

WILD CHIMPANZEE FOUNDATION



Siège, Secretariat & Swiss Representation

69, Chemin de Planta
1223 Cologny – Geneva
Switzerland

Email: wcf@wildchimps.org
Internet: www.wildchimps.org

Head Office & European Representation

c/o Max-Planck-Institute for Evolutionary
Anthropology
Deutscher Platz 6
04103 Leipzig
Germany

Tel: +49 341 3550 250/200
Fax: +49 341 3550 299

West African Representation

23 BP 238 Abidjan 23
Côte d'Ivoire
Tel / Fax: +2251805/02252925
Email: abidjan@wildchimps.org

Guinean Representation

BP06, Sangaredi, pref. de Boke
Guinea Conakry
Tel: +22464007309
Email: guinea@wildchimps.org

ANNUAL REPORT 2012

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

Prepared by the WCF team

Contents

General conclusion and outlook for 2013	3
Executive Summary	4
1. Environmental Education.....	7
1.1. Theater tours.....	7
1.1.1. Côte d'Ivoire.....	7
1.1.2. Liberia	8
1.2. The newspaper "Paroles de Forêt" / "Forest Wisdom"	9
1.3. Club P.A.N	9
1.3.1. Côte d'Ivoire	9
1.3.2. Guinea	10
1.4. Development of supporting education materials.....	10
1.5. Proximity awareness	10
1.6. Activities with the CPE and OIPR in Côte d'Ivoire.....	11
1.7. School exchange German and Ivorian schools, and activities with the French schools of Abidjan	12
1.8. Celebrating 33 years of research and conservation of chimpanzees in the Taï National Park	13
1.9. Eco-museum of Banco National Park	14
2. Micro-projects.....	14
2.1. Community micro-projects	14
2.2. School micro-projects	16
3. Ecotourism	17
3.1. Taï sector	17
3.2. Djouroutou sector.....	17
4. Biomonitoring and surveillance support.....	18
4.1. Côte d'Ivoire	18
4.1.1. Biomonitoring activities in Taï National Park	18
4.1.2. Assessment of the conservation status of four national parks in Côte d'Ivoire	20
4.1.3. Biomonitoring activities in Comoé National Park	21
4.1.4. Law enforcement and anti-poaching patrols	22
4.2. Liberia	23
5. Sustainable use of natural resources	24
5.1. Sustainable management of classified forests in Côte d'Ivoire	24
5.2. Guinea GAC concession and offset	25
6. Monitoring and evaluation.....	27
6.1. Studies of reference for monitoring and evaluation of ecotourism projects	27
6.2. Sociological studies and consumption of bushmeat.....	28
7. Acknowledgements.....	30
8. References.....	31
9. WCF Team.....	32

Acronyms

Club P.A.N. – People, Animals, Nature

CPE - Cellule des Projets Environnementaux

FDA - Forestry Development Authority

OIPR - Office Ivoirien des Parcs et Réserves

TNP – Taï National Park

SODEFOR - Société pour le développement des forêts

FLEGT - Forest Law Enforcement, Governance and Trade

General conclusion and outlook for 2013

By the president of the Wild Chimpanzee Foundation (WCF) Christophe Boesch

The year 2012 was placed under the double sign of austerity due to the continuation of the world financial crisis on one side, and on the other side the pressing need to maintain our activities on the ground in the face of the continuous pressures on the wild populations of chimpanzees and their forested habitats in the three West African countries where we are active. These required additional efforts from all WCF members in Africa as well as in Europe, and without their exceptional devotion and motivation such a challenge might have seemed too high. I am therefore especially happy to propose this 2012 report that details our activities and success in such a particularly tense environment.

The main positive developments of the year 2012 were to a productive reinforcement of the visibility of our priority in the “Forest Complex Taï-Sapo” resulting in the open support of many of our national, institutional, and private partners as well as of some international donors. Therefore, the WCF is optimistic that the diverse and complementary activities that the WCF develops within this forest complex with our partners will expand in a near future, at a time where a revision of the Forestry Law is underway in Liberia, the creation of new protected areas are considered, and where Côte d’Ivoire is planning to join the FLEGT process of the EU. The detailed knowledge accumulated over the past years through biomonitoring on the distribution of chimpanzee populations in West Africa allowed us to concentrate some of our activities in those areas in these countries that are most suitable for the survival of the chimpanzees.

The perspectives for 2013 for the WCF will take in account the fact that the private sector active in sustainable activities are even more affected by the present financial crisis, forcing us to slow down our activities in this sector, while continuing our push towards activities bringing long-term added value in our priority zones, like ecotourism, improved law enforcement in protected areas, sustainable agro-forestry in forest corridors or agriculture practices with high ecological components. We hope also to reinforce our effective presence on the ground in the three countries where we are the most active, namely Côte d’Ivoire, Liberia and Guinea.

Executive Summary

In 2012, the WCF resumed activities at a steady rate following the post-election crisis in Côte d'Ivoire of 2011, which caused many delays. Below is a summary of the activities undertaken by WCF:

This year, the WCF continued to conduct **multi-media environmental education campaigns** throughout its priority area, the Taï-Sapo Forest Complex. Overall, we visited 7 villages in Liberia and 29 in Côte d'Ivoire with local and professional theater groups. We were able to educate more than 11.500 people about the conservation of chimpanzees and the importance of protecting their forest habitat.

The 12th edition of the "Paroles de Forêt/Forest Wisdom" was printed and more than 10.000 copies were distributed in Côte d'Ivoire, Liberia and Guinea.

Environmental education programs at schools around Taï National Park (TNP) / Côte d'Ivoire and at schools in the region of Boke / Guinea continued with Club P.A.N. (People, Animals, Nature). In 2011-2012, 754 children joined the Club P.A.N. in Côte d'Ivoire and 312 children in Guinea. Accompanied by the Cellule des Projets Environnementaux (CPE) and the Office Ivoirien des Parcs et Réserves (OIPR), the WCF worked with additional schools and organized interscholastic competitions, a school trip to the TNP, and three radio programs with 90 children from the three schools to discuss the issues of conservation at TNP.

The celebration of 33 years of scientific research and conservation of the chimpanzees in Côte d'Ivoire happened from 5-13 October 2012 at the French Institute in Abidjan. There it was officially announced that Prof. Christophe Boesch and Dr. Emmanuelle Normand will receive the medal of honour from the Ivorian government for their contribution to protect the nature of Côte d'Ivoire. The chiefs of the villages in the region of Taï gave a sculpture to Prof. Boesch to thank him for his support of the region. Because of all the publicity, media, press and activities during the celebrations not only the people in Abidjan were reached, but a large part of the Ivorian population. Around 1000 people have visited the French Institute in Abidjan and Banco National Park. 600 people signed the manifesto to protect wild chimpanzees.

The renovation of the **eco-museum in the Banco National Park** was done thanks to a donation made by the company SIFCA in 2012. A second building was constructed to serve as the audio-visual room. Due to the construction upgrades, visits to the park were limited this year.

In 2012, the WCF developed a new school **micro-project** in the village of Paulé-Oula, a grass-cutter farm. The snail farms in Sakré and Djouroutou were rehabilitated following the damage of infrastructure during the difficult periods in 2012. The school from Petit-Tiệmé has so far raised \$ 3,800 selling their grass-cutters and has used these profits to help rebuild their school canteen. Four fish farms have been renovated in four villages

around TNP: Vodelobly, Zagné, Ponan and Daobly. Due to the political crisis and the security situation in June 2012, some of the farmers have fled to Liberia leaving their farms to be completely abandoned. In 2012, the WCF built a barn over some of these fish ponds to increase the farm's profitability.

In 2012, the **ecotourism projects** of the WCF and its partners in **Taï and Djouroutou** have unfortunately not achieved everything that was planned.

In 2012, WCF and OIPR led the **7th phase of the biomonitoring programs across TNP in Côte d'Ivoire**. The results show an alarming decrease of wildlife in the park, with a probable decrease in abundance of keystone species: 47% in chimpanzee populations, and 68% for monkey populations between 2011 and 2012 phase. This shows the direct impact of the post-election crisis. Moreover, a decrease in the population of duikers (62%) and a (83%) decline in the population of monkeys have been observed between 2008 and 2012. A serious decline of one of the largest populations of chimpanzees in West Africa suggests the need to rapidly increase the presence of security officers in the park, especially in the areas of research and ecotourism which shelters more than five chimpanzee communities accustomed to human presence. Recent studies have shown a decrease in the frequency of poaching when there is a permanent presence of rangers, researchers and eco-guides. (Campbell et al. 2008, 2011, Köngden et al. 2008 Diarrassouba et al. in prep).

In the **forest of Grebo in Liberia**, the first phase of biomonitoring was conducted in collaboration with the Forestry Development Authority (FDA). Data was collected during these three missions for three weeks over three months. The analysis revealed the presence of a population of 412 chimpanzees, as well as the presence of elephants, pygmy hippos, monkeys and duikers. However, the data also shows that poaching is still an imminent threat to wildlife in Grebo. Following these initial results, a proposal to extend the park was recommended to the FDA.

Activities to **support law enforcement** inside the TNP were led in 2012 and coupled with data collection to help evaluate the effectiveness of research and ecotourism areas. Currently, the permanent law enforcement teams are concentrated in areas where there is still an abundance of animals such as the research site in Taï, and the ecotourism zones in both Taï and Djouroutou. Monthly patrols by Mobile Brigade of OIPR have been carried out but, nonetheless, a strong poaching pressure still weighs on the wildlife in these areas, partly due to their abundance of wildlife that attracts poacher from different villages around the park. Thus, we hope the increased efforts put in place for both ecotourism projects in the park will help further improve the protection of these chimpanzee communities.

The flora and fauna of the **classified forests of Goin-Débé and Cavally**, located in the west of Côte d'Ivoire, continue to suffer from the serious degradation of forest cover due to the unsustainable and often illegal agricultural practices (mostly cocoa) since 2009. The post-election crisis resulted in the lack of government enforcement and the arrival of

new human populations in the area has dramatically worsened the situation for the forest of Cavally. A field response by the Société de Développement de Forêts (SODEFOR) supported by WCF has been agreed upon at the beginning of December 2012.

In 2012, our 4th year of activity within the **GAC concession in Guinea** was executed according to plan and it provided important progresses concerning our ecological monitoring and some of the mitigation activities within the concession following the WCF recommendation to GAC in 2011. This year, however, was dominated by the strong reduction of activities on-site by GAC due to the international financial context and as a consequence some important joint WCF/GAC activities initiated in 2011 were reduced or postponed in 2012.

In 2012, new approaches to the **socio-ecological impact studies** were developed with an emphasis placed on the transboundary corridors: Taï and Djouroutou for Côte d'Ivoire (done in 2012) and Ziah's Town and Fishtown for Liberia (scheduled for early 2013). Data was collected in 41 villages and 505 people have been interviewed on the Ivorian side.

The **bushmeat trade study and survey** was conducted by an Ivorian student on local markets, as well as with families living in the areas of Taï and Djouroutou. The same approach will be employed in Liberia 2013 and a detailed report on the entire area will then be completed.

1. Environmental Education

1.1. Theater tours

1.1.1. Côte d'Ivoire

This year, theater groups met with villagers around the Taï and Banco National Parks. Both professional and amateur theater groups were able to inform the villages about the benefits of protecting chimpanzees, the parks, and the importance of corridors between protected areas, as well as the problems of deforestation. The amateur theater groups were from local schools in the area: Grabo, Djouroutou, Wonséaly and Agban-Attié. The famous, professional theater company, Ymako Teatri, also toured around both parks. More than 9,600 spectators attended these performances in Côte d'Ivoire (Table 1). It was not only the residents of the protected areas that have been sensitized in this way, but also ambassadors, representatives of various ministries and national institutions that attended these programs. The group from the school of Wonséaly brilliantly illustrated the importance of conservation efforts during a show when the Minister of Environment and Sustainable Development visited the TNP in March 2012. During this performance, the main character "Kouadio" first thought he was right in buying chimpanzee meat, ended up being the principal mediator for saving chimpanzees, after having been taken to see the chimpanzees in the forest by a scientist. In Abidjan, three shows were also performed by Ymako Teatri during the celebrations marking 33 years of research and conservation of the Taï chimpanzees.



Table 1. Number of participants at theatre performances in Côte d'Ivoire

National Park	Theatre group	Villages/sites	Spectators
Profession theatre group			
Taï NP	Ymako Teatri	Youkou, Gbarou, Djouroutou, Béoué, Karié, Paule-Oula, Gouléako 1, Taï, Gahably, Kéibly = 10 presentations	3,600
		1x Banco NP and 2x at the French Institute Abidjan = 3 presentations	450
Amateur theatre groups			
Taï NP	EPP Grabo August 2012	Soto, Siahé, Dbapêt (V1) et Grabo = 4 presentations	1,300
	EPP Djouroutou March 2012	Djouroutou, Para, Karié, Béoué, presentation during the JIEC = 5 presentations	1,800
	EPP Wonséaly 14 March 2012	Soubré = 1 presentation	45
	Lycée Taï March 2012	Taï, Kouadio Sangbékro, Zaïpobly, Ponan = 4 presentations	2,000
Banco NP	EPP Agban Attié Octobre 2012	Banco NP and French Institute Abidjan = 2 presentations	450
TOTAL		29 presentations	9,645

1.1.2. Liberia

The WCF also conducted a tour with an amateur theater group in Liberia around Sapo National Park and Grebo National Forest in collaboration with Eddie Theater Productions. In April 2011, we were able to reach seven villages (Gbeh River, Mantoaken, Nyanwriken, Tarworken, Gbawlieken Tuobo, Wissitoken, Geeken). During the tour, 1,950 people saw the play put on by the company “Cultural awareness for conservation from Putu Jawordee”.



1.2. The newsletter "Paroles de Forêt" / "Forest Wisdom"



In 2012, a total of 3,000 copies in English and 7,000 copies in French of the 12th issue of the WCF newsletter "Forest Wisdom" were distributed through our outreach programs, theatrical presentations, interactive exchanges, competitions, and Club P.A.N. (People, Animals, Nature). The celebration of 33 years of research and conservation of chimpanzees in Côte d'Ivoire in October 2012 was also a highlight in the 12th issue. The previous Newsletters (issues 1-11) were distributed as well to help the population of Abidjan read and learn about the WCF activities and chimpanzee conservation. All issues are available to download at:

<http://www.wildchimps.org/wcf/francais/files/awareness.htm>

1.3. Club P.A.N.

1.3.1. Côte d'Ivoire



In 2012, an extra-curricular education program was conducted around TNP. Given the security situation, the program on the west side of TNP has not been fully implemented because schools were cancelled during the month of April. Nonetheless, in Taï as well as Soubéré, 754 Club P.A.N. children were entitled to the parent's days in 2012. The CPE also took the initiative to successfully group neighboring schools together. Thus, in Taï, the six schools that lacked the lessons 6-10,

were grouped together two by two and the parents' day took place and competitions were held based on the first five lessons they had followed. The Club P.A.N. school year of 2012/2013 started from the 17th to 19th of September with a capacity building workshop for the supervisors, teachers and local assistants. A total of 15 schools with 658 children will participate in the program (previously 12 schools in Côte d'Ivoire). One of the most notable results from the workshop was the creation of 10 lesson-sheets harmonizing the animation of each of the 10 lessons for the teachers. These sheets are presently being used for the first phase of Club P.A.N. under the supervision Ouattara Dabila and with the help of local assistants Kouakou Adrien and Gbla Georges Gnolou.



1.3.2. Guinea

The Club P.A.N. program was established in Guinea in 2010 by the WCF and was ongoing in 2012 with the financial help of the Guinea Aluminium Corporation (GAC) and the help of the Ministère de l'Enseignement Pré Universitaire et de l'Education Civique. During the school year 2011/2012 the children from the villages Dubhi, Mobhi, Thiankountioli and Boulléré in the region of Boké / Sangaredi had the possibility to join the 10 Club P.A.N. sessions to learn more about the flora and fauna of their regions' ecosystems. During the school year 312 children attended the program. The full program was held with teacher trainings, pre-and post-evaluations, 10 lessons and parents' days during which the children performed their theatre plays.



1.4. Development of supporting education materials

In 2012, with the help of an intern and an Ivorian graphic artist Koffi Desiré, the WCF has developed new educational tools for the villages. Posters and stickers with clear conservation messages such as "No poaching!" or "I promise to protect chimpanzees!" were produced and posters with images of the conservation of the Taï-Sapo corridor in years to come were also made and have been distributed widely.



1.5. Proximity awareness

The WCF began a proximity outreach program in villages in the Taï-Sapo area to improve relationships with the local people and to inform them on the corridor project. During the visits, WCF animators showed posters and films about chimpanzees and the WCF projects.



1.6. Activities with the CPE and OIPR in Côte d'Ivoire

An eco-vision caravan was led to train the members of the village associations for conservation and development in outreach techniques. It took place east of TNP from the 20th to 28th of January 2012 in the villages of Doba, Broukoffikro, and Tchétaly with 54 future members attending.

Two inter-school competitions, in Djapadji and Karié, were held on the 26th of February and the 7th of March. The objective was to raise awareness for the preservation of the TNP through environmental education in schools. School-group winners from Djapadji told the story of a poacher who killed the last remaining lizard in the forest in order to heal his son from an illness. It was possible to salvage the lizard by using just the excrement, which would have been sufficient to save his son's life. Instead, he killed the last remaining lizard and thus lost its medicinal properties forever. The winners from the school of Karié wowed the jury by their incantations to exorcise the evil from the barren earth land and sterile flat forests left in the canton of Patokloai.



In February 2012, the 10 winners of the school competitions 2011 visited the TNP in Djouroutou, where they were able to climb Mount Niénokoué, hoped to see the chimpanzees, walk along the trails scattered with informative signs about the various animals found in the forest, and discover the various canopy layers.



Environment days were celebrated in Taï from the 4th to the 6th of June 2012. These days of information, education and communication brought together more than 4,000 spectators and participants. It was marked by a huge parade of local associations and educational organizations and ended with speeches about the importance of the TNP.

Three radio programs were made with partners from the schools of Tabou, Buyo and Taï with 30 students each. The programs dealt with the dangers of the extinction in the forest

and the decline of chimpanzees. Another program was held on the Soubré radio station "Yackoi" during which the regional director of education and Capt.. YAPI Fabrice (representing the Director of TNP) was interviewed. They discussed the contribution of the schools through environmental education for sustainable conservation of the TNP. On March 14, the Minister of Environment and Sustainable Development and Urban Safety attended a Club P.A.N. and theater event. He was very impressed by the animation sequence of Club P.A.N. and the play "They are so close to us!" performed by the school amateur theater group of Wonséaly, Amaragui and Soubré.



1.7. School exchange between German and Ivorian schools, and activities with the French schools of Abidjan

The school exchange program between German and Ivorian children received new motivation because two Ivorian coordinators where selected: Gbla Georges Gnolou and Kouakou Adrien. They help with the distribution of the letters and organize the answers with the Ivorian exchange partners. In 2012, about 1000 letters, several posters and small gifts were exchanged between Germany and Côte d'Ivoire, on both sides there are more than 1000 children involved each year.



WCF and its partner, the CPE, participated in the "Festival of books and science" organized by the French schools in Abidjan called "Read the earth, a living world" from the 15th to 30th of April 2012 in Abidjan. About 1,000 students from the French schools were able to participate in interactive discussions and explore Banco National Park, where they were presented with the elements of a tropical forest and the concept of biodiversity. The WCF film about chimpanzees was screened in Banco National Park, the

library in Plateau, in the library "Books for All" in Adjamé and the Médiastore Cap Sud located at Marcory. Discussions followed the movie screenings to help the students better understand the behavior of chimpanzees.



1.8. Celebrating 33 years of research and conservation of chimpanzees in the Taï National Park

The celebration of 33 years of research and conservation of chimpanzees in Côte d'Ivoire



was organized by WCF, Swiss Centre for Scientific Research, Max Planck Institute for Evolutionary Anthropology and OIPR and took place from the 5th to the 13th of October 2012 at the French Institute of Côte d'Ivoire in Abidjan. The main objective was to disseminate the results of the studies on chimpanzees, show the threats to this species and its habitat, and to stimulate a national commitment to

conservation by signing the manifesto "to protect chimpanzees and the Taï National Park." The celebration started with an opening ceremony on 5 October 2012, chaired and sponsored by three ministries: the Ministry of Higher Education and Scientific Research, the Ministry of Water and Forests, and the Ministry of Environment and Sustainable Development. Among the guests were the Ambassador of France, Switzerland and Germany, several embassy advisers, directors of NGOs active in the field of environment, businessmen, researchers, representatives of different ministries such as the Ministry of Agriculture, the Ministry of Foreign Affairs, the Ministry of National Education, the Ministry of Integration, representatives of the authorities of the District of Abidjan, the local authorities from around the TNP, journalists and students.

The weeklong celebration conference was open to the public so that they could have a chance to hear about the live of chimpanzees and monkeys, the impact of the conservation on parks and reserves, watch film presentations about chimpanzees and monkeys, and attend the theatre pieces performed by Ymako Teatri and amateur theater groups.

Apart from the French Institute of Côte d'Ivoire, celebrations were also held in Banco National Park with the participation of school groups and Ymako Teatri. Visits to the eco-museum and guided walks in the forest were offered. On the 13th, we hosted the closing ceremony held in Banco National Park. Several embassies such as China, Brazil, India and Switzerland among others were represented. There it was officially announced that Prof. Christophe



Boesch and Dr. Emmanuelle Normand will receive the medal of honour from the Ivorian government for their contribution to protect the nature of Côte d'Ivoire. The chiefs of the villages in the region of Taï gave a sculpture to Prof. Boesch to thank him for his support of the region. With the local media we were able to reach the population of the whole country. Around 1,000 people visited the French Institute and Banco National Park. More than 600 people have signed the manifesto to protect chimpanzees.

1.9. Eco-museum of Banco National Park

The renovation of the eco-museum in the Banco National Park was done thanks to a donation made by the company SIFCA in 2012. A second building was constructed to serve as the audio-visual room. Due to the construction upgrades, visits to the park were limited this year.



2. Micro-projects

2.1. Community micro-projects

This year, the WCF received financial support from the Swiss Embassy in Côte d'Ivoire to revive the activities of four fish-farms that had been abandoned in 2011 due to the post-election crisis in Côte d'Ivoire. With their support, we focused our attention on these four farms located near the trans-boundary ecological corridor of Taï-Sapo in the village of Daobly, Ponan, Vodelobly and Zagné, in a region where the illegal trade in bushmeat

between Liberia and Côte d'Ivoire has been identified. The fish-farms in these villages had the advantage that rehabilitation of more ponds per farm was possible to maximize their profits and thus to set an example for other farms in the region. Additionally, an innovative approach of integrating fish farms together with chicken farms was used with the aim of reducing the cost of food as well as providing an additional source of income. One of the villages was selected to become a local point for the production of fry to help provide for the high demand in the region.

Between January and April 2012, the following fish-farms were concerned:

- in Ponan, six ponds were rehabilitated and an additional one created
- in Daobly, six ponds were rehabilitated and another created
- in Vodelobly, seven ponds were rehabilitated, three other ponds also exist and can be upgraded with enough funding in the future
- in Zagne, four large ponds were rehabilitated, they are twice as large as the other farms and four other ponds are intended to be upgraded in the future

Between the months of February and March 2012, two chicken coops on stilts were constructed over each of the ponds. These huts can accommodate 60 chickens, which in return can produce 120 chickens every 3 months. All of the ponds in Daobly, Vodelobly and Ponan were stocked with 1000 fry of carp (*Tilapia nilotica*), and three ponds in Zagne were stocked with 2000 fry of carp. The farm in Zagné was chosen to be the site of production of fry to supply other farms in the future, thereby reducing transportation costs and risks of loss of fry during transportation. To start with, each pond in Zagné received 450 adult carp for reproduction which were originally purchased in Daloa (300km away).

WCF members have been following the development of the fry production program and periodically recording the weight of the fish to monitor the efficiency of the farm based on three different feeding methods which are then compared:



1. Some ponds have fry that are fed with recommended industrial food. Their growth will be used as a reference.
2. The fish ponds associated with the chicken coops receive no additional food. Deposits from chicken droppings and remains of food that the chickens eat are used to fertilize the ponds, thereby producing plankton, a natural food source for tilapia.
3. Some ponds have composts placed nearby and corn meal and local rice is given daily.

The first measurements indicate that the initial growth of the fry is faster in ponds combined with the chicken coop.

Following the instability in the area related due to the illegal infiltration of the Cavally Classified Forest, the ponds were abandoned in April. During this time, many of the managers and farmers fled to Liberia. Nonetheless, the farm in Daobly was able to sell their chickens and retained the profits to buy new chicks and also developed a cornfield

for extra feed. However, the first production cycle generally did not achieve the expected results. Due to the abandonment of the farms during the instability, many of the farms needed work to be done again. The situation had also discouraged the communities. Two meetings were held in November to re-motivate the groups working on the farms, under the supervision of the respective sub-prefects in Taï and Zagné. The inventory was done, the farms cleaned, and a training workshop was held in December 2012. At the request of the Sub-Prefect of Taï, more women were also involved in the farm in Ponan in light of the positive experience of the Daobly site which was led by women. The year 2013 will be a decisive year to complete a full production cycle and to encourage the people to invest in more livestock.

2.2. School micro-projects

WCF has been working with school micro-projects since years (Table 2). In order to help promote alternatives to the consumption of bushmeat around the TNP, WCF has helped build a new grass-cutter farm in Paulé-Oula and has also helped with the rehabilitation of snail farms in Sakré and Djouroutou, that were damaged due to the post-election crisis. The grass-cutter farm in Wonséaly was also rehabilitated, where several adult grass-cutters had died from poison from corn that was bought. To overcome this problem, the school has now developed a small field of corn and other schools have now been advised to not use food bought from outside. The CPE coordinators were trained to supervise the farms, and an awareness campaign was undertaken to improve management.

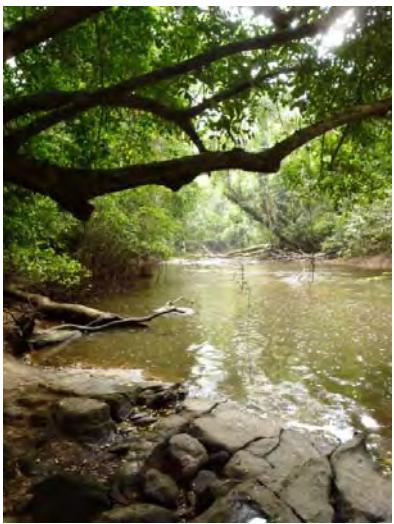
Table 2. Summary of school micro-projects around the TNP

Type of farm	School	Date created	Stock	Observations
Grass-cutter	Petit Tiémé	2006	30	Grass cutters sold in 2012
	Paulé-Oula	2012	10	Built new in 2012
	Taï	2012	25	Some grass cutters sold
	Wonséaly	2010	9	Rehabilitated in 2012
Snail	Djouroutou	2011	100	Rehabilitated in 2012
	Sakré	2010	100	



3. Ecotourism

3.1. Taï sector



As part of the project entitled "Conservation and development through ecotourism in the Taï National Park," the activities of the WCF and its partners for the year 2012 have unfortunately not achieved everything planned. Nevertheless, taking into account the specific context of western Côte d'Ivoire this year, five major factors deserve to be mentioned. In January and March of 2012, the Ambassador of Switzerland, Dr. David Vogelsanger, proved to be the bearer of hope not only for the sustainability of the project but also for the people of Taï and surrounding villages. He went to various sites to assess the potential for ecotourism and during his second stint, led by a team of eco-guides; he entered TNP to take part in Red Colobus tracking and stayed at the forest camp.

On the 21st of February 2012, the Mayor of Taï granted 2.5 hectares of land for free to the project, located on the River N'zé at the entrance of the town. We hope in the future to build tourist accommodations there. On 9th of March 2012, a partnership agreement was signed between OIPR and WCF, which defined the mutual roles in the cooperation of ecotourism project.

In March 2012, a new survey to find a more suitable territory for ecotourism began. Four phases of prospection were led from April to June, and the results of the survey confirmed the presence of a great array of flora and fauna very suitable for tourism, although, not very many signs of chimpanzees. The results from the surveillance project in the area showed a decrease in poaching and an increase in wildlife (see chapter 6.1.1.4). This led us to decide to conduct a new survey just north of the research area so as to allow both areas to benefit from a permanent presence of forest guards.



In October 2012, new prospection missions were launched to the south of the previous zone, and closer to the village of Taï. The full inventory will be completed in January 2013 and we hope to determine the status of the forest after having collected data on the presence of chimpanzees and other primates, illegal human activities and old dirt roads which could be rehabilitated.

3.2. Djouroutou sector

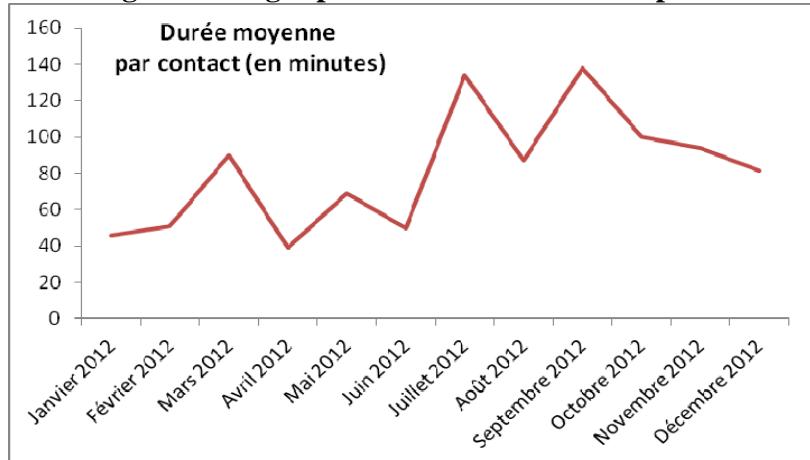
In collaboration with OIPR a new work program was established to facilitate the habituation of chimpanzees. First, a new method of data collection was put in place with a new data collection sheet. The identification of individuals is a priority for the

habituation process since it will give us a better idea of the size of this chimpanzee group, their range and demography. All indices of poaching (gunshots, poacher's camps, snares, trails, etc.) are also listed in these data sheets, which allow, on one hand, agents of OIPR to target their surveillance activities more accurately, but to also quantify the evolution of poaching in the territory of the chimpanzees.

Throughout this year, we have observed an improvement in the work carried out by the guides and advancement in the habituation process (Figure 1), with the chimpanzees being nested almost every night and followed throughout the day. During the last three months of 2012, the chimpanzees have strayed away from their normal territory and have been seen frequently far away across the Hana river.



Figure 1. Average time length per contact with the chimpanzees in minutes



4. Biomonitoring and surveillance support

4.1. Côte d'Ivoire

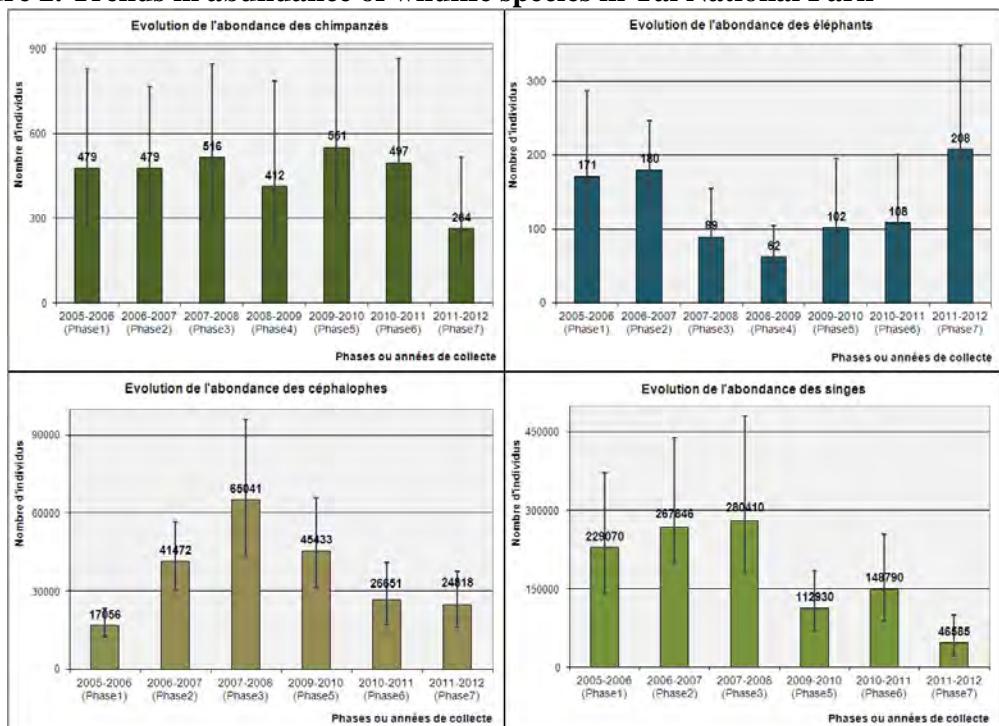
4.1.1. Biomonitoring activities in Taï National Park

In 2012, the 7th phase of biomonitoring in TNP was led from January to July 2012, with five different teams supervised by two officers of the OIPR and WCF. The beginning of data collection was delayed due to our equipment having been stolen during the post-election crisis, which was replaced in 2011. In total, 367.848 km of transects were trekked. The encounter rate of direct observations of animals was 3.81 observations per kilometer. In total, bovids were the most observed group of species (64% of observations) while observations of chimpanzees, elephants and monkeys were 1%, 4% and 2%.

The animals observed directly were mostly in the areas of Taï and Djouroutou. Overall, when compared with results from previous phases, the average estimates of the

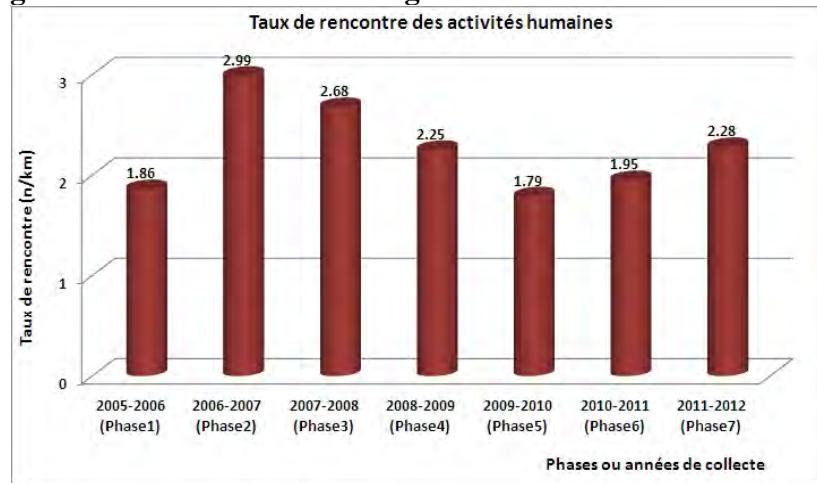
abundance of chimpanzees, monkeys and duikers have decreased significantly. Bovids are present throughout the park, with highest densities found in the western and central areas of the park. The abundance of chimpanzees has greatly decreased (47%) in 2012 (Figure 2), which has been the largest decline since the beginning of the program in 2005. As for the monkeys, the decrease is the second largest since the beginning of the program. The decrease between phase six and phase seven is 69% and between phase three and phase seven is 83%. This decrease is dramatic for TNP which is famous for its spectacular monkey population. For duikers, the decrease in phase six is confirmed with a population decline of 62%. Finally, the elephants appear to have been the least affected, with an estimated population of 208 individuals. However, a strong fluctuation in the elephant population has regularly been observed since the beginning of the program, which cannot be explained by a simple repopulation or increased hunting.

Figure 2. Trends in abundance of wildlife species in Taï National Park



Outside of the Taï sector, we found that the number of illegal human activities has increased in all sectors of TNP, especially in the east and south. Encounter rates of poaching signs is up 2.09 per km, and an encounter rate of illegal activities representing threats to plant species is at 0.20 signs / km. The encounter rate of all illegal activities has increased, between phase six (1.95 signs / km) and phase seven (2.29 signs / km) (Figure 3). Biomonitoring results were discussed and validated during a workshop with the OIPR in December 2012. We stressed the urgent need to strengthen surveillance in the park with the aim of achieving again the aggression index of 1.79 / km, the lowest the park has seen back in 2009. Budgets for running the park in 2013 have thus been allocated slightly superior to the one of 2009 and towards keeping the permanent presence of guards in the identified priority areas (research and ecotourism).

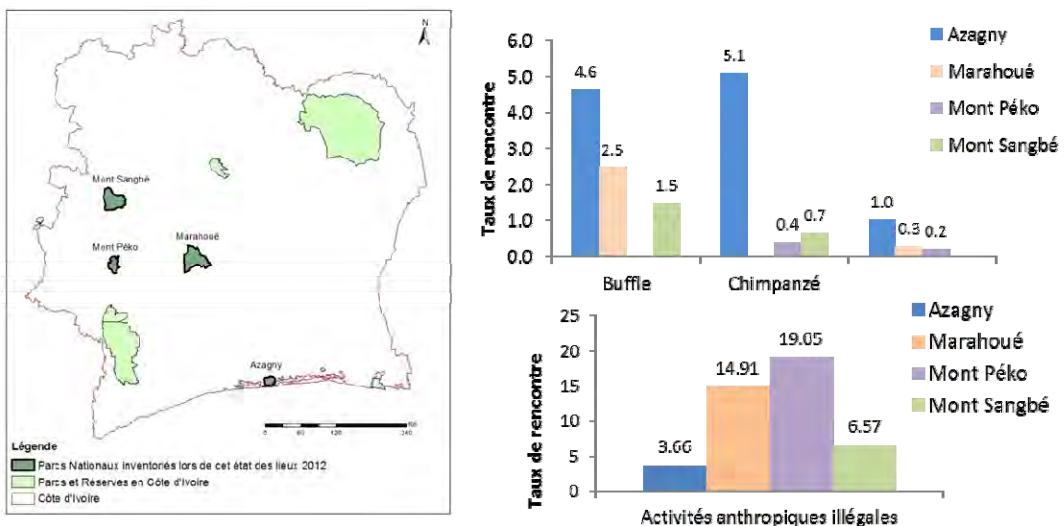
Figure 3. Encounter rates of illegal activities in Taï National Park



4.1.2. Assessment of the conservation status of four national parks in Côte d'Ivoire

To obtain information in a short period of time and with limited resources, WCF together with Afrique Nature (an international conservation NGO) conducted four rapid assessments between 27/04/2012 and 06/09/2012 in four national parks that have not been surveyed in recent years. These parks were: Azagny NP, Marahoué NP, Mont Péko NP and Mont Sangbé NP. Results showed that Mont Sangbé NP has the best potential as it has the greatest diversity in species, including chimpanzees, though encounter rates for large mammals was higher in Azagny NP, which included chimpanzees, elephants and buffalo. Encounter rates of illegal human activities were highest in Mont Péko NP (19.05 signs / km) and Marahoué NP (14.91 signs / km) (Figure 4). Habitat destruction due to agricultural activities was abundant in all parks.

Figure 4. Encounter rates of species of fauna and illegal activities in 4 parks



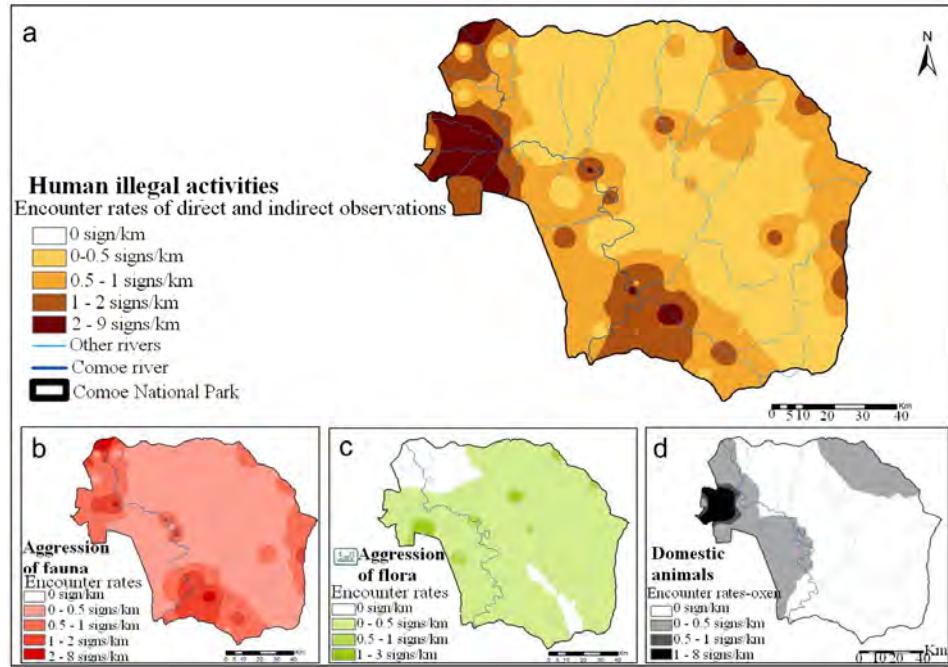
4.1.3. Biomonitoring activities in Comoé National Park

A pedestrian inventory was done in Comoé National Park from March to August 2012 to assess the current state of biodiversity and illegal human activities. In total, 296 km have been surveyed. Results showed (88.22%) direct and indirect observations of bovids and (4.35%) illegal human activities. Of the 3,894 data points for bovids, only 83 were direct observations. Hartebeest were the most observed animal followed by bushbuck and then duikers. Buffalo, antelope and waterbuck were also observed, but in small numbers. The presence signs for monkeys were few (1.35 indices/10 km or 0.95% of observations) and only one chimpanzee nest was found off transects. Similarly, only two footprints of elephants were found throughout the park. The southwest of the park holds most of the biodiversity. Direct observations of cattle represent only 1% of all observations but 21% of direct observations of mammals. During the survey, 65.12% of human activities observed were either poaching or fishing (Figure 5). Poaching is most intense in the northwest and southwest of the park, while the farms were observed in the west, as were observed in 2010. Although the park still holds a diversity of species, their abundance is very low and particularly alarming for flagship species such as elephants and chimpanzees.

The law enforcement and awareness strategy for Comoé National Park by OIPR needs to be adapted to the current threats. Our report recommends:

- To rehabilitate the access trails to put in place effective surveillance in the park.
- To ensure enhanced law enforcement programs in the southwest are present in places of high biodiversity in order to ensure wildlife repopulation.
- To continue the rehabilitation of the park by removing all the plantations and grazing activities of domestic animals.
- And to promote the establishment of a seasonal biomonitoring program.

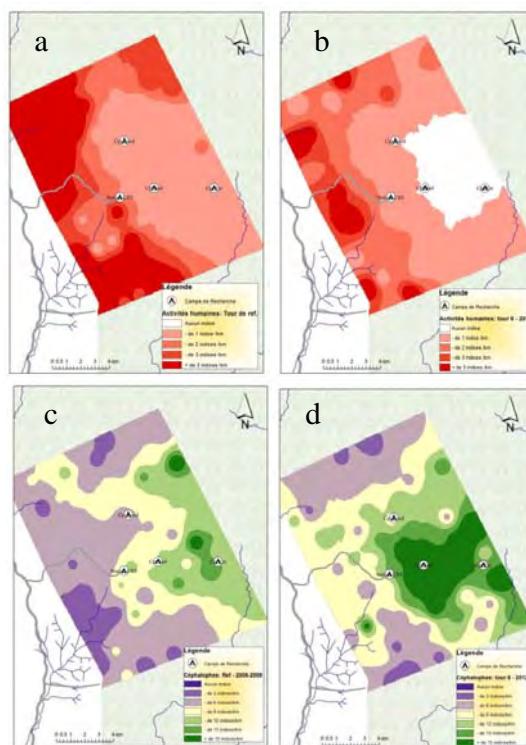
Figure 5. Spatial distribution of illegal activities in Comoé National Park



4.1.4. Law enforcement and anti-poaching patrols

In 2012, the WCF has continued the project "Improving research on biodiversity in the TNP, by controlling the effects of illegal human activities", funded by UNDP and FISDES, in collaboration with OIPR. The objectives are to maintain a permanent presence of forest guards in the research area, to monitor the abundance of species and illegal activities, and finally to determine the factors that influence the distribution of animals. Between January and November 2012, 164 days of patrols have been led in the research area by an average of 4 agents. Several indices of aggression were observed and some poachers apprehended. In conjunction, trained teams collected data on wildlife and illegal human activities on 158 transects, each one km long in the same zone. The first results show that in four years, the encounter rate of indices of aggression has decreased from 2.176 to 0986 indices / km in the research zone ($t = 3653$ df = 129 $p <0.001$), corresponding to the same period of time during which poaching significantly increased in the rest of the park due to the post-election crisis. Repopulation of species with short reproductive cycles has also occurred in areas where poaching has decreased (Figure 6). There is no significant variation in the chimpanzee population in the area ($t = -0,885$, df = 147, $p = 0378$), despite a significant reduction observed by researchers in 2009 after a respiratory illness that killed many of individuals in the habituated groups. Regarding the duikers, encounter rates increased significantly between the reference phase (index 6.262 / km) and the phase of 2012 (index 9095 / km) ($t = 3400$ df = 126 $p <0.001$). It is essential that this program continues to further quantify the benefit of a permanent presence of guards on species with longer reproductive cycles, such as chimpanzees.

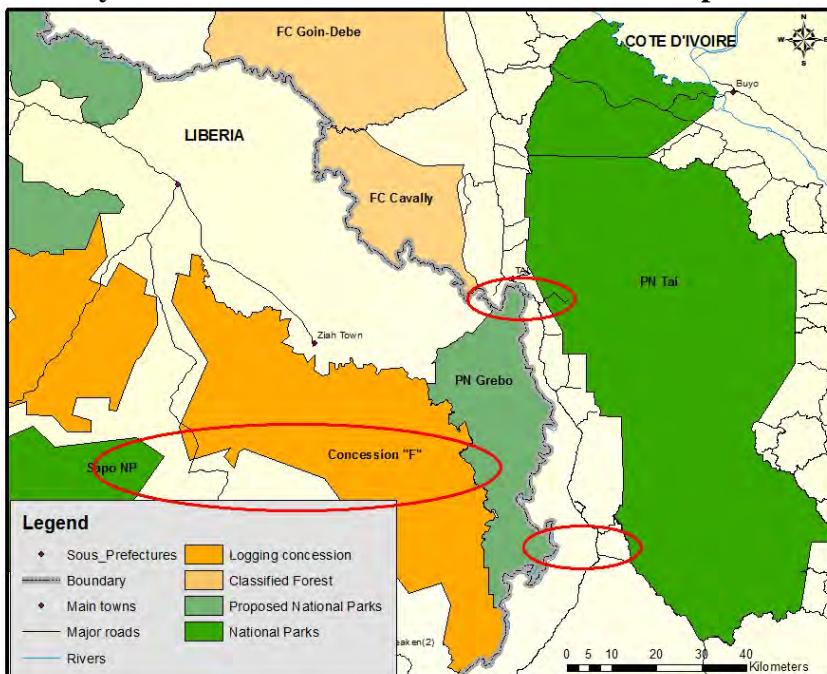
Figure 6. Survey data from 2009 and 2012: from a) to b) shows the decrease in illegal activities in the periphery and no evidence of illegal activity observed in the center of the research zone in 2012. From c) to d) shows the repopulation of duikers in the center of the research zone in 2012.



4.2. Liberia

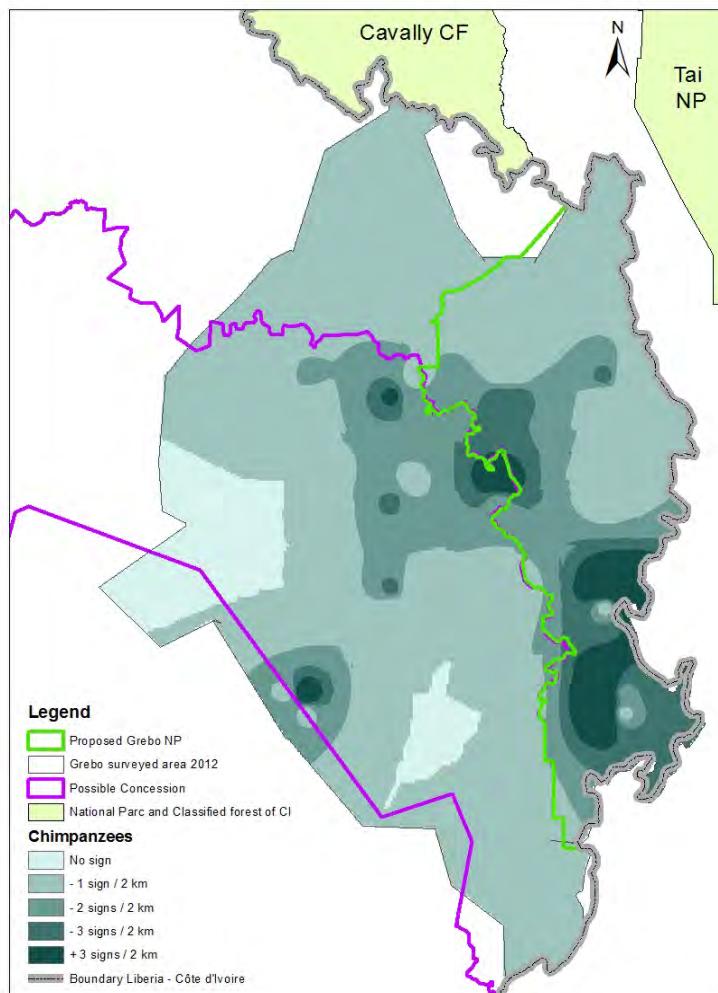
In 2012, the WCF and the Forestry Development Authority (FDA) conducted the first complete survey of chimpanzees and other large mammals of Grebo National Forest in the southeast of Liberia. This forest lies in the heart of the Taï-Sapo Forest Complex, (Figure 7), a hot spot of biodiversity and a conservation priority for West Africa.

Figure 7. Priority areas of corridor conservation in the Taï Sapo Forest Complex



Training in data collection methods preceded the survey for the FDA and local communities. The field teams collected over 4,500 data points on chimpanzees, other mammals and human activities along 178 km of transects. The encounter rate of all activities (feeding sites, vocalisations, nests) of chimpanzees in the park was 4.26 signs per 10 km. The density of chimpanzees was estimated at 0.111 per km² and a total population of chimpanzees was estimated at 412 individuals with a 33.7% CV (Figure 8). Much of this chimpanzee population (55%-60%) is within the area proposed to become a national park. Chimpanzees were the most frequently encountered species of primates across the eight different species found. Other large mammals included eleven species of bovids, elephants and pygmy hippos. Nevertheless, the region remains threatened by poaching, mining, agriculture and logging. Hunting is most prevalent in the logging concession and in the south of the park, where the majority of chimpanzees were located. In general, the location of the proposed protected area is well situated as it holds the largest amount of endangered species, namely elephants, Jentink's duikers and pygmy hippopotamuses and 55% to 60% of the chimpanzee population. Nonetheless, it is recommended to reassess the limits of the proposed park to incorporate the areas in the south holding the majority of the monkey populations, including the red colobus, black-and-white colobus, and Diana monkey and in the northern area contiguous to the Cavally Forest in Côte d'Ivoire, where leopards and golden cats were observed five times.

Figure 8. Spatial distribution of chimpanzees



5. Sustainable use of natural resources

5.1. Sustainable management of classified forests in Côte d'Ivoire

Regarding the eco-guard program in the Ivorian classified forests, the beginning of the year was very successful, with missions led between January and March 2012 in the Cavally Classified Forest and the southern part of the Goin-Débé Classified Forest. The illegal occupants left the west and north of the forest, but still continued to clear the forest in the east. The Director General of SODEFOR has assured WCF that the aspect of security in the forests is a priority. SODEFOR has now programmed a mission for January 2013 to take back control of the forest. WCF will continue its program for the classified forests once the security situation in the forest has returned to normal. In May 2012, the management plans for both classified forests were presented and finalized at a stakeholder workshop. In August, they were then presented to the minister, other donors, universities, NGOs and the Ivorian press.

5.2. Guinea GAC concession and offset in Guinea

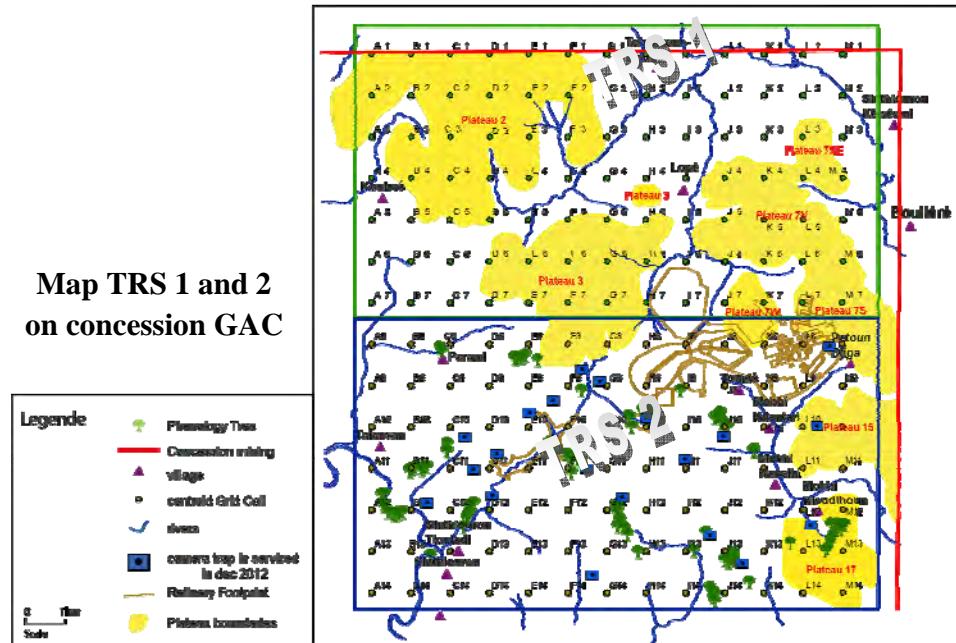
Our 4th year of activity within the GAC concession was executed according to plan and it provided important progresses concerning our ecological monitoring and some of the mitigation activities within the concession following the WCF recommendation to GAC in 2011. This year, however, was dominated by the strong reduction of activities on-site by GAC due to the international financial context and as a consequence some important joint WCF/GAC activities initiated in 2011 were reduced or postponed in 2012. The importance to continue this project cannot be emphasized enough as our work with the local communities has proved very successful and the expectations have grown accordingly. The presence of the WCF team on the ground has been totally accepted and is seen as a perfect way to integrate ecological and social concerns into the GAC development of the project. The increasing precision of our knowledge on the chimpanzee populations within the concession not only allows us to quantify the residual negative impacts of mining efforts, sensu IFC Standard 6, but permitted us to plan in detail the best way to implement the proposed mitigation activities and develop our monitoring tool for the time the mining operation would start on the ground. The chimpanzee population within the concession seemed to be stable and we could estimate it over the 4 years at 176 individuals with a small confidence interval of 9.3% (Table 3).

Table 3. Abundance and density of chimpanzees in the GAC concession

	2009	2010	2011	2012	Total
Effort (Km)	536.98	347.40	339.27	348.41	1572
Density (ind./sq.km)	0.16	0.18	0.21	0.14	0.17
Abundance (indiv.)	166.00	185.00	220.00	142.00	176
%CV	18.18	19.83	19.12	19.26	9.3

The distribution of the chimpanzees within the concession is confirmed to be widespread and that they are found everywhere except for areas too close from the main road. The temporary research site between plateaus 2 and 7 allowed us to identify some members of potentially more than one chimpanzee community, based on visual identification through video clips taken with our camera-trap method (Figure 9). Analysis of those data will start soon and we can then have a better knowledge of the existing chimpanzee population structure of chimpanzees within the concession. Data confirm an important impact of the human population on the environment within the concession, with a possible increase in tree cutting in some areas and still some level of hunting.

Figure 9. Map of the temporary research sites (TRS), the green line shows the TRS Sangaredi 1, that was working between February 2011 and July 2012, the blue line shows the TRS Sangaredi 2, created in August 2012 which will last till August 2013, TRS Sangaredi 2 shows the distribution of the camera traps



For the offset project a first international meeting was held in Washington DC in January 2012 on the policy for the “Development of an Offset Strategy in Guinea” that included important international donors, like the World Bank, the IFC, USAID, USFWS, with large international NGOs and some representatives of the mining industry. The IFC was very interested to see the progress accomplished within the WCF/GAC project and many participants agreed to join us for the Conakry workshop. A major national workshop was held in Conakry in March 2012 with a wide participation of ministries, some ambassadors, different private stakeholders as well as international donor agencies to obtain a wide support: This was concretized by a national declaration in favor of a “National Conservation Offset Strategy” that was signed by all of the ministries and national authorities and national and international NGOs. The WCF has started some preliminary feasibility studies in the area earmarked as the “best national offset region” for chimpanzees, namely the eastern Foutah Djallon with the hope to rapidly contribute to the protection of a population of about 2 to 3000 chimpanzees. The next step will be to obtain an agreement with the government on an area to manage for the offset program within this area and start rapidly with monitoring, sensitization and surveillance of the offset area. WCF sees the collaboration with GAC as an important opportunity to show the world and the Guinean authorities that mining operations can be integrated within an ecological sustainable and favorable program that is on one side economically profitable but at the same time has some long-term positive impact on the biodiversity. It is our wish that the financial situation will improve rapidly so that these promises could be implemented and developed.

6. Monitoring and evaluation

This new approach aims to take into account not only the impact of outreach activities developed by the WCF in previous years, but also to study the impact of the increased surveillance, micro-projects and ecotourism. Data collection was conducted in 2012 in three areas, which correspond to areas of research and ecotourism in TNP and two villages in the sub-prefectures of Taï and Djouroutou. Data collection in villages around Grebo National Park / Liberia will take place in January-February 2013 (Table 4).

Table 4. Collection periods for different baselines studies for monitoring and evaluation

	Taï	Djouroutou	Liberia
Bushmeat study	November - December 2012	July - August 2012	January - February 2013
Sociological study	July -August 2012	March - April 2012	
Study on fauna and illegal human activities	December 2011	January 2012	February 2013

6.1. Studies of reference for monitoring and evaluation of ecotourism projects

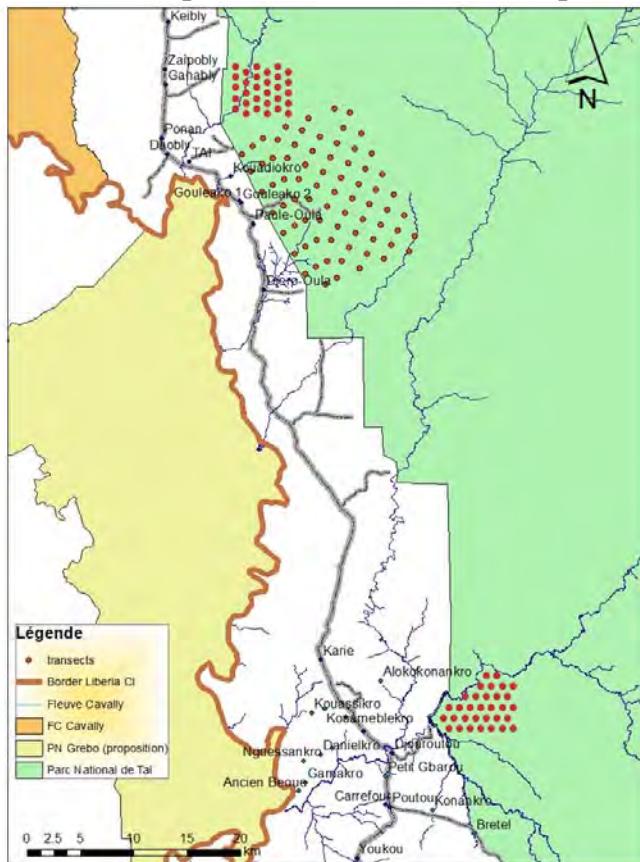
Data collection was carried out in the Djouroutou ecotourism zone on 32 transects and in the Taï ecotourism zone on 20 transects (Figure 10). The first results confirm the importance of these areas. Fourteen large mammals have been observed on transects in both study sites. Over 50% of these species are on the IUCN Red List and three are classified as endangered: chimpanzee, red colobus, and pygmy hippopotamus (Table 5). This information allowed us to determine the encounter rate and the spatial distribution of various species and illegal human activities. These results will constitute the baseline to be able to study the impact ecotourism has on the wildlife in the future.

Table 5. Mammal diversity at the two study sites

Common Name	IUCN Red List Status	Djouroutou	Taï
Bongo	Near-threatened	Present	Present
Buffalo		Present	
Maxwell's duiker		Present	
Bay duiker		Present	Present
Black duiker			Present
Chimpanzee	Endangered	Present	Present
Mangabey	Vulnerable	Present	Present
Red colobus	Endangered	Present	Present
Black and white colobus	Vulnerable	Present	Present
Diana monkey	Vulnerable	Present	Present
Putty-nosed monkey			Present
Campbell's monkey		Present	Present

Lesser spot nosed monkey		Present	Present
Forest elephant	Vulnerable	Present	
Pygmy hippopotamus	Endangered	Present	Present
Giant forest hog			Present
Red river hog		Present	Present
Total		14	14

Figure 10. Transects in the forest are represented by dots and villages involved in sociological studies and consumption of bushmeat are those presented on the map

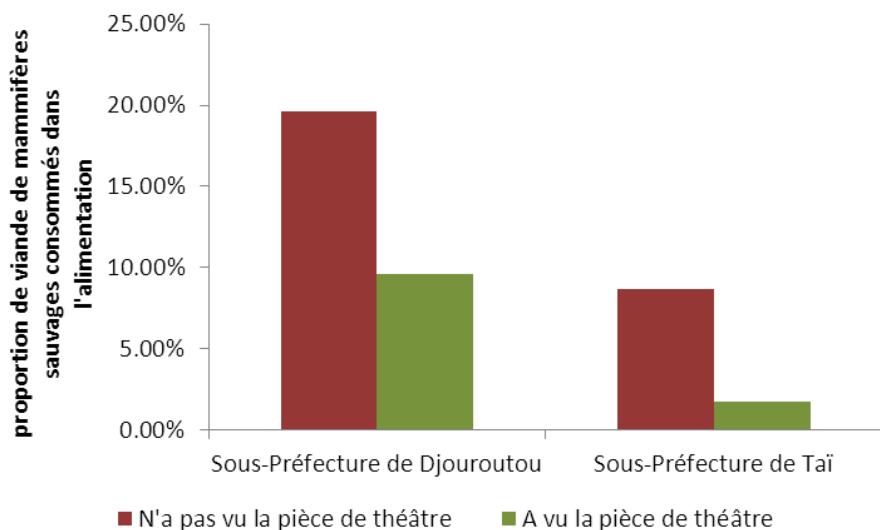


6.2. Sociological studies and consumption of bushmeat

Since 2009, the WCF has led a study on the bushmeat trade around TNP. The information of this study helps the park managers to be aware and updated in this illegal, complex and dynamic trade. It not only evaluates the degree of illegal bushmeat trade, but it also measures the impact of the TNP management. During 2012, we continued our bushmeat study in the villages and markets around TNP. We have also adopted a new methodology with the introduction of weighing the meat during the months of February and March 2012. This survey was stopped in May 2012 due to the border closing in light of the security issues in the region. Other markets (Guiglo and Zagné) were also investigated.

Over all, mammals made up 96.63% of all animals with three dominant orders: artiodactyls (40.6%), rodents (32.9%) and primates (16.12%). Duikers, cane rats, porcupines, cercopithecines and colobines were the most represented. At the market in Taï, with meat coming from Liberia, 7,197 carcasses were found, 360 of which were endangered species. All these species are thought to come from ten different localities along the Liberian border with Côte d'Ivoire, in and around the Grebo National Forest. Two studies on the consumption of animal protein by the local populations in the regions of Taï and Djouroutou were carried out during the months of July through August and November through December 2012. In the four localities studied in Djouroutou, a list of 23 species consumed by people was identified. We weighed 167.57 kg in eleven restaurants visited on ten occasions. This means that by extrapolation, one can imagine that these eleven restaurants open every day and sell a little more than 6,000 kg of bushmeat per year. Considering an average weight of 15kg for duikers and 4 kg for a monkey, it represents 192 duikers and 239 monkeys per year to supply these eleven restaurants. A further study is underway by an Ivorian student to better understand the impact of this market across TNP, taking into consideration the populations of monkeys and duikers that have been quantified for TNP and the annual dynamics of the animal populations. Finally, a large part of the study concerns the behavior of households and the impact of management measures on attitudes and perceptions towards the conservation of TNP. We have weighed 20.79 kg of meat in 71 families visited over four days, including 3.81 kg of duiker meat and 0.46 kg of monkey meat. By extrapolation, this amounts to over 23 duikers and 10 monkeys consumed by these families each year. In short, the study will evaluate the consumption of bushmeat in families. Preliminary analysis shows that there is a relationship between the amount of bushmeat consumed by those people unaware of conservation efforts and those who have participated in awareness raising campaigns (Figure 11). These studies will allow us to guide the conservation actions made to improve the long-term management of the wildlife in TNP.

Figure 11. Impact of awareness on the consumption of bushmeat



7. Acknowledgements

The WCF would like to thank all private donors, conservation organizations and foundations that have helped finance the activities of 2012:

Africa Seed Grants of Cleveland Metroparks Zoo, Afrique Nature, Ambassade de Norvège en Côte d'Ivoire, Ambassade de Suisse en Côte d'Ivoire, Arcelor Mittal Limited, BBC Natural History Unit, Brevard Zoo, Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung, Columbus Zoo and Aquarium, Deutsche Gesellschaft für Internationale Zusammenarbeit, DierenPark Amersfoort Wildlife Fund, Great Ape Conservation Fund of the US Fish and Wildlife Service, Great Ape Survival Partnership of the United Nations Environment Program, Guinea Alumina Cooperation, Keidanren Nature Conservation Fund, Leipzig Zoo, Max Planck Society - Innovation Fund, Ministry of Finance in Côte d'Ivoire, Mohamed bin Zayed Species Conservation Fund, Oklahoma City Zoo & Botanical Garden - Conservation Action Now, Paul Schiller Stiftung, PNUD, Rufford Small Grants Fund, Sweden Chimpanzee Trust, Tierschutz Zürich, World Bank, World Wildlife Fund for Nature and Zoo am Meer Bremerhaven.

Alexander Burkhardt, Alexander Hügi, Alexander Kluge, Anita Lesquereux, Axel Friedrich, Benefizgala Biberach, Chistophe und Hedwige Boesch, Christophe Deutsch, Claudia Nebel, E. Burnand und Ch. Thevenoz, Elena Lieven, Ernst Boesch, Eva Demler, Ferreira Ulysse, Hans Kummer, Humboldt Gymnasium Werdau, Indra Willms-Hoff, Jens Stroschmieden, Kepler-Gymnasium Leipzig, Jürgen Breimer, Karin Augst, Karin Fenzlau, Klaus Wittig, Kurt Müller, Lessing Mittelschule Zwickau, Mahmoud Maslem, Malerwerkstätten Nebel & Roeder, Margaret Zetting, Marianne Knecht, Martina Wittig, Max-Klinger Gymnasium, Mimi Arandjelovic, Mittelschule Kirchberg, Nadin Eckhardt, Paul Conrad, Redouan Bshary, Rolf and Gabriella Schäppi, Rosmarie Waldner, Susanne Normand, Vera Schmeling, Viola Schmid and Wolfgang Enard.

The WCF is grateful to all partners supporting its research and conservation activities in 2012:

Max Planck Institute for Evolutionary Anthropology, WILD Foundation, Wildlife Conservation Society, World Wildlife Fund, Rainforest Alliance, Fauna & Flora International, Ministères de la République de la Côte d'Ivoire, Ministère de l'Environnement, du Développement Durable, de Samubrité Urbain, des Eaux et Forêts, Ministère de l'Enseignement Supérieur et de la Recherche Scientifique, Ministère du Tourisme, Ministère de l'Education Nationale, Ministère de l'Economie et de Finances, Office Ivoirien des Parcs et Réserves, Société de Développement des Forêts, Fondation Parcs et Réserves de Côte d'Ivoire, Cellule des Projets Environnementaux, Centre Suisse de Recherches Scientifiques, University of Abobo-Adjame et de Cocody Abidjan, Afrique Nature International, Deutsche Gesellschaft für Internationale Zusammenarbeit, KFW:Bankengruppe, Division Agriculture et Ressources Naturelles Afrique sub-Saharienne, Agence Française de Développement, Union Européenne, SOS FORET, ACB en Côte d'Ivoire, Ymako Teatri, Dao N'Daw Koumba, Désirée Koffi, Ben A. Sylla, Forestry Development Authority, Eddie Theatre Productions, Jawordee Conservation Awareness Culture Troop, University of Monrovia, Ministères de la République du Liberia, African Methodist Episcopal University.

8. References

Boesch, C., Gnakouri, C., Marques, L., Nohon, G., Herbinger, I., Lauginie, F., Boesch, H., Kouamé, S., Traoré M. and Akindes, F. (2008). Chimpanzee conservation and theatre: a case study of an awareness project around the Taï National Park, Côte d'Ivoire. In Conservation in the 21st Century: Gorillas as a Case Study (Eds, Stoinski, T., Steklis, D. and Mehlman, P.). pp.128-135. New York: Springer Science and Business Media.

Borchers, C., Riedel, J., Boesch, C., et Breuer, T. (2009). Deux programmes d'éducation environnementale pour la conservation des grands singes africains: Club Ebobo et Club P.A.N. », *Revue de primatologie*, 1, document 8. <http://primatologie.revues.org/>.

Campbell G, Kuehl H, N'Goran P, Boesch C (2008). Alarming decline of the West African chimpanzee in Côte d'Ivoire. *Current Biology* 18, 903-904.

Campbell, G., Kuehl, H., Diarrassouba, A., N'Goran, P. K. and C. Boesch (2011) Long-term research sites as refugia for threatened and over-harvested species. *Biology Letters* doi: 10.1098/rsbl.2011.0155

Hoppe-Dominik, B., Kühl, H.S., Radl, G., Fischer, F. (2011) Long-term monitoring of large rainforest mammals in the Biosphere Reserve of Taï National Park, Côte d'Ivoire. *African Journal of Ecology* doi: 10.1111/j.1365-2028.2011.01277.x

Köndgen, S., Kühl, H.S., Ngoran, P., Walsh, P.D., Schenk, S., Ernst, N., Biek, R., Formenty, P., Mätz-Rensing, K., Schweiger, B., Junglen, S., Ellerbrok, H., Nitsche, A., Briese, T., Lipkin, W.I., Pauli, G., Boesch, C., Leendertz FH (2008) Pandemic human viruses cause decline of endangered great apes. *Current Biology* 18: 260-264.

Kouakou, Y.C., Boesch, C., Kuehl, H. S.: (2009) Estimating chimpanzee population size with nest counts: Validating methods in Taï National Park, *American Journal of Primatology* 71: 447-457.

Kouakou, C.Y., Boesch, C., Kuehl, H.S. (2011) Identifying hotspots of chimpanzee group activity from transect surveys in Taï National Park, Côte d'Ivoire. *Journal of Tropical Ecology* 27: 621-630.

N'Goran, P.K., Boesch, C., Mundry, R., N'Goran, E. K., Herbinger, I., Yapi, F.A., Kühl, H.S. (2012). Hunting, law enforcement and African primate conservation. *Conservation Biology*. DOI: 10.1111/j.1523-1739.2012.01821.

9. WCF Team

Côte d'Ivoire & Liberia: Emmanuelle Normand, Dervla Dowd, Zoro Goné Bi Bertin, Paul N'Goran, Virginie Vergnes, Thierry Fabbian, René Maho N'Gbesso, Seydou Diarrassouba, Zoro Gone Bi Irié Bérenger, Konan Kouakou Firmin, Celestin Kouakou Yao, Antoine N'Guessan, Gregoire Nohon, Hilaire Guilahoux, Dabila Ouattara, Thomas Gelsi, Camille Bolé, Denis Lia, Valentin Yagnon, François T. Yro, Michel Somopohi, A. Diarrasouba, Camille Di, Kadjo Cinthia, Taki Gobable Florence, Dibi Monique, Anoh Joseph, Kablan Yves, Konan Herve, Kouakou Adrien, Gbla Georges Gnolou, Julie Champeau, Daniel Arranaga.



Guinée: Sébastien Regnaut, Mamadou Samba Barry, Floris Aubert, Foromo Doré, Amadou Balde, Abdoulaye Soumah, Kabinet Conde, Amadou Keita, Siddy Diallo, Assanne Beavogui, Saidou Barry, Boubacar Diallo, Aissatou Barry, Petra Sichova, Lucien Lamah, Aliou Bah, Bailo Bah, Salian Traore, Moussa Kaba, Zike Diallo, Abdoulaye Barry, Thierno Balde, Hassatou Barry, Mamadou Dian Barry, Vincent Lapeyre.



Europe: Christophe Boesch, Hedwige Boesch, Tobias Deschner, Julia Riedel, Claudia Borchers, Marzela Scheller, Claudia Nebel, Christina Kompo and the IT and media department of the Max Planck Institute for Evolutionary Anthropology.