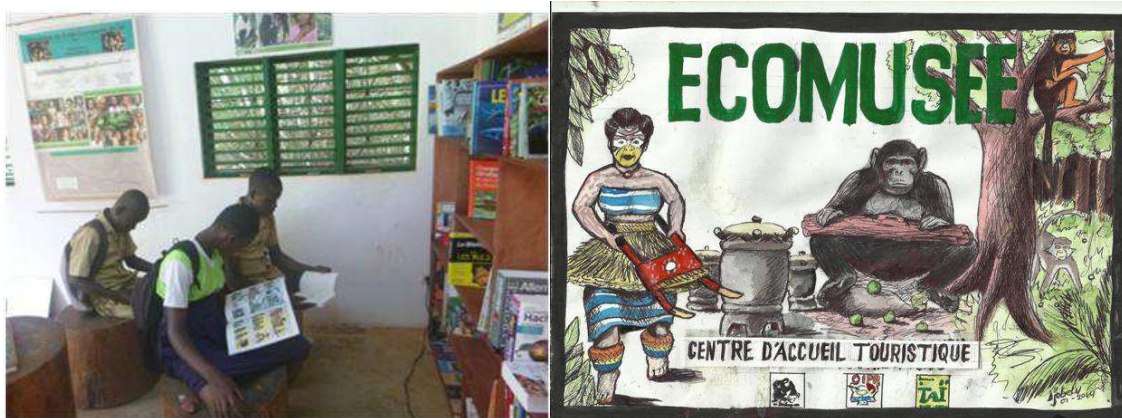
- **Species Working Group** with 4 sub-committees, 2 of which are led and coordinated by WCF:
 - Biomonitoring sub-committee: discusses research and survey methodologies; aims at harmonizing survey techniques throughout Liberia in order to promote best practice; aims at establishing a national data base for biomonitoring data
 - Law Enforcement sub-committee: supports the development of regulations for the wildlife law, the review of laws, the fight against the Illegal Wildlife Trade, bushmeat and other crimes; focuses on threatened species and their rescue in the light of sanctuary work; anti-bushmeat campaign
- **Illegal Wildlife Trade Task Force**: overlaps with the Law Enforcement sub-committee and is piloting the anti-bushmeat campaign with the Paynesville City Corporation
- **Green Liberia Initiative**: collaboration between institutions involved in (agro-) forestry and conservation, e.g. through the development of a common communication strategy
- **Liberia Nature Talk**: monthly public talk and presentations organized by the Society for the Conservation of Nature of Liberia and hosted by the University of Liberia. WCF Country Director was the first speaker of this initiative that started in August 2017

1.4. Alternative livelihood and sustainable use of natural resources in the Tai-Grebo-Sapo Forest Complex (Liberia and Côte d'Ivoire)

1.4.1. Environmental education and ecotourism in Côte d'Ivoire

The eco-museum in Tai provides information and activities for tourists, training sessions for WCF staff, but also organizes awareness programs for the local population and local primary and secondary schools, such as screening of documentary films, educational presentation on conservation and information/debate sessions. From January to December 2017, approximately 1288 people visited and attended the different activities of the eco-museum. Among them 276 visitors were adults and 992 were children. 1004 items such as "Forest Wisdom" newsletters in French and other brochures have been distributed.

A Reading Space in the eco-museum has been opened mid-November 2017. Books of nature (animals, forest, plants, climate, biology, pollution) and of traditional culture, gender and peace are available for free. The idea was also to buy dictionaries in French, English and German as well as schoolbooks. 116 units of books for children, but also for adults, are available. As primary and secondary schools in Tai do not have libraries, and as many schoolchildren don't have the financial means to buy books or even schoolbooks, this reading space is to help the pupils to read or to do their homework. For example, in November and December 2017 a total of 129 children came to read books, check dictionaries, or used school books. By attracting young people to the eco-museum, the local WCF staff can raise awareness among them for the protection of environment.



Environmental education and awareness in Tai, Côte d'Ivoire

Community awareness raising activities were held in several villages and small camps close to TNP and CCF. This year, 61 sessions have been conducted with emphasis on foreign communities living and working in the Tai area. Besides two-native indigenous ethnic (Oubi and Guéré), 7 other communities (Akan, Dan, Malinké, Malien, Béninois, Burkinabè and Ghanéene) are living in the area. Most of the participants were planters but other social-professional categories (teaching body, students, law enforcements agents, owners of restaurant and local public authorities) are also joining. Those sessions allow collecting information on poaching, security, development needs, or their perception of the park and

conservation. In 2017, a total of 6442 people attended the 61 awareness sessions organized by the WCF team. This increase compared to 2016 is also due to a theater tour that took place in April 2017, where approximately 4700 spectators were attending the performances.



Awareness raising in villages near Taï National Park, Côte d'Ivoire

Eco-tourism: habituation of mangabeys, red colobus and chimpanzees in Taï

In 2017, habituation at Taï site has been marked by the completion of the identification process of the mangabeys' group (*Cercocebus atys atys*) done by the eco-guides working in the eco-tourism area in TNP. Each mangabey has a name and can be recognized by its physical appearance. The group comprises 52 individuals, with 10 births. The average length of contact per day is 10 hours and 47 minutes (in 2016, it was 10 hours and 8 minutes).



Habituated mangabey group in Taï National Park, Côte d'Ivoire

The identification of the red colobus (*Ptilocolobus badius badius*) remains difficult. They forage mostly within the canopy and the 2 males identified in 2016 have disappeared. Since October 2017, one of the 2 identified red colobus has been seen again. This year the average length of contact per day is 8 hours and 52 minutes.

The search for a group of chimpanzees continues. End of 2016, the eco-guides have had several times direct contact with chimpanzees not showing any signs of fear, they were obviously already habituated. This direct contact happened mostly in the southern part of the

eco-tourism area in TNP. After collaborating with the team of the TCP working at the bordering area of the eco-tourism zone in the southern part, we concluded that those chimpanzees could be a habituated group of the research area. With the visit of Professor Christophe Boesch in November 2017, a new strategy has been developed. 3 eco-guides from the forest team will only do the habituation of chimpanzees. This team will be led by Grégoire Nohon. Moreover, they will continue to search in the southern part to identify the limit between the habituated chimpanzees and the non-habituated ones. The average length of time spent to search the chimpanzees per day is 10 hours and 18 minutes.

The ethno-botanical circuit has been redesigned, as during the time spent following the primates, eco-guides had found new giant trees: a huge *Klainedoxa gabonensis*, an incredible *Piptadeniastrum africanum*, a beautiful *Lophira alata* and 3 *Musanga cecropioides* with amazing roots. These beauties will be shown to the visitors.

To supervise the habituation process of red colobus, mangabeys and chimpanzees in the ecotourism area, a new volunteer supervisor (Thibault Pouliquen) arrived in May 2017. Besides the habituation of primates, the supervisor is also responsible to accompany tourists and to support the forest team which is composed of 8 eco-guides (4 women and 4 men) and 2 camp managers (1 woman and 1 man).

Ongoing training has been implemented since the beginning of the eco-tourism community project. Twice a week, in the afternoon, the forest team takes part in training sessions at the eco-museum. Documents for their training have been developed, such as sheets about animals of TNP, ethno-botanical information, hygienic rules and rules how to behave in the forest. In addition, from January to May 2017, a volunteer joined the project to teach English to the team. Twice a week, he organized English lessons.



Training of eco-guides in Tai, Côte d'Ivoire

Eco-tourism: habituation of chimpanzees in Djouroutou

This year, the Djouroutou chimpanzee habituation program started with several changes:

- 2 new eco-guides have joined the habituation team (totalizing 6 eco-guides), and 3 former eco-guides left the team at the end of December 2016;

- 2 persons were recruited as camp man/woman to ensure the cooking, the maintenance of the camp and the reception of the tourists;
- Julien Desré, who has been working for WCF for 2 years is since January 2017 overseeing the habituation process and is coordinating tourist activities taking place in the forest

The chimpanzee community is monitored daily; 5 adult males, 7 adult females, 4 male adolescents, and 4 juvenile males are fully identified. In total, 20 individuals have been identified, but the group size remains unknown. With the introduction of the new program, chimpanzees were lost for 11 days in January, but the number of days that chimpanzees were lost declined significantly thereafter. It becomes difficult for the eco-guides to follow the chimpanzees when they cross the wide Hana River.

Since the beginning of the year 2017, 129 tourists went to the forest taking part in the proposed activities (visiting chimpanzees and hiking on Mount Niénokoué). Most of the tourists come to observe the chimpanzees of Djouroutou in their natural environment. During the 119 visits in 2017, chimpanzees could be observed on 102 occasions. The objective is to reach 100% by improved habituation.

Work has been conducted for the eco-guides and the tourists in the "chimpanzee camp" in the forest. A shower, a toilet and a dining resting space have been built.



Dining- resting space and the new shower facility in the forest tourist camp

To increase the number of visitors in 2018, a new strategy plan is developed to strengthen the communication about the eco-tourism project. To this aim, a new volunteer has been recruited in December 2017 to implement this strategy.

1.4.2. Tourists and development of community program in Taï, Côte d'Ivoire

In 2017, the ecotourism community-based project "Nature and Culture" of Taï has welcomed **60 tourists**. An increase compared to the first half of year 2016 where only 34 guests had come to Taï. Most of these visitors were French and then German.

Visitors of the community project have spent 83 nights in the forest at the camp, 50 nights in hotels at Taï, and 18 nights in the traditional huts of the village of Gouléako 1, a community “Bed and Breakfast” run by women of the village, who fully benefit from the income.

Among those visitors, the Ambassador of Germany, was accompanied by his daughter and the Consul of Switzerland by his wife. Moreover, at the end of May, two representatives of a local travel agency “Evasion Côte d’Ivoire” visited the Taï community project. They were completely satisfied and decided to recommend the Taï destination to their clients. The project received the satisfaction note of 9.27 out of 10.



Visitors of the eco-tourism project in Taï

1.4.3. Livelihood support at Grebo-Krahn National Park, Liberia

In 2017, WCF has supported aquaculture projects in 4 communities with 14 farmers and a total of 17 fish ponds. From July to August 2017, the construction of 5 ponds in Peah was completed and ponds were stocked with 3,491 Nila Tilapia fingerlings.



Fish-farming near Grebo-Krahn National Park

In August 2017, a farmer-to-farmer exchange was held in Sayuo with the Peah farmers joining Sayuo, thus providing the opportunity to learn from each other's experiences. Training in pond-maintenance and local fish-feed production was offered at all sites between August and October 2017. The first 3 ponds in Sayuo were harvested in September 2017, and the remaining 4 ponds in October 2017. The total harvest from all ponds in Sayuo amounted to 424 kg, of which 315 kg were sold and 109 kg were kept for the consumption by the local community. The total income generated was Liberian \$ 137,300. The WCF Aquaculture Program Officer has been training an Aquaculture Assistant from the local NGO Multi-Agrisystems Promotors (MAP), aiming at sustainable supervision and continuation of the project beyond the lifetime of WCF's current aquaculture project.



Harvested Tilapia; farmer is weighing fish to be distributed to harvest helpers



Fish only for consumption by family members; farmer is happy with the size of his Tilapia

1.4.4. Sustainable forest management in Côte d'Ivoire

As part of FLEGT (Forest Law for Enforcement, Governance and Trade / Application de la réglementation forestière, de la gouvernance et des échanges commerciaux) and the FAO-EU FLEGT program, WCF benefits from a project funded by the European Union (EU), the United Nations Food and Agriculture Organization (FAO), the United Kingdom Department for International Development (DFID), and the Swedish International Development

Cooperation Agency. WCF is mandated by SODEFOR (Côte d'Ivoire Classified Forest Manager) to implement Independent Monitoring (IM) in the Cavally, Yaya and Besso Classified Forests.

Assessment and revision of the forestry and exploitation regulations in the classified forests of Côte d'Ivoire

A recommendation from Phase 1 of the Independent Monitoring project indicates that SODEFOR should revise its forestry rules that were no longer adapted to the current context of classified forests that are degraded, compared to the period when these rules were adopted. These rules contain the conditions for any opening to exploitation, designation of the trees to be exploited, and their quantity. An international expert from ITTO (International Tropical Timber Organization/Organisation Internationale des Bois Tropicaux) and a national expert have been recruited to assess the effectiveness of the existing rules and to propose a revision of these rules in the light of the state of scientific knowledge, the imperative of sustainably managing the forest resource, and the reality on the ground. A working methodology was proposed by the experts and validated by SODEFOR and WCF. A field mission of about ten days was conducted in some of the Ivorian classified forests. The new document produced was validated during a national workshop held in Adzopé on 21 and 22 June 2017.



National workshop about sustainable timber exploitation, 21st of June 2017, Adzopé

Replication of mandated Independent Observation Missions in two new classified forests

One of the different objectives of the project was to replicate the IM in 2 newly classified forests in Côte d'Ivoire. A technical meeting with SODEFOR has allowed identifying these 2 new classified forests. An information meeting of the ITS and INPROBOIS operators on the implementation of IM in the Besso and Yaya Classified Forests was organized by SODEFOR on 9 May 2017, providing information on the IM approach, the objectives and results obtained in CCF. On 23 June 2017, an endorsement for the extension of IOM to the 2 new classified forests was signed by WCF, followed by the director-general of SODEFOR.

Diagnosis of the development activities of the two new classified forests

From July 3 to 6, 2017, an initial diagnostic mission was carried out in view of the development of activities and recording any malfunctions in the Besso and Yaya Classified

Forests. A first meeting was held at the UGF of Akoupé in the presence of the Director of the Abengourou Management Centre (DCG) and the Chief in charge of the classified forest (CUGF) of Besso. A second meeting took place at the UGF N'Zodji in Alépé in the presence of the CUGF of the Yaya Classified Forest.

Identification of local CSOs and residents of the two new classified forests

Local CSOs were identified prior to and during the diagnostic mission from 3 – 6 July 2017 during which the 3 main villages bordering Yaya and Besso Classified Forest were visited. Questionnaires were distributed to be filled out by those interested in IM activities and then forwarded to WCF for analysis and selection of local residents and CSOs able to participate in the training and practices on IM in support of WCF's implementation of activities in the field.

Civil society training workshop on independent observation and forest management

The training was conducted from 31 July to 5 August 2017. Its objective was to strengthen the capacity of communities and CSOs bordering the Besso and Yaya Classified Forests, as well as national CSOs, on the Independent Monitoring approach and on the forest management, with a theoretical and practical component. The training also aimed to identify members of the most motivated and competent national CSOs to continue their training at the IO. A field trip took place in the Yaya Forest Reserve about fifty kilometers from Abidjan, and the last half-day of training was devoted to a theoretical and practical evaluation of the participants.



Training of national NGOs on independent forest monitoring in Yaya Classified Forest

Independent Observation missions

WCF conducted 4 stand-alone Independent Observation missions in the first half of 2017. These missions were conducted with the members of the communities being trained for IM.

- The first autonomous mission took place from 16 to 17 February 2017;
- The second mission took place from 4 to 8 April and helped to strengthen the capacity of local communities by developing an observation strategy outside the mission periods of IM on logging sites in the forest;
- The third mission took place from 14 to 18 June;
- The fourth mission took place from 4 to 9 July.

2 joint SODEFOR - IM missions took place:

- The first was conducted by the SODEFOR Control Service in the Yaya Classified Forest. It took place from 27 to 30 November 2017;
- The second joint mission focused on the evaluation of the implementation of annual program activities in 2017 by the operator STBC and was conducted by the SODEFOR Technical Department. It took place from 4 to 8 December 2017.



Independent monitoring missions in Yaya and Cavally Classified Forest

Analysis of management documents with CSO support and IM reporting

Following the analysis of the management documents received and the IM mission's progress, WCF continued the preparation of several IM reports:

- An IM report covering the period May 2015-May 2016, i.e. the period between the formulation of recommendations following the observed malfunctions and the adoption of corrective measures (IM report No. 3);
- An IM report on the implementation of corrective measures by the services concerned over the period June 2016 - March 2017 (IM report No. 4).

Both reports were released to the public on 29 September 2017. A third report on the review of lessons learned from the IM project in Côte d'Ivoire is being prepared. The analysis of management documents received by IM for Cavally and Yaya Classified Forests continued with the support of the 10 national CSO members who were selected in the final IM training

test. 5 working sessions were held for document capture and analysis. New IM reports will be further developed and published based on the analysis of the latest IM missions.

Capacity building workshop for field officers

This workshop was held from 12 to 14 September 2017 and aimed at strengthening the capacities of the forest management units of the 2 new classified forests in which the IM is operating to ensure sustainable management of these forests. This workshop took place over two and a half days, covering, among others, the IM approach, the FLEGT process and the EUTR, the interests of the different actors in the IM approach, and the responsibilities of the agents monitoring exploitation in a classified forest.

Capacity building workshop for SODEFOR managers in forest management

This workshop was held from 17 to 20 October 2017 at the Abidjan Management Center. It aimed to increase the capacity of SODEFOR's forest managers to implement virtual lay-based inventorying devices (inventory protocol, survey design, plots, blocks), take ownership of the new silviculture and logging rules in Côte d'Ivoire's dense forest area (adopted in June 2017, see above), and finally strengthen their capacity to process inventory data and the elaboration of the list of authorized trees for cutting (LAAC).



Practical capacity building workshop in Anguédedou Classified Forest

Development of a forest control-procedures manual

With a view of organizing a training workshop on forest monitoring and control, SODEFOR was asked to produce a summary manual of forest control-procedures. A document relating to the forest control-procedure already existed but was incomplete. WCF supports SODEFOR in regular working sessions so that all procedures are collated and improved in a new document.

Support for civil society and adoption process of the new Forest Code

WCF supports civil society as a resource person in the context of VPA / FLEGT multi-stakeholder negotiation in Côte d'Ivoire as well as in the process of drafting the implementing texts of the new Forest Code involving all stakeholders. In this context, WCF regularly participates in work-meetings of the civil society.

2. Activities in Guinea

2.1. Creation of the Moyen-Bafing National Park (Guinea)

As part of the implementation of the 2011-2020 strategic phase of the Convention on Biological Diversity, the Guinean Government is committed to cover 25% of the national territory into Protected Areas, covering different large ecosystems and managed effectively. The Ministry of Environment, Water and Forests, through the Guinean Office of Parks and Reserves (OGUIPAR), that has developed and validated a national strategy for the management of Protected Areas with an 8% coverage, since 2010, is collaborating with the Wild Chimpanzee Foundation (WCF) and the Guinea Alumina Corporation (GAC) to identify a potential high conservation value area. With the aim of offsetting the negative effects of GAC mining and ensuring the conservation of chimpanzees (*Pan troglodytes verus*) in a favorable ecosystem, the data collection carried out by WCF teams is presently assessing the number of surrounding villages, and the respective number of inhabitants, in order to determine the nature of inhabited areas (towns, villages, hamlets) and to obtain information on the socio-territorial aspect. For securing the help of neighboring communities in the maintenance of sustainable and social living conditions (respectful of the environment), some consultations in the different identified areas are currently in progress. These consultations employ a participatory approach that raises awareness, and advises the administrative, political authorities and local beneficiary populations how to integrate and ensure the process of natural resource-management in a future Protected Area agreed by all parties.

2.1.1. Community consultations

The aim of the different consultations is to bring all stakeholders involved to understand their responsibilities in the process of natural resource management in and around the Moyen-Bafing National Park, and thus ensure that they take responsible ownership of it. The present consultations follow the first round in April 2016 and aim to make people aware of the place they will occupy within the future National Park, and what solutions will be established. Also, all relevant socio-economic categories (minorities included), potentially impacted by the project, were considered. Several missions, involving many meetings, were programmed by the Guinean Parks and Reserves Office in collaboration with WCF. Consultative meetings were held in the different administrative regions (3), prefectures (5), rural communes (7) and districts (28), located in the target area by the project of creating Moyen-Bafing National Park (MBNP), to reach exchanges, discussions and adaptations for a consensual decision.

The different administrative areas of Moyen-Bafing were visited by 2 OGUIPAR/WCF teams. Each of these meetings consisted of a presentation of the project for the creation of the national park in detail, and of broadcasting short films on environmental awareness translated simultaneously into the national languages. A debate session followed these presentations, allowing everyone to discuss different aspects of the creation of the national park.



Discussions during the community consultation in Fello Koundoua

2.1.2. Inter-ministerial commission

In February 2017, an inter-ministerial commission was created including the Ministry of Mines and Geology, the Ministry of Energy and Hydraulic, and the Ministry for the Environment, Water and Forestry. This commission was urgently needed to lead discussions concerning the conflicts between the economic development (such as the Koukoutamba dam project) and the environmental protection of the Moyen-Bafing National Park. For the first time in the history of the Republic of Guinea, such a commission was created to give the public actors the possibility to express their concerns and be consulted on the problems of combining economic development and environmental protection.

The first meeting of the commission was held on April 18th 2017. and a number of recommendations were formulated, such as the need for a national boundary validation workshop, the sharing of information such as GPS data, the involvement of all members in the environmental and social impact assessment of the Koukoutamba project, and the support to the commission managing the creation of a trust fund for the Moyen-Bafing National Park.



First meeting of the inter-ministerial committee on April 18, 2017

2.1.3. Socio-economic survey

A socio-economic study by OGUIPAR/WCF was conducted from February to June 2017 to better understand the local population's characteristics, quantifying their means of subsistence and identifying their daily challenges. The consideration of socio-economic issues is an indispensable component of the creation of a new protected area. Considering the concerns of the populations and integrating them into the decision-making processes will enhance their support in favour of the park creation and the related conservation activities.



Training of the sociologists in Labé for the socio-economic survey in the Moyon-Bafing National Park, Guinea

In February 2017, the training of the 14 sociologists for the large socio-economic study in the Moyon-Bafing region was held in Labé. The first day of training was opened by Colonel Sow (Directeur Général Adjoint d'OGUIPAR) and the "Inspecteur de l'Environnement" from Labé. After the training, the sociologists started collecting data. Two teams, composed of seven trained sociologists, a team leader, a cook and a driver, were sent on four missions over 3-4 weeks each. The study period started on the 15th of February 2017 and ended on the 12th of June 2017. For the fieldwork, the necessary equipment (computers, lamps, batteries, shoes and first-aid kits) were purchased. All needed documents like questionnaires and policies were printed. The villages to be visited were selected on a random basis, with the sole criterion of their location within the existing three zones of the Moyon-Bafing National Park. The households to be interviewed in each village were also randomly chosen. Individuals in households were selected according to their availability.

Two different questionnaires were used during the data collection:

1. A questionnaire with 11 questions was designed for public persons (like village chiefs, industry leaders, imams, and group representatives) to deal with the characteristics of a village (like historical context, administrative structure, presence or absence of a weekly market, school, medical services, village groups, daily problems and solutions).

2. A questionnaire with more than 250 questions was prepared for households. The questionnaire was divided into two sections: a section on basic household information such as household characteristics, household goods, food, water, electricity, transport and land. The second section concentrated on details about the interviewed person such as health, mobility, knowledge of existing environmental regulations and interest in resource conservation.



Household interview in the village Kalinko Missira

The socio-economic survey has been completed; the two teams have visited 69 villages and conducted 710 interviews in 609 households. Data analysis is in progress and should produce a descriptive analysis of the socio-economic situation of households (graphs, percentage tables, etc.) and a statistical analysis of certain variables (correlation, multivariate analysis, etc.). In addition, the data obtained during this socio-economic survey will be compared with data collected by Lukas Boesch in 2014/2015.

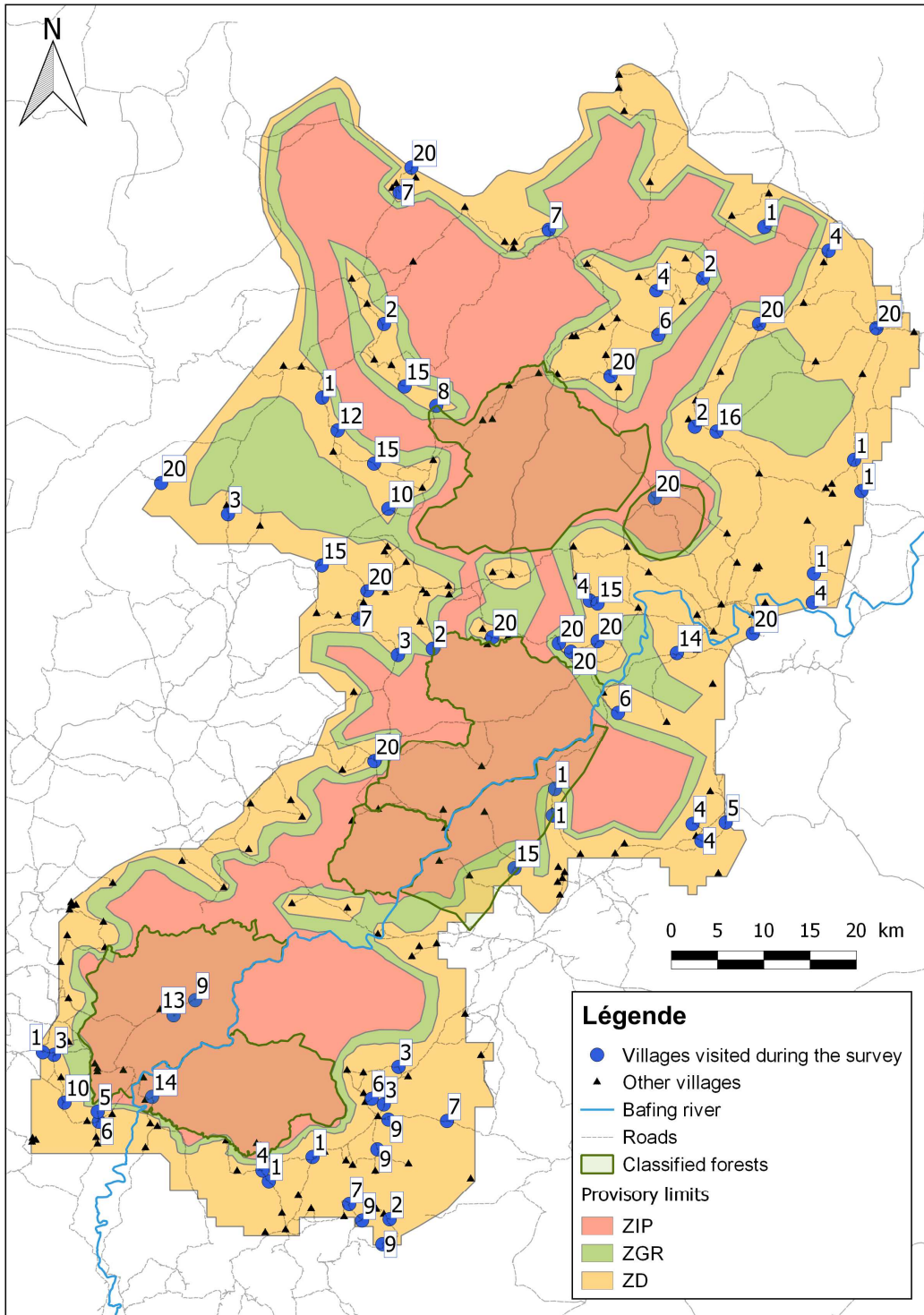


Figure 3: Map of the Moyen-Bafing National Park with the 3 Zones (ZIP – „Zone Intégralement Protégée“ (Fully Protected Zone), ZGR – „Zone de Gestion de Ressources“ (Sustainable Resource Use Zone), ZD – "Zone de Développement" (Development Zone) and the villages visited during the socio-economic survey 2017 with blue points and numbers.

2.1.4. National validation workshop of the boundaries of the Moyen-Bafing National Park

On the 8th of May 2017 a national workshop was held in Conakry to validate the temporary boundaries of the Moyen-Bafing National Park following the validation of the inter-ministerial commission. All the stakeholders were invited including the Ministry of Mines and Geology, the Ministry of Energy and Hydraulic, the Ministry for the Environment, Water and Forestry, the Ministry of Foreign Affairs and the Organization for the Development of the Senegal River.

Following the opening speeches of the guests of honour, Colonel Sow (Directeur Général Adjoint d'OGUIPAR), gave the first presentation on the protected area network of Guinea. The second presentation was done by Professor Christophe Boesch (WCF president), on the different delimitation scenarios. Numerous questions and discussions followed the presentations until an agreement was reached on the general validation of the temporary borders of the Moyen-Bafing National Park.



Participants of the national workshop about the temporary borders of the Moyen-Bafing National Park in Conakry, Guinea

2.2. Theater awareness raising campaign

One of the main WCF objectives is to provide free environmental education for the human communities living near protected areas. For this aim, the WCF has created several theater-plays and organized many theater-tours, professional and amateur ones, in Côte d'Ivoire, Liberia, Sierra Leone and Guinea and relies on lessons learned during these campaigns to raise awareness for chimpanzee and nature conservation. In 2017, the WCF organized a first

theater-tour with eight performances in villages of the Moyen-Bafing region. For the theatre-tour we collaborated with the TOUCHATOUT Company, a company we had already worked with in 2011/2012. The present tour took place from the 1st to the 21st of July 2017 and reached a total of 1870 spectators, composed of 45% adults.

The performed play concentrated on the relationship between the presence of the forest and the quantity of water available, evoking the need to preserve the environment by modifying the exploitation and use of natural resources towards more sustainable methods. The final scene of the play concluded by addressing the creation of the Moyen-Bafing National Park as a solution enhancing the conservation of the natural resources, so badly needed by humans and animals.



Theater performance by TOUCHATOUT in a village of the Moyen-Bafing region

The choice of villages targeted during this tour was based on ethnic criteria (4 villages per ethnic group), geographical (50% of villages on each bank of the Bafing River) and accessibility (feasibility of roads linking villages between them).

Table 4: Spectators at the theater performances July 2017

Villages	Adults	Adolescents	Children	Total
Fello	80	32	41	153
N'dire	45	35	48	128
Laafa	130	60	80	270
Dara	71	25	34	130
Kalinko	114	47	67	228
Boubé	31	19	33	83
Gagnakaly	84	47	29	160
Bendougou	284	189	245	718
Total	839	454	577	1870
%	45	24	31	100

Following the theater performances, a discussion round was animated by WCF and a documentary film presented, featuring innovative sustainable farming methods. These discussion rounds were joined by 600 persons.

Table 5: Participants to the discussion rounds in July 2017

Type of public	Number of participants	%
Men	103	17
Woman	205	34
Adolescents	106	18
Children	186	31
Total	600	100

2.3. Club P.A.N.

Conservation education is a priority and long-term action for the conservation of chimpanzees and other wildlife. In 2017, WCF continued its environmental education program named Club P.A.N. (People, Animals, Nature) in six schools (Kalinko, Keyla, Gagnakaly, Kollet, Kounet and Kouratongo) in the Moyen-Bafing region with 500 participating children.



Club P.A.N. outdoor nature classroom in Guinea

Six teachers and six principals were trained in November 2016 during a five-day workshop in Tougue, Guinea. We conducted 12 conservation education sessions in each of the six schools, and accomplished pre- and post-evaluation of the children.



Club P.A.N. teachers and principals during the teacher training 2016 in Tougue

Evaluation results show that Club P.A.N. children increased their knowledge by 40% on average, and 91% of the children want to avoid eating bush-meat in the future, these are encouraging results of our environmental education program.

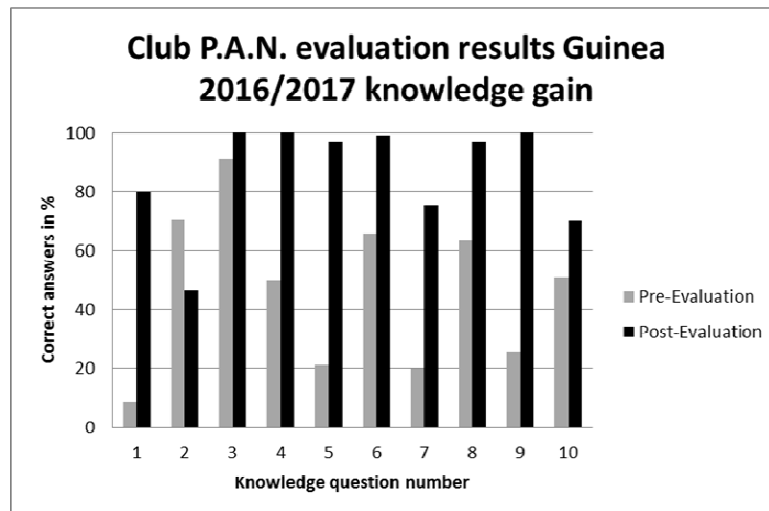


Figure 4: Correct answers in percent to ten knowledge questions during pre- and post-evaluations in Guinea show the knowledge gain after the Club P.A.N. program.

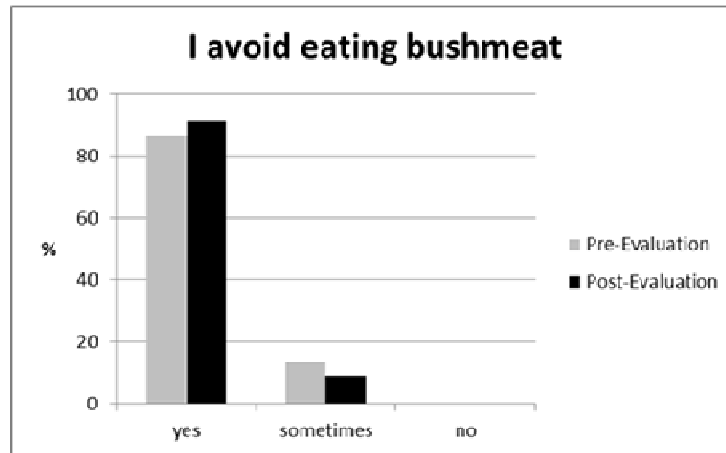


Figure 5: Answers in percent to the statement “I avoid eating bushmeat” during pre- and post-evaluations in Guinea.

At the end of the school year, the children prepared the parents’ day for their village, reaching with their presentations more than 3280 villagers and parents. Parents were evaluated after the presentations. All interviewed parents gave positive feedback to the program; it was mentioned that the children increased their knowledge and that they received T-Shirts and school materials such as books. 100% of the children had talked to their parents at home about Club P.A.N. and all parents were able to report something the household had learned from Club P.A.N., such as the importance of national parks and forests, also words like ecology and biodiversity were named by the parents. WCF achieved all Club P.A.N. objectives set out.

2.4. Biomonitoring in the Moyen-Bafing National Park

2.4.1. Long term ecological monitoring by camera traps

In January 2017, 30 camera traps were systematically set up in the Moyen-Bafing National Park (MBNP). Initially, 9 cameras each were installed in 3 study areas spread over the MBNP (Figure 6), one in the classified forest of Bakoun, one in the classified forest of Boula and one in the northern forest corridor between these two classified forests.

The aim of camera-trap monitoring was to improve the ecological monitoring with traditional line transects and to discover species that may not have been found or are difficult to observe by the field teams. At the end of the study, we will compare the three study areas and their animal abundance.

The geographical location of the cameras in the 3 study areas corresponds to a network of 3x3 cells of 1 km² each. There was a camera in each cell. However, when sites were detected which are particularly useful for the observation of rare species (like fruit trees), additional cameras have been added. Thus, in the classified forest of Boula there were finally 10 cameras, in the classified forest of Bakoun 9, and in the northern forest corridor 11 cameras.

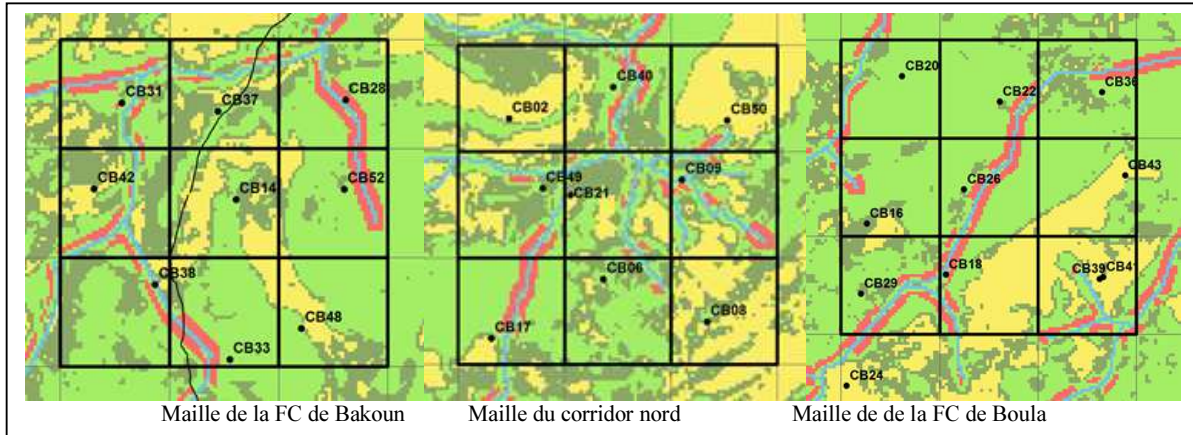


Figure 6: Systematic placement of the camera traps in the second round in the classified forest of Bakoun (left), in the northern forest corridor between these two classified forests (middle) and in the classified forest of Boula (right)

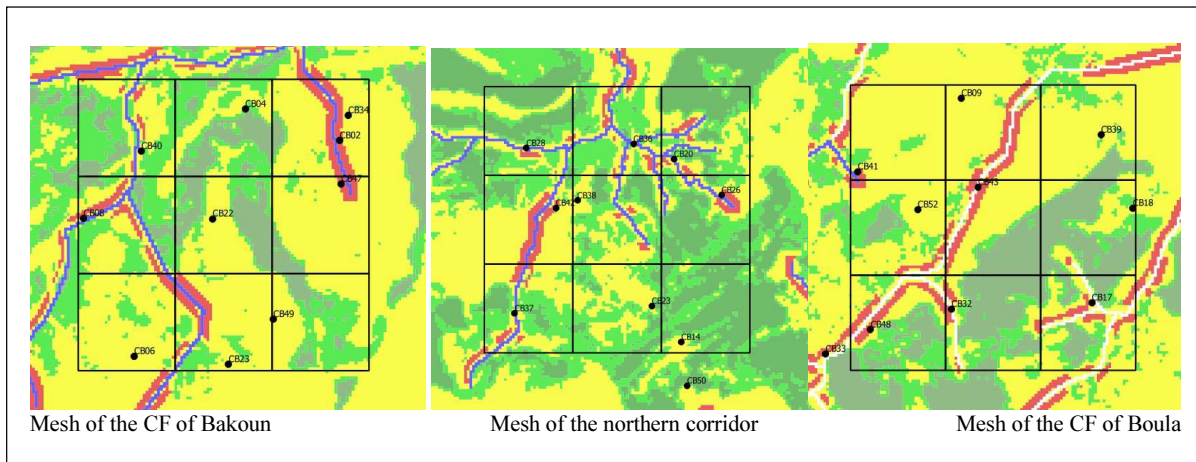


Figure 7: Location of the third round of camera traps in the classified forests and the north corridor of the Moyen-Bafing National Park

In January 2017 a local team was trained by WCF to take over the monthly maintenance of the cameras. This included visiting the cameras on a monthly basis, downloading the saved videos, cleaning the memory cards, and replacing the batteries. Diallo Boubacar was supervising the project and was supported by Assane Sefou Beavogui from WCF.



Monthly camera checks by Diallo Boubacar and Assane Sefou Beavogui

Between the placement of the cameras in January 2017 and their dismantling in July 2017 (during the rainy season the cameras might be damaged), a total of 10,370 videos were saved, 3,083 from Bakoun Classified Forest, 4,287 from Boula Classified Forest and 3,000 from the northern forest corridor. Each of the videos has a duration of one minute, but evaluation of all of them requires about 200 hours. The long-term camera trapping device was reinstalled in September 2017 and is expected to continue until the next rainy season in 2018.

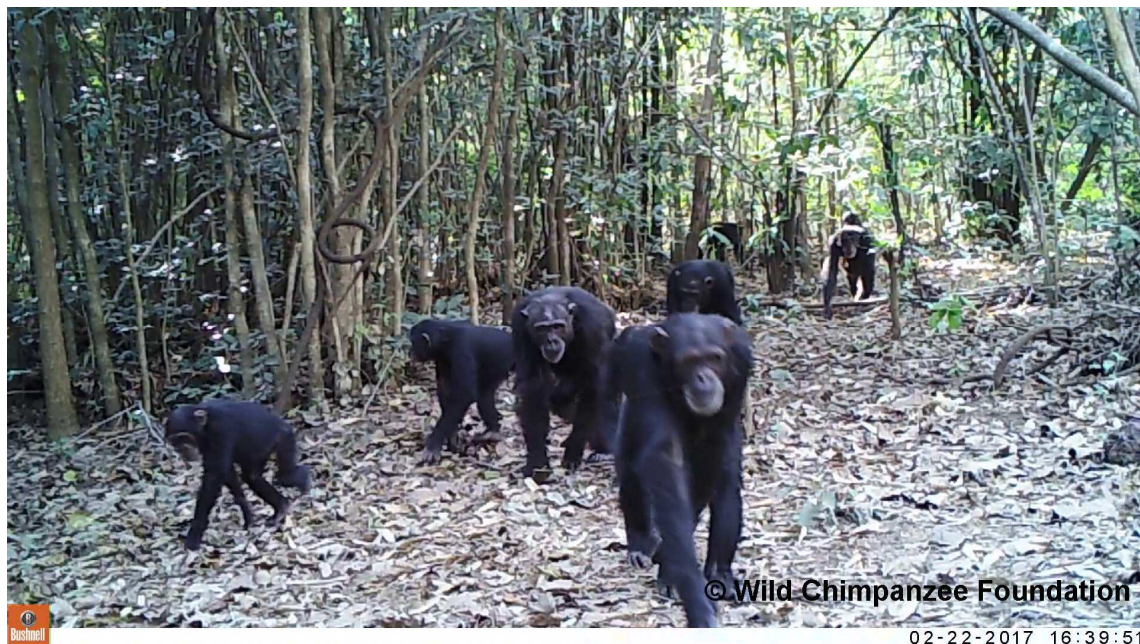
We presently analyse the sequences from the second round of the camera trap study, and may confirm the presence of leopards (*Panthera pardus*), West African chimpanzees (*Pan troglodytes verus*) and black-and-white colobus (*Colobus polykomos*) in all three study areas and the presence of 32 mammal species in 2017. This confirms the importance of the natural forest corridor between the two classified forests.



*Two leopards (*Panthera pardus*) captured by our camera traps in the Moyon-Bafing region*

Table 6: Camera trapping calendar in three zones of the Moyen-Bafing National Park

		CF Bakoun	Corridor	CF Boula	Total
# Number of cameras installed		9	11	10	30
Date of camera installation		23 au 26/01/2017	29 au 31/01/2017	02 au 04/02/2017	~
Round 1	Date	27/02 au 02/03/2017	03 au 05/03/2017	06 & 07/03/2017	~
	# Video	433	666	637	1736
Round 2	# cameras	9	11	11	31
	Date	30 & 31/03/2017	04 & 05/04/2017	04 & 05/04/2017	~
	# video	750	695	1185	2630
Round 3	# cameras	9	10	11	30
	Date	08 & 11/05/2017	12 & 15/05/2017	16 & 17/05/2017	~
	# video	746	540	1189	2475
Round 4	# cameras	9	10	11	30
	Date	13 & 16/06/2017	19 & 21/06/2017	22 & 25/06/2017	~
	# video	760	499	767	2026
Round 5	# cameras	9	10	11	30
	Date	14 & 16/07/2017	20 & 22/07/2017	23 & 25/07/2017	~
	# video	394	600	509	1503
Total # videos recorded		3083	3000	4287	10370



Chimpanzee group captured by a camera trap in the Moyen-Bafing region

2.4.2. Punctual search tracking

In November 2017, a research program executed by a PhD student and led by the Max Planck Institute of Evolutionary Anthropology in Leipzig, Germany set up a system of behavioral monitoring of the chimpanzee by camera traps. This program aims to test a new behavior not described yet (such as cracking of *Azelia africana* pods). Then, from November 2017 to

March 2018, 20 cameras were spread over 2 areas: the Bakoun Classified Forest and around the village of Laafa. A dozen of *Azelia africana* trees bearing fruits were found and some camera traps were installed near them. WCF plays a role of logistical supervision. A local team was composed and trained in December 2017 to provide monthly camera surveying services (video download, memory-card cleaning, battery replacement). An assistant (Millimono Lamine François) has been recruited by WCF to supervise this program daily.

2.4.3. Nest degradation study

To convert chimpanzee nest estimates into chimpanzee abundance estimates, two rates must be included in the calculation: the nest production rate and the nest degradation rate (Laing et al. 2003). Due to variations in yearly and regional climate conditions, it is necessary to update the nest degradation rate in the Moyen-Bafing National Park (MBNP) area. This ensures that changes in climate and weather are taken into account in our chimpanzee population estimates. The methodology required the team to identify fresh nests (one or two days old), marking the trees and drawing a diagram that helps to identify each particular nest during the re-visits (this was important, given that chimpanzees could subsequently make new nests in the same trees, and given that some trees already held multiple nests).

As such, in December 2015, a team visited the study area and identified 66 freshly built nests that were re-visited and examined at varying time intervals over a period of 45 weeks. In October 2016, the last re-visit was undertaken. The analyzed data gave a nest degradation rate of 269 days in 2015-16. In November 2016, a team began the new nest degradation study, to have continuous data on the fluctuating nest degradation rate. Presently, 92 nests are being studied, spread over five different geographic areas, representing two different habitats (gallery forest and wooden savannah). The gallery forests along the Laafawol and Bakouwol rivers contain 85% of the monitored nests. 73% of the observed nests since last November have already reached the final stage of degradation.



One of the 92 nests monitored during the nest degradation study. A tree that carries the nest is marked by a number and drawn.

Table 7: Degradation of nests recorded on 14 October 2017, according to the different stages, in 2 major types of habitat

Stages	Wooded savannah				Forest gallery			
	I	II	III	IV	I	II	III	IV
Number of nests	0	0	0	8	0	0	2	51
Total	8				53			
% of nest	0			100	0		4	96

Table 7 presents the respective stages of degradation of the different nests monitored during the penultimate follow-up (June 2017). Most of the nests recorded are in the gallery forest. Also, nearly 96% of the nests tracked in 2017 have reached their last stage of degradation. Table 8 shows that a dozen of tree species is used by the chimpanzee to build their nest. Two tree species are those mostly used, *Carapa procera* and *Anthonotha crassifolia*.

Table 8: Tree species used for nest building by chimpanzees

Tree species	Number of nests	% of nests
<i>Carapa procera</i>	25	23
<i>Erythrophleum guineense</i>	9	8
<i>Anthonotha crassifolia</i>	20	19
<i>Ficus sp</i>	2	2
<i>Manilkara multinervis</i>	5	5
<i>Pseudospondias microcarpa</i>	0	0
<i>Azelia africana</i>	2	2
<i>Daniellia oliveri</i>	1	1
<i>Lannea sp</i>	2	2
<i>Bridelia sapida</i>	1	1
<i>Uapaca senegalensis</i>	1	1
<i>Pterocarpus erinaceus</i>	10	9
NA	29	27
Total	107	100

2.5. Meteorological study

Since 2016, the rainfall in Laafa-Boubé has been measured using a rain gauge. In February 2017, a weather station with automatic recording of daily rainfall, humidity and temperature was installed there. The rain gauge could thus be moved to the village of Laafa-Kokoun. From the preliminary results and the increasing needs for meteorological knowledge on the entire park, the project will be reinforced in 2018 by installing new high-capacity professional rainfall systems, 3 hygrometry and temperature records on a North / South gradient in

addition to our equipment. Local staff under the direction of the supervisors will be recruited and trained in 2018 for maintenance and survey.



Meteorological station in Laafa-Boubé (left) and rain gauge in Laafa-Kokoun (right)

2.6. Hydrological study

Downstream from its source, the Bafing River, which runs through the MBNP, becomes Senegal River, forming one of the major rivers of West Africa. The source for the Niger and the Guinea Bissau Rivers are also found in this region which holds water reserves for 7 West African countries. Without ever being dry, the Bafing has a variable flow, depending on the season; there is an average ratio of 1 to 76 between low water (May) and high water (September). The figure below shows the hydrological network that spans the MBNP zone.

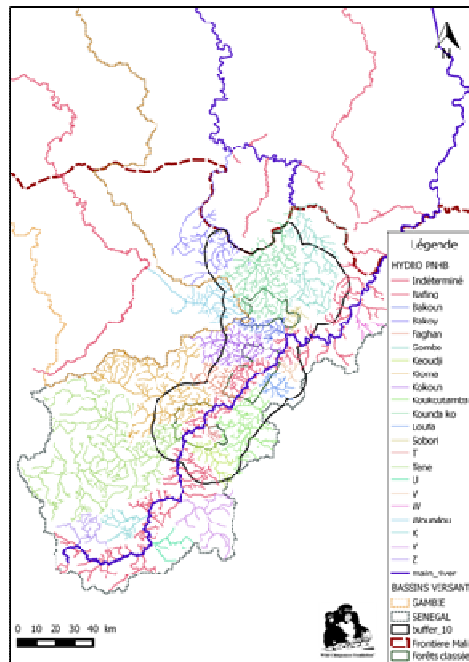


Figure 8: The hydrological network and its various catchment areas in the Moyon-Bafing National Park with the thick blue line representing the Bafing River

One aim of the MBNP creation is to improve the water security for both nature and the human population in the region. Changes in both ground and surface water supply carry severe impacts for domestic and agricultural usage, leading to major negative effects on food supplies, health, economic and environmental losses, and social upheaval (Pavel 2003). Thus, such impacts are complex, and can be a serious threat to achieving poverty reduction and sustainable development (Chika Urama & Ozor 2010). Therefore, we initiated a monitoring system to collect data on water levels to be able to follow the evolution of the situation during the implementation of the project.



Installation of the scales in Kokoun: 2. Scale placed in Kokouwol river; 3. Scale placed in Bendekourewol river; 4. Team from Kokoun observes the scales and takes data.

The MBNP contains seven classified forests; the water-level study is undertaken in the northern corridor region between the classified forests of Bakoun and Boula that serve as a wildlife corridor. Reforestation efforts for gallery and other types of forests in this area will aim to achieve greater habitat connectivity. The first set of scales was situated on the rivers Bakouwol, Dansocoya, Kalouwol, and Laffawol near the villages of Laafa and Dansokoya. Unfortunately, the Laffawol, Bakouwol and Dansocoyawol scales were quickly damaged during the rainy season (July 2016), with a 75% damage ratio (3 scales out of 4). So in the

beginning of the following dry season, a new set-up protocol was developed to improve installation conditions (places with relative protection against floating objects and water strength during the growing season). In April 2017, the 3 damaged scales were replaced and 2 additional scales were installed near the village of Kokoun (Bendekouewol river, originating south of Laffa-Boube, and the Kokouwol river, an important tributary of the Bafing river). Presently, six scales are spread over six rivers and three villages in the northern corridor.

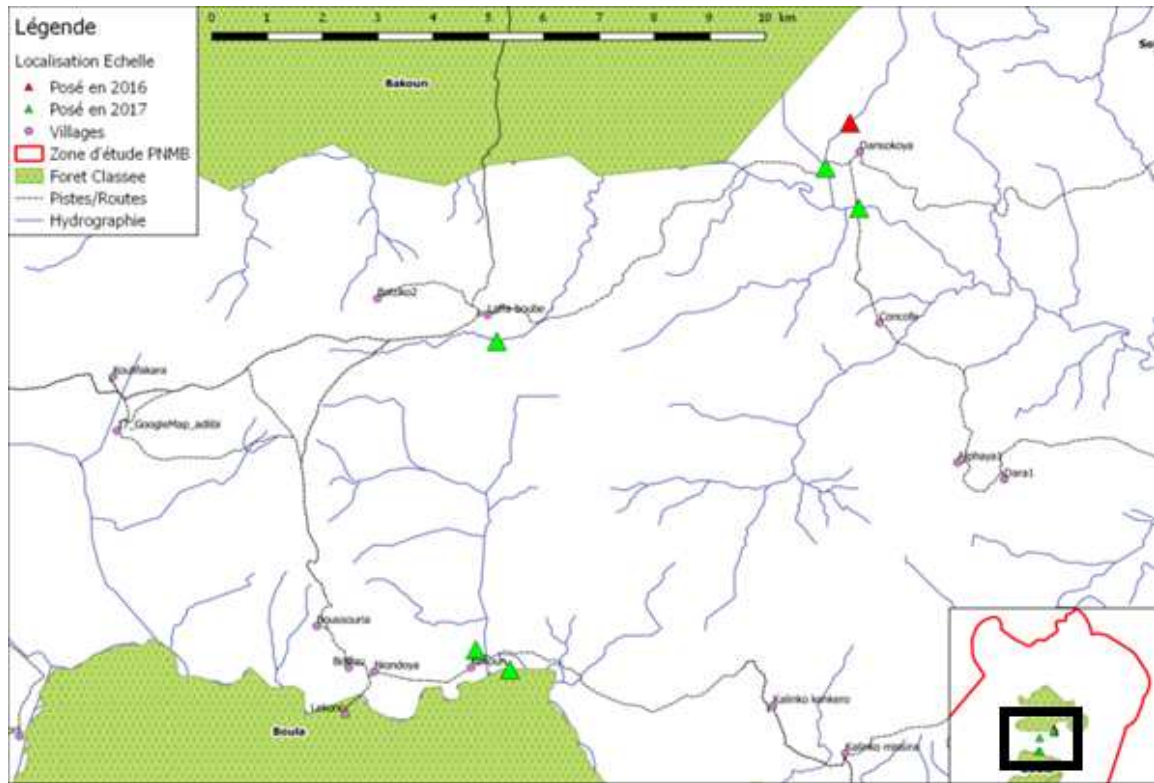


Figure 9: Location of the six scales in the northern forest corridor

At present, a total of 6 scales are spread over 5 rivers and 3 villages of the north corridor. The scales are daily monitored by 3 people. Given the results of 2017 and the difficulties of keeping equipment in good condition during the rainy season, the program will be completed in 2018.

2.7. Tree nursery

Restoring degraded gallery forests and sensitive areas by and for the populations is part of the sustainable forest management. A restoration allows most types of tropical forests to be regenerated due to their high stump sprouting capacity and seed potential at relatively low cost. Moreover, the empowerment of populations by giving them managerial control of natural resources helps to guarantee a more balanced and healthy ecosystem. With this in mind, two teams were sent into the field to collect ecologically/economically valuable seeds from gallery forests. Around 75,000 seeds were collected. In May 2016 a tree nursery was set up in the village of Laafa-Boubé situated on the river Bakoun and on the edge of a classified forest – an area with a high density of chimpanzees. Two local residents were trained in its management and 30,000 seeds were either potted or were placed in a germination site under their care. Choice of plant species depended on two factors: a policy of protecting natural resources with the objective of aiding the survival of the local fauna and the improvement of the living conditions of the local human populations.

Tree species selected for the nursery were two-fold:

- 1- For the survival of wildlife, we selected fruit trees likely to be consumed by wildlife or used for nesting etc. such as *Azelia africana*, *Daniellia oliveri*, *Dialium guineense*, *Cola cordifolia*, *Parinari excelsa*.
- 2- For the improvement of the conditions of the local population or valuable species in anticipation of economic-interest groups to profit from natural resources, we selected the following species, *Carapa procera*, *Azelia africana*, *Dialium guineense*, *Erythrophleum guineense*, *Isobertinia doka*.

The tree nursery was expected to produce at least 15,000 plants, but in the rainy season of 2016, the flooding of the Bakoun river next to the tree nursery washed away many plants. To compensate for this loss, assistants were paid to harvest about 20,000 new seeds in 2017. A total of 20,124 seeds were harvested and seeded in the nursery. Currently, the nursery comprises approximately 12,690 plants and we are expecting around 15,000 in 2018. Prospects for 2018 are to plant mature plants in a degraded forest area. A suitable season would be in August, during the rainy season.



Tree nursery of Laafa-Boubé with the small plants

2.8. Natural Assisted Regeneration in Senegal as an incentive for Guinea

Given the difficulties of reforestation through tree nurseries based on wild seed collections being not only time consuming, with a great loss through extreme dryness or heavy floods, we were attracted by a Natural Assisted Regeneration Project in Senegal by World Vision. Christophe Boesch and his Guinean team and members of the Guinean Office of Parks and Reserves were invited to visit this project from 11th to 18th November 2017. During these days 10 farmers including 1 woman of the three communities Mbeuleup, Kathiotte, and Ndignick were met and they exposed their experiences by visiting their fields and discussing their positive results such as an increased gain of harvest and, as many more trees will grow, more shade which is important for women working in the fields carrying their babies on their backs. Another important point, of course is to avoid or at least drastically reduce the use artificial fertilizers. The main draw-back, however, is the long regeneration phase of up to 4 years. A detailed report about this visit is available upon request and the resulting information is being analyzed with regard to its implementation in the Moyen-Bafing region.

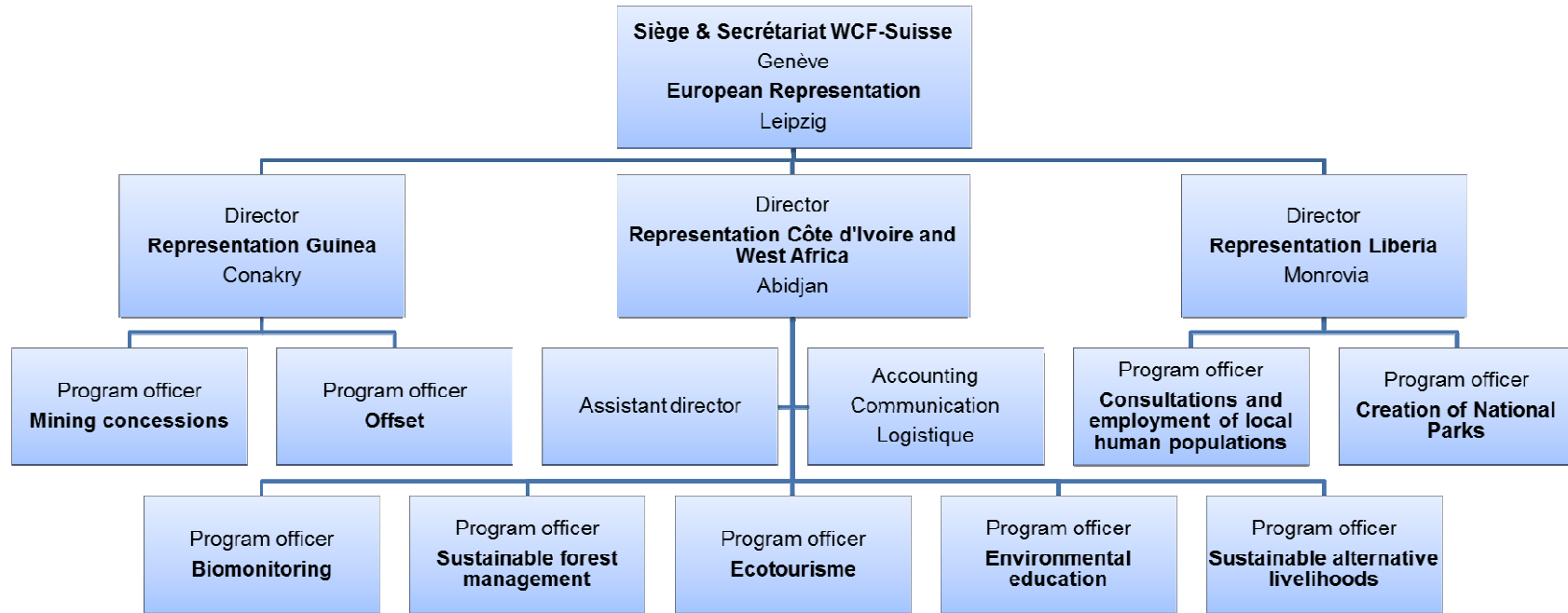


Christophe Boesch and his team visiting the World Vision's Natural Assisted Regeneration project in Senegal as an incentive for the Moyen-Bafing National Park in Guinea

2.9. Draft of the environmental and social management plan

For the creation of the MBNP it is needed to draft an environmental and social management plan (ESMP) gathering the information for efficient park management. In this context, the design of the management plan was initiated in October 2017 containing main issues of conservation and conservation threats, and long-term operational goals were set with success indicators for a budgeted operational plan. In December, a draft of the ESMP was written, taking into account that, so far, about 30% of the information was available.

3. Organizational chart



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