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Inventory of the proposed landscape corridors between Taï National Park, Côte d'Ivoire and Grebo National Forest, Liberia

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Abidjan, Côte d'Ivoire

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EXECUTIVE SUMMARY

INTRODUCTION

During the workshop held in Abidjan, economic capital of Côte d'Ivoire, which took place the 4th and 5th of October 2009 and aimed to initiate a transboundary collaboration between Côte d'Ivoire and Liberia in order to establish landscape corridors between the protected areas of the Taï-Sapo Forest Complex. During the workshop, the importance of the conservation of the Taï-Sapo Forest Complex, the largest remaining bloc of the Upper Guinean Forest ecosystem and a biodiversity hotspot in West Africa, was highlighted. A workgroup devoted to the feasibility of implementing landscape corridors within the complex to connect the 6 protected areas identified three different types of corridor: Existing corridors between protected areas that need monitoring; existing corridors that are highly threatened and need immediate response actions and new corridors that need to be created to connect protected areas. Many of these corridors will require transboundary collaboration.

The first corridors to be studied are the two corridors that connect the Taï National Park (Côte d'Ivoire) to the Grebo National Forest (Liberia). This report presents the results and analyses of the **biomonitoring carried out in 2010 by the Wild Chimpanzee Foundation in these two corridors**. The corridors are named Taï-Grebo towards the north and Djouroutou-Grebo in the south. Analyses include data on different land uses, fauna, flora as well as human activities and thus the feasibility of the fauna of the region using these corridors. This overview will be used as a basis to implement the ecological corridors between the different protected areas of the Taï-Sapo Complex. **Data for both corridors have been acquired according to a systematic linear transect sampling. In addition, the rivers and their gallery forests, natural corridors by themselves, have been surveyed to provide extra-information and more accurate encounter rates.**

MAIN RESULTS

This survey allowed us to collect both anthropogenic and ecological useful data that will help in orientation the implementation of the proposed landscape corridors between Taï NP and Grebo NF.

Within both corridors, direct observations of wildlife were made, though they were rare and mostly indirect. Nonetheless this does confirm that certain animals are already using this land naturally and are thus likely to continue to use the corridors once they are fully set up. Despite a high level of human pressure (poaching and farming), the survey showed presence signs for several species of duikers, with an encounter rate of **2.22 signs/km in Taï-Grebo and 1.86 signs/km in Djouroutou-Grebo**. Bovid was the most common family encountered during the survey. It included species such as **black duikers, black-backed duikers, Maxwell's duikers, bushbucks, buffalos and bongo antelopes**. We also collected presence signs of primates, 18 in Taï-Grebo and 44 in Djouroutou-Grebo. Even though **no chimpanzee signs were noted**, our teams found signs of several monkey species such as the **diana monkey, lesser white-nosed monkey, sooty mangabey, lowe's mona monkey and dwarf galago**. Most of the other signs encountered were from small mammals, but the survey along the rivers allowed us to detect signs of several large mammals such as **pigmy hippos, elephants and leopard.**

In addition, the survey allowed us to define the anthropogenic land use within the corridors, which are rural areas, and therefore contained mostly plantations of both perennial and food crops. **Areas used for perennial plantations such as cocoa, coffee, rubber or palm represented about 50% of the total surface of both corridors. Food crops such as rice, yam and cassava, represented 14% of the Taï-Grebo corridor and 9 % of the Djouroutou-Grebo corridor**. The analyses of the different types of plantations and their spatial distribution will aid in setting up the concrete implementation of the conservation measures needed for effective landscape corridors in the region. Secondary forest areas were also noted during the survey and showed that they were almost three times more common in the Djouroutou corridors. These remaining forests were found mostly in the **Djouroutou-Grebo corridor, in the areas adjacent to Taï NP and Grebo NF (about 17% of the corridor surface) and in the south of the Taï-Grebo corridor, at the Eastern and the Western tips (about 6% of the corridor surface).** Reforestation is thus essential in order to allow the species to have free access to the two protected areas and in between them.

In addition, poaching was the second main human activity, notably trapping. We noted a **52%** proportion of presence signs for poaching for the **Taï-Grebo corridor** and **83% for the Djouroutou-Grebo corridor** (which included all other human activities too, such as fishing and logging).

OUTLOOK

The present analysis showed that these corridors are widely used by the local populations for agriculture, but still **held animal populations such as primates, elephants, buffalos, leopards or pigmy hippos**. It confirmed the potential of these 2 identified areas to be set as landscape corridors to connect the Taï National Park with the Grebo National Forest

This report is a basis for the implementation of different conservation measures needed for the two corridors to ensure mobility for the animal species between Grebo National Forest, parts of which are proposed to become a **new Liberian National Park** and Taï National Park. This **reference state** of the corridors will assist in planning the next actions needed to be taken as well as to monitor and orientate the future management of the area. By **restoring the gallery forest ecosystems along the streams, supporting reforestation within the corridors, promoting sustainable agricultural practices such as agroforestry, developing the production of non timber forest products, sensitizing the local populations, and increasing communication between officials of both countries,** landscape corridors could be put in place to connect the protected areas in the Taï-Sapo Forest Complex and as such ensure the survival and gene diversity for the animal species therein.

1. CORRIDORS AND DESIGNS

1. General information and survey designs

During the workshop a total of 11 corridors were identified for the Taï-Sapo Complex and are shown in figure 1 below:

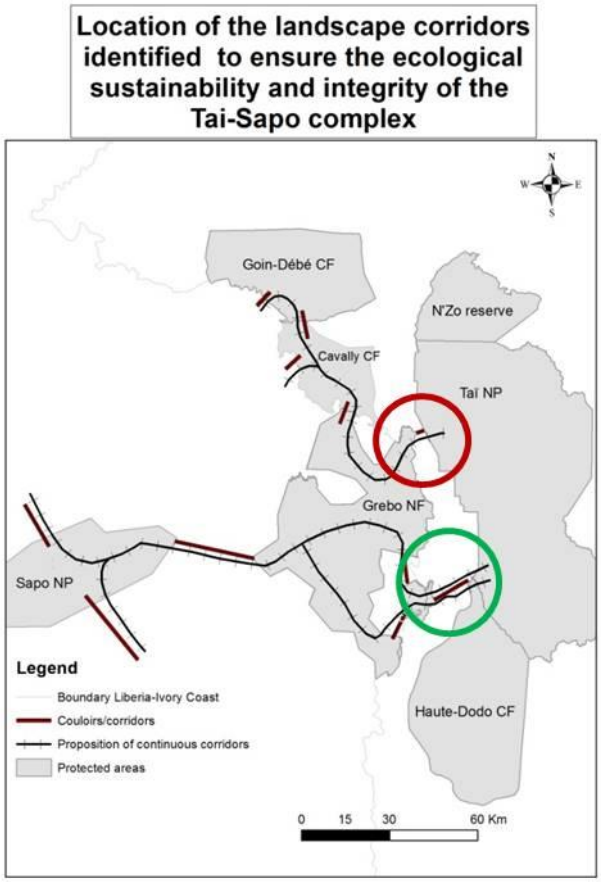


Figure 1: Localization of the corridors concerned by this study (in red the Taï-Grebo corridor and in green the Djouroutou-Grebo corridor)

The two corridors connecting the Taï NP with the Grebo NF are the first of the 11 corridors to be surveyed. Data collection with the two corridors was done following the linear transect method. The systematic disposition of the transects is called a design. The following provides information about the design and the sampling efforts in both corridors.

1. The Taï-Grebo corridor

Of the 121.4 km of the planned transects in the design (figure 2), 116.9 km were surveyed during the study, representing 96% of completion. The remaining 4 % correspond mostly to inaccessible humid areas. Each transects was 500 m in length.

The data collection was carried out from the 11th November 2010 to the 22nd November 2010, during 2 missions led by 2 teams. Each team was made up of a minimum of 7 persons, 4 field assistants and 2 porters and 1 WCF biomonitoring supervisor.

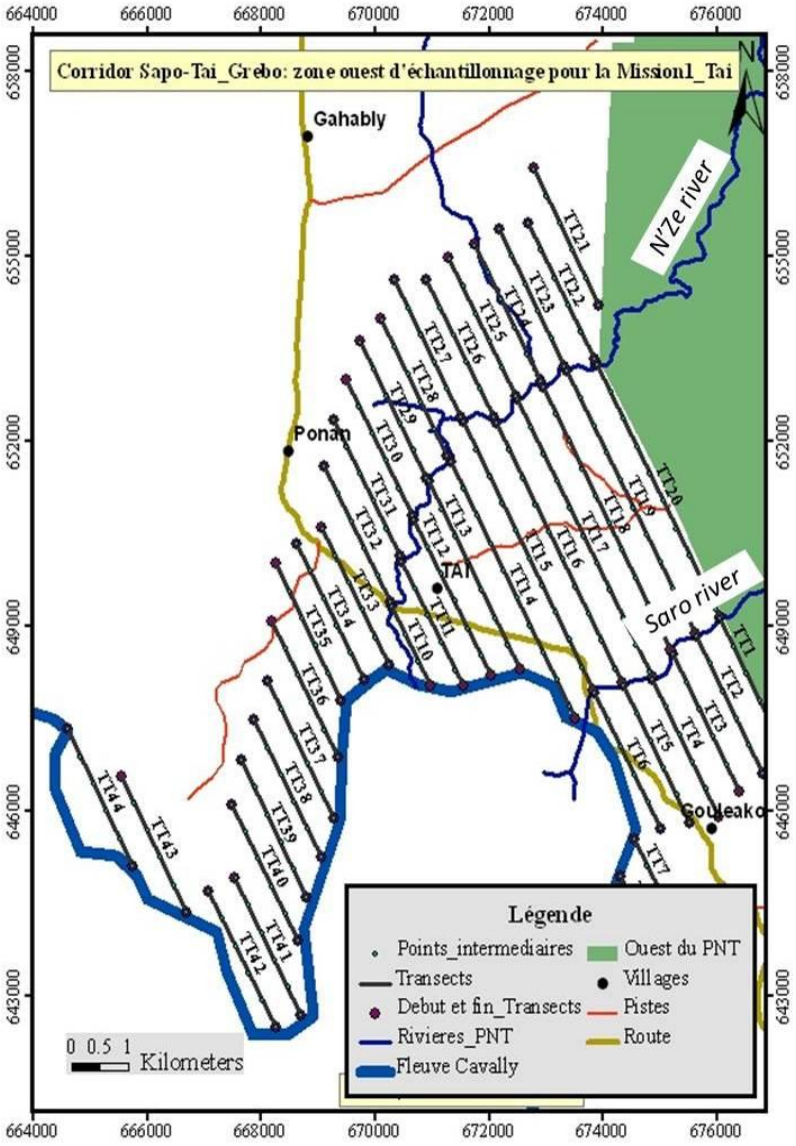


Figure 2: Survey design for the Taï-Grebo corridor transects

In addition, our teams also collected data along the neighboring Cavally, N'Zé and Saro rivers, on a total length of 63.6 km.

2. The Djouroutou-Grebo corridor

The design (figure 3) was made up of 500m-long transects systematically placed along the Hana river. In areas of more dense forest, the transects were longer in length.

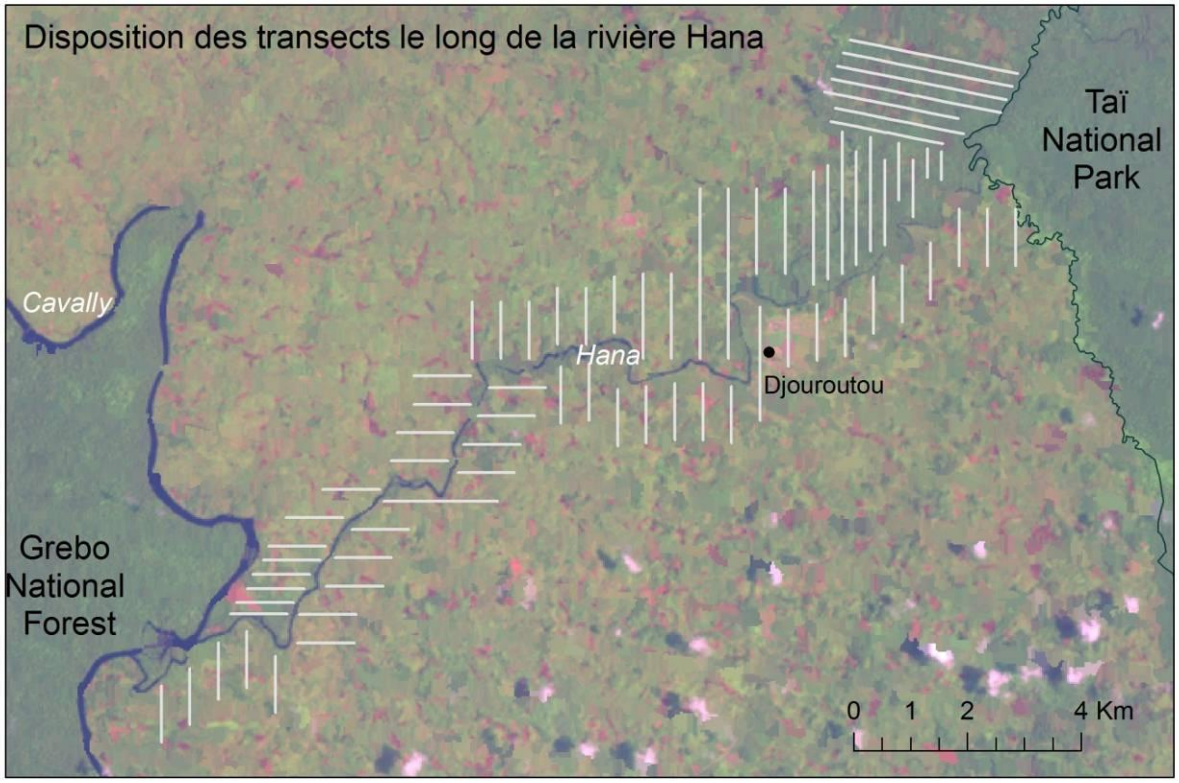


Figure 3: Survey design for the Djouroutou-Grebo corridor

Total planned length of transects was 114km, of which 98.2 km were surveyed, that is to say a total of 86%. Due to wet field conditions, many of the areas were inaccessible.

The field teams also collected data along the Hana River, on both banks, on a total length of 40 km. Overall, the design included 138.4 km of transects surveyed by 5 teams during 2 missions between August 5th and August 23rd 2010. The first mission aimed to inventory the dense zone near Taï National Park, with teams of 8 persons, including a WCF supervisor and an OIPR agent. The second mission was carried out to inventory the west side of the corridor, with three 7-person supervised teams, and two 6-person teams, more experienced and therefore able to collect data without the presence of WCF supervisors.

2.RESULTS

This chapter details the results and analyses of the data collection and provides information on animal populations within the proposed areas to be set up as landscape corridors, as well as information on anthropogenic activities and the different land uses.

1. Bovids

Bovids represent the group for which the majority of presence signs found were attributed to. These were mainly dung and tracks. A total of 749 observations and an average encounter rate of **2.35 presence signs/km** were found for both corridors. Direct observations were rare since wild animals tend to be discrete in such fragmented and hunted zones. Nevertheless we observed 2 black duikers, 1 black-backed duiker, 1 Maxwell's duiker and 1 bushbuck. In addition 34 signs of presence for buffalos and 2 for bongos have been noted. The results are displayed n table 1.

Table 1: Presence signs of bovids

Type of observation	Scientific names	Observations on transects	Observations along rivers	Encounter rate (km^{-1})
TAÏ-GREBO CORRIDOR				
Buffalo tracks	*Syncerus caffer*	12	2	0.08
Total Buffalos	***Syncerus caffer***	**12**	**2**	**0.08**
Duiker feces	*Cephalophus sp.*	47	1	0.27
Duiker tracks	*Cephalophus sp.*	260	91	1.94
Direct observation of black duiker	*Cephalophus niger*	1	0	0.01
Direct observation of black-backed duiker	*Cephalophus dorsalis*	1	0	0.01
Total Duikers	***Cephalophus sp.***	**309**	**92**	**2.22**
Direct observation of bushbuck	*Tragelaphus scriptus*	1	1	0.01
Bushbuck tracks	*Tragelaphus scriptus*	7	2	0.05
Total Bushbucks	***Tragelaphus scriptus***	**8**	**3**	**0.06**
Bongo antelope tracks	*Tragelaphus euryceros*	2	0	0.01
Total Bongo antelope	***Tragelaphus euryceros***	**2**	**0**	**0.01**
Total Bovids Taï-Grebo		**331**	**97**	**2.37**
DJOUROUTOU-GREBO CORRIDOR				
Buffalo tracks	*Syncerus caffer*	14	3	0.12
Buffalo feces	*Syncerus caffer*	2	1	0.02
Total Buffalos	***Syncerus caffer***	**16**	**4**	**0.14**
Duiker feces	*Cephalophus sp.*	25	3	0.20
Duiker tracks	*Cephalophus sp.*	160	67	1.64
Direct observation of black duiker	*Cephalophus niger*	1	0	0.01
Direct observation of Maxwell's duiker	*Cephalophus monticola maxwe*	1	0	0.01
Total Duikers	***Cephalophus sp.***	**187**	**70**	**1.86**
Bushbuck tracks	*Tragelaphus scriptus*	40	4	0.32
Total Bushbucks	***Tragelaphus scriptus***	**40**	**4**	**0.32**
Total Bovids Djouroutou-Grebo		**243**	**78**	**2.32**

Duikers presence signs were widely spread across the corridors, though they were concentrated in the areas where forests are still remaining, especially the western tips of both corridors (figure 4).

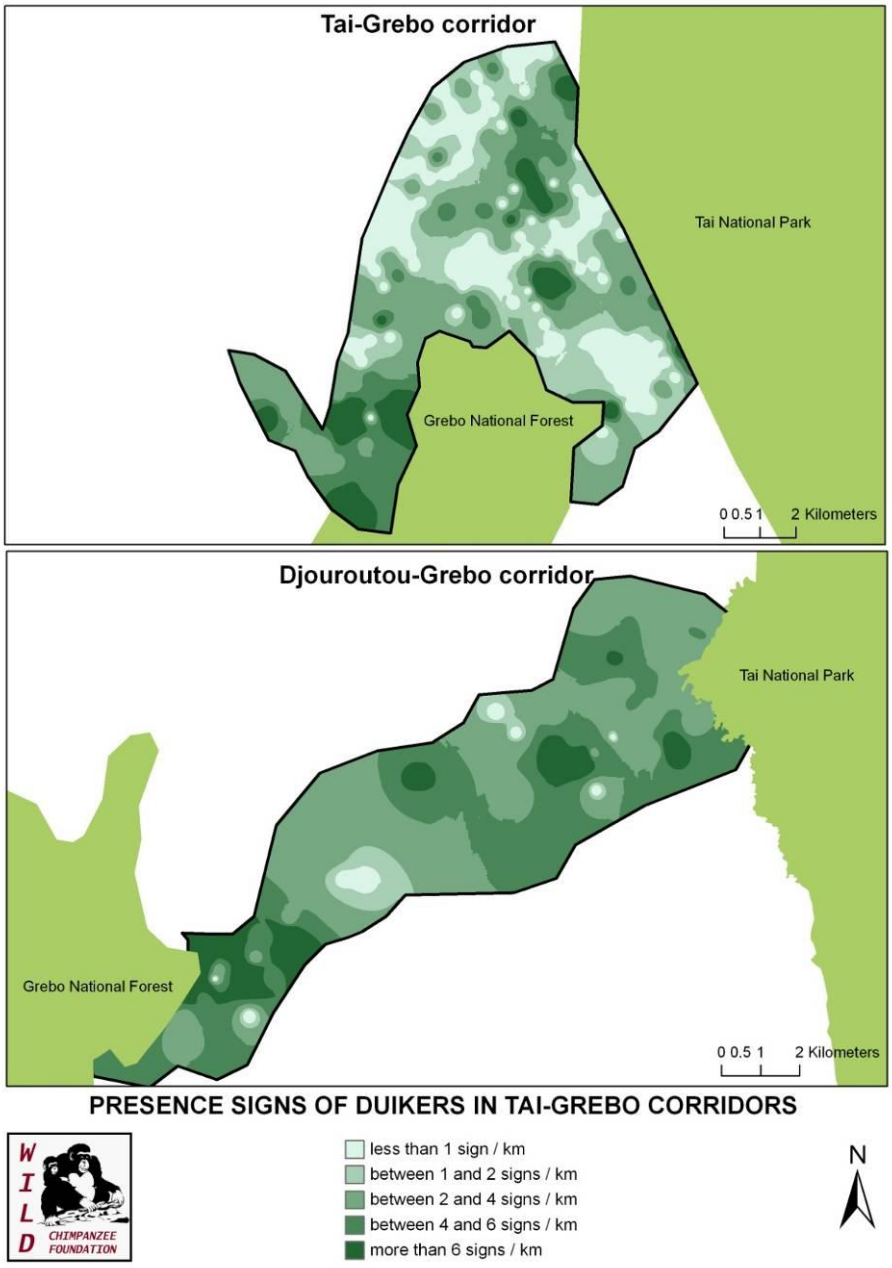


Figure 4: Spatial distribution of the presence signs of duikers

2. Primates

Monkeys were also encountered (seen or heard) in the surveyed areas, with the most common being the Diana monkey and the lesser white-nosed monkey. We noted a total of 62 (table 2) observations, including surprising encounters with a galago, a nocturnal species usually visible only by night. Figure 5 (next page) is a map showing the spatial distribution of the primates seen or heard during the data collection. They were mostly located on the edges of both corridors, but figure 5 shows that the Djouroutou corridor is also used by primates. This showed the potential of the corridors to be used by animal populations.

Table 2: Presence signs of primates

Type of observation	Scientific names	Observations on transects	Observations along rivers	Encounter rate (km^{-1})
TAÏ-GREBO CORRIDOR				
Diana monkey	*Cercopithecus diana diana*	1	0	0.01
Lowe's mona monkey	*Cercopithecus mona lowei*	4	0	0.02
Lesser white-nosed monkey	*Cercopithecus petaurista*	6	1	0.03
Total monkeys seen		**11**	**1**	**0.06**
Diana monkey	*Cercopithecus diana diana*	2	0	0.01
Sooty mangabey	*Cercocebus atys atys*	1	0	0.01
Lowe's mona monkey	*Cercopithecus mona lowei*	2	1	0.01
Total monkeys heard		**5**	**1**	**0.03**
Total Monkeys Taï-Grebo		**16**	**2**	**0.09**
DJOUROUTOU-GREBO CORRIDOR				
Diana monkey	*Cercopithecus diana diana*	0	7	0.05
Lowe's mona monkey	*Cercopithecus mona lowei*	0	12	0.09
Lesser white-nosed monkey	*Cercopithecus petaurista*	12	4	0.12
Galago	*Galagoides sp.*	4	1	0.04
Total monkeys seen		**16**	**24**	**0.29**
Diana monkey	*Cercopithecus diana diana*	1	0	0.01
Sooty mangabey	*Cercocebus atys atys*	0	1	0.01
Lowe's mona monkey	*Cercopithecus mona lowei*	0	2	0.01
Total monkeys heard		**1**	**3**	**0.03**
Total Monkeys Djouroutou-Grebo		**17**	**27**	**0.32**

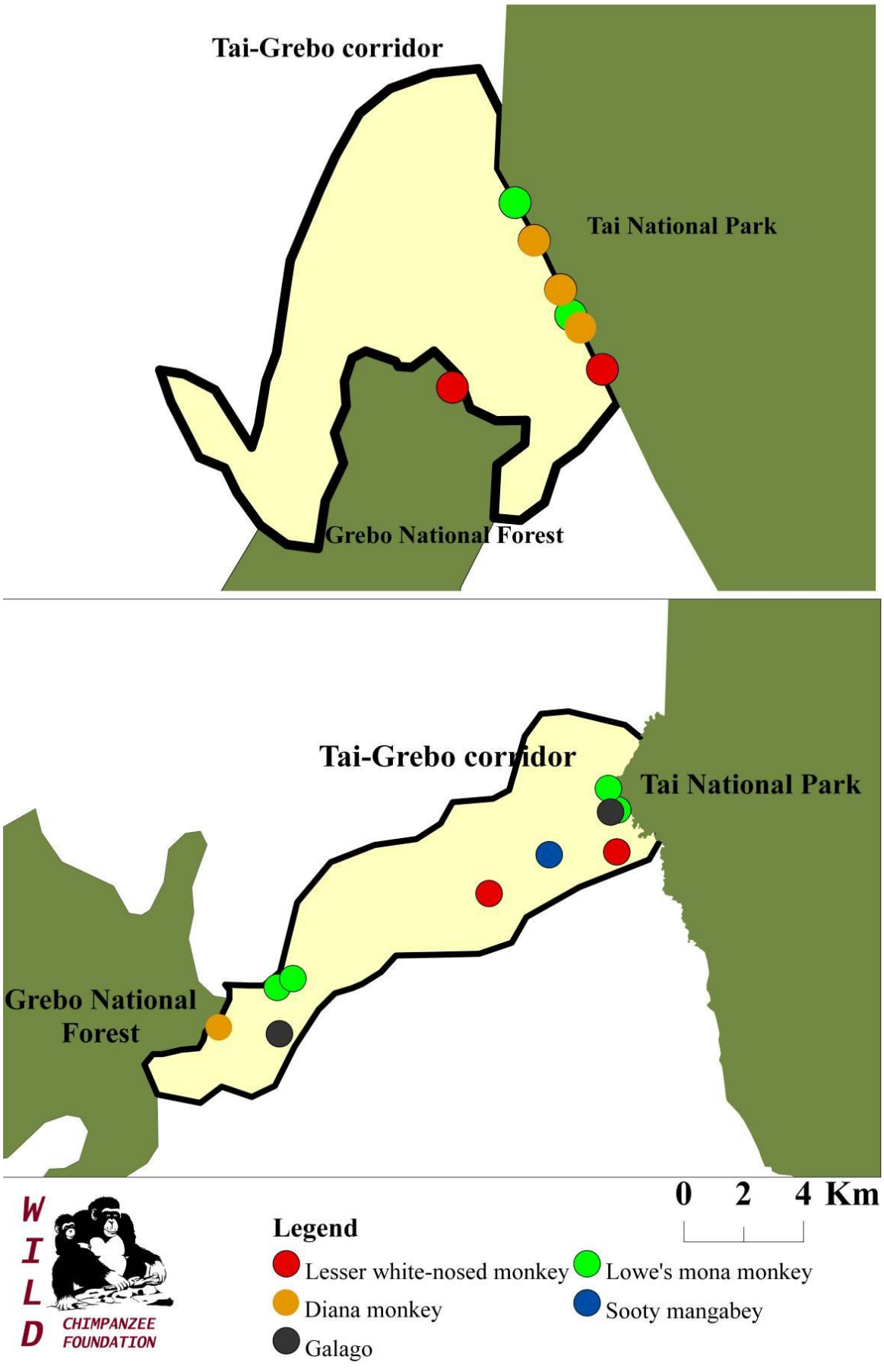


Figure 5: Spatial distribution of the primates (seen or heard)

3. Other mammals and reptiles

Other signs of presence were encountered in the corridors (0.50 signs/km for Taï-Grebo and 0.87 signs/km for Djouroutou-Grebo), which included the presence of large mammals such as pigmy hippos, elephants and leopards (table 3). These observations were mostly made along the rivers banks in the forest galleries. Figure 6 (below) shows the spatial distribution of the large mammals presence signs (buffalos, elephants, leopards, pigmy hippos, red river hogs and giant forest hogs) observed during the data collection. These observations were made mainly near both protected areas in Taï-Grebo, and also within Djouroutou-Grebo and it confirmed the potential of the corridors to be used by several animal species.

Table 3: Presence signs of other animals

Type of observation		Scientific names	Observations on transects	Observations along rivers	Encounter rate (km^{-1})
TAÏ-GREBO CORRIDOR					
Slender mongoose		*Herpestes sanguinea*	1	0	0.01
Mongoose tracks		*Herpestes sp.*	3	0	0.02
Total mongooses			**4**	**0**	**0.02**
Pygmy hippopotamus tracks		*Choeropsis liberiensis*	0	5	0.03
Leopard tracks		*Panthera pardus leopardus*	0	7	0.04
African Brush-Tailed Porcupine tracks		*Atherurus africanus*	2	11	0.07
Non-identified squirrel		*Paraxerus sp.*	7	**0**	0.04
Green Bush Squirrel		*Paraxerus poensis*	7	7	0.08
Total squirrels		***Paraxerus sp.***	**14**	**7**	**0.12**
Water chevrotrain tracks		*Hyemoschus aquaticus*	0	**3**	0.02
Greater Cane Rat tracks		*Thryonomys swinderianus*	2	0	0.01
Greater Cane Rat feces		*Thryonomys swinderianus*	5	0	0.03
Total Greater Cane Rat		***Thryonomys swinderianus***	**7**	**0**	**0.04**
Reptiles	Monitor lizard	*Varanus Niloticus*	1	0	0.01
	Indetermined snakes		0	3	0.02
Giant Ghana snail		*Achatina achatina*	18	7	0.14
Giant black snail		*Achatina ventricosa*	1	0	0.01
TOTAL other animals Taï-Grebo			**47**	**43**	**0.50**
DJOUROUTOU-GREBO C					
Marsh mangoose		*Atilax paludinosus*	0	1	0.01
Mongoose tracks		*Herpestes sp.*	3	0	0.02
Total mongooses			**3**	**1**	**0.03**
Pygmy hippopotamus tracks		*Choeropsis liberiensis*	1	7	0.06
Pygmy hippopotamus feces		*Choeropsis liberiensis*	1	1	0.01
Total Pygmy hippopotamus		***Choeropsis liberiensis***	**2**	**8**	**0.07**
Elephant tracks		*Loxodonta africana*	1	1	0.01
Red river hog tracks		*Potamocherus porcus*	28	9	0.27
Giant forest hog tracks		*Hylochoerus meinertzhageni*	2	0	0.01
African Brush-Tailed Porcupine tracks		*Atherurus africanus*	10	6	0.12
African Brush-Tailed Porcupine feces		*Atherurus africanus*	1	0	0.01
Total Brush-Tailed Porcupine		***Atherurus africanus***	**11**	**6**	**0.12**
African civet tracks		*Civettictis civetta*	1	0	0.01
Non-identified squirrel		*Paraxerus sp.*	1	**2**	0.02
Green Bush Squirrel		*Paraxerus poensis*	14	18	0.23
Total squirrels		***Paraxerus sp.***	**15**	**20**	**0.25**
Red rat			0	1	0.01
Praomys sp		*Praomys sp.*	1	0	0.01
Greater Cane Rat tracks		*Thryonomys swinderianus*	2	0	0.01
Reptiles	Green mamba	*Dendroaspis angusticeps*	1	1	0.01
	Gaboon viper	*Bitis gabonica*	0	1	0.01
	Green viper		0	1	0.01
Giant Ghana snail		*Achatina achatina*	3	2	0.04
TOTAL other animals Djouroutou-Grebo			**70**	**51**	**0.87**

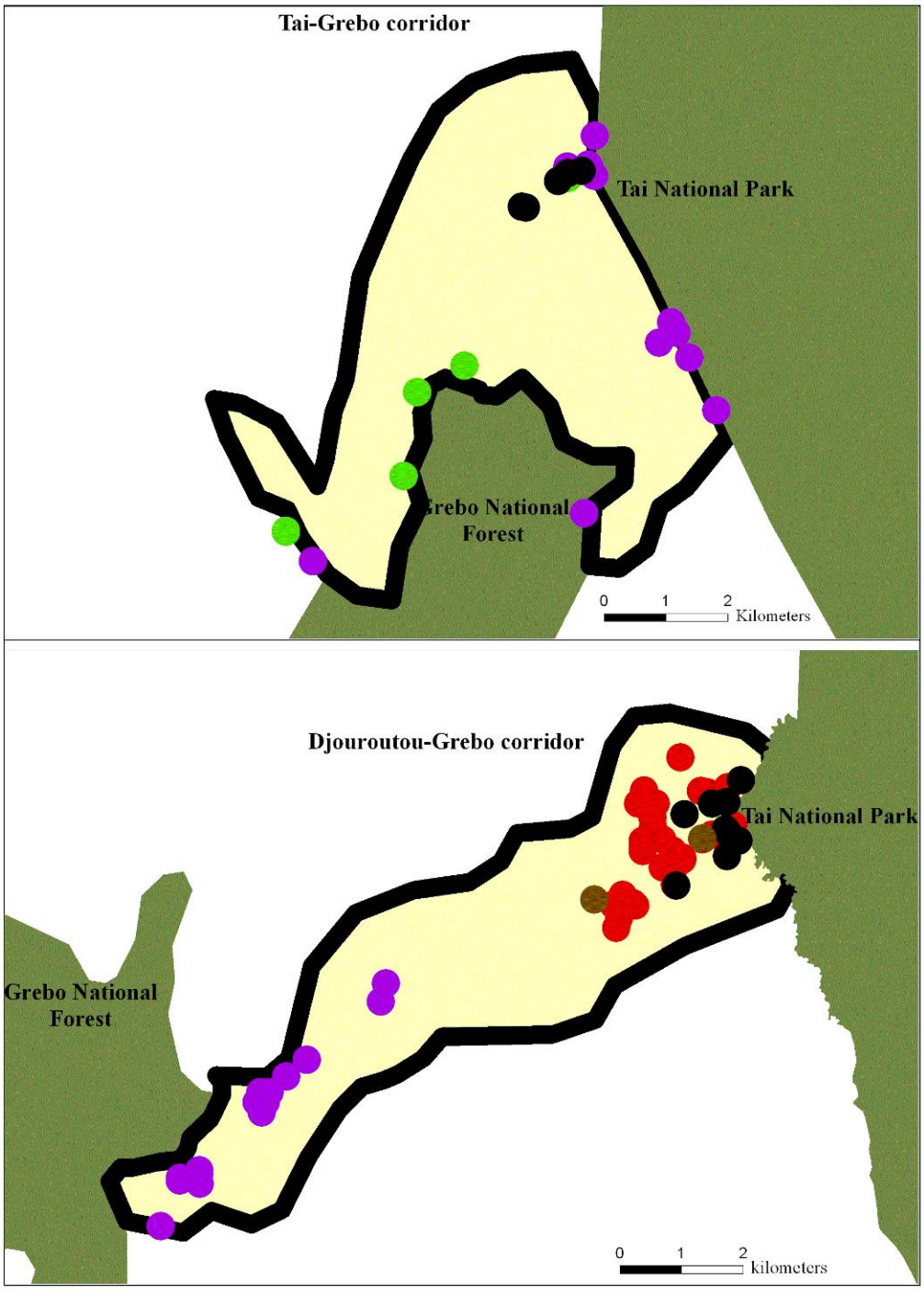


Figure 6: Spatial distribution of the large mammals observations

4. Birds

Many bird species were encountered (seen or heard) during the survey, with a total of **515 observations**. **Hornbills and turacos** were the species most frequently observed, and 16 francolins presence signs were detected in the Taï-Grebo corridor (table 4). At least 11 species were present in both sites.

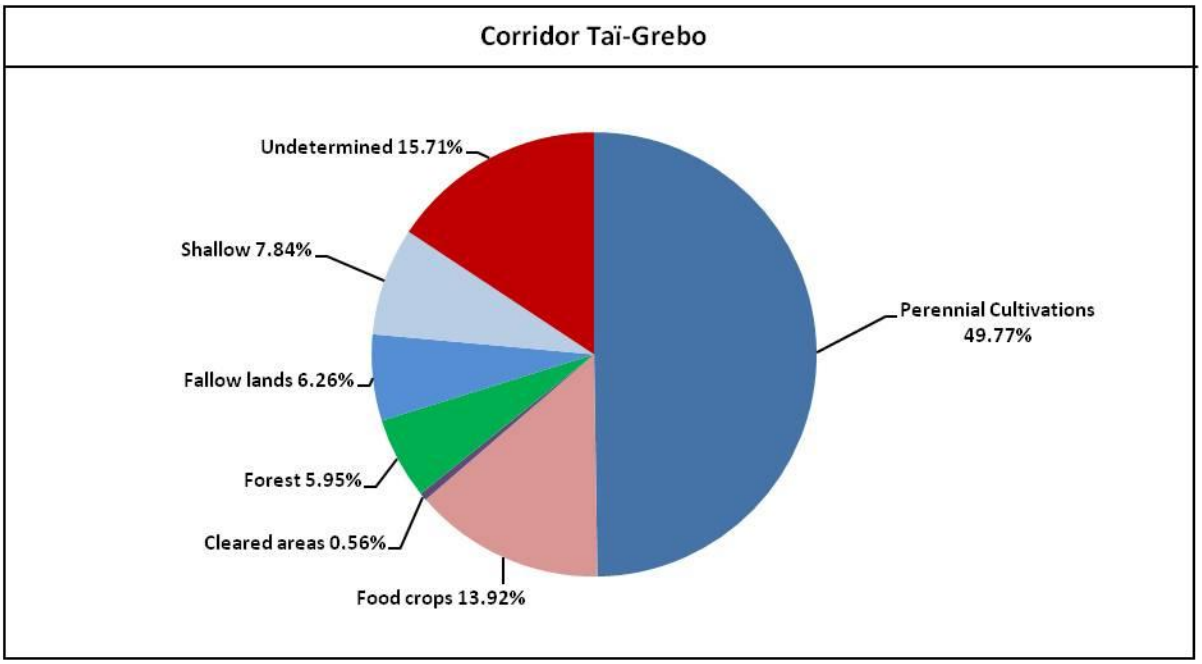
Table 4: Presence signs of birds

Species	Scientific names	Seen on transects	Seen along rivers	Heard on transects	Heard along rivers	Total	Encounter rate (km^{-1})
TAÏ-GREBO CORRIDOR							
Crowned Eagle	*Stephanoaetus coronatus*	3	0	0	0	3	0.02
Hornbill sp.		32	12	40	16	100	0.55
Senegal Coucal	*Centropus senegalensis*	11	0	19	0	30	0.17
African Grey Parrot	*Psittacus erithacus*	7	0	1	2	10	0.06
Red-fronted Parrot	*Poicephalus gulielmi*	1	0	0	0	1	0.01
Turaco sp.		14	0	26	5	45	0.25
Forest Francolin tracks	*Francolinus lathami*	1	0	0	0	1	0.01
Forest Francolin	*Francolinus lathami*	11	4	0	0	15	0.08
Total francolins		**12**	**4**	**0**	**0**	**16**	**0.09**
Other birds		1	0	0	0	1	0.01
Total birds Taï-Grebo		**81**	**16**	**86**	**23**	**206**	**1.14**
DJOUROUTOU-GREBO CORRIDOR							
Crowned Eagle	*Stephanoaetus coronatus*	0	1	0	0	1	0.01
Hornbill sp.		92	29	35	18	174	1.26
Senegal Coucal	*Centropus senegalensis*	3	1	7	2	13	0.09
African Grey Parrot	*Psittacus erithacus*	8	3	3	2	16	0.12
Red-fronted Parrot	*Poicephalus gulielmi*	1	0	0	0	1	0.01
Great Blue Turaco	*Corythaeola cristata*	11	4	24	14	53	0.38
Yellow-billed Turaco	*Tauraco macrorynchus*	4	0	33	10	47	0.34
Crested guineafowl	*Guttera eduardi*	0	1	0	0	1	0.01
Undetermined raptor		1	0	0	0	1	0.01
Undetermined ibis		0	0	0	2	2	0.01
Other - gnenekoi carcass		0	1	0	0	0	0.00
Total birds Djouroutou-Grebo		**120**	**40**	**102**	**48**	**309**	**2.23**

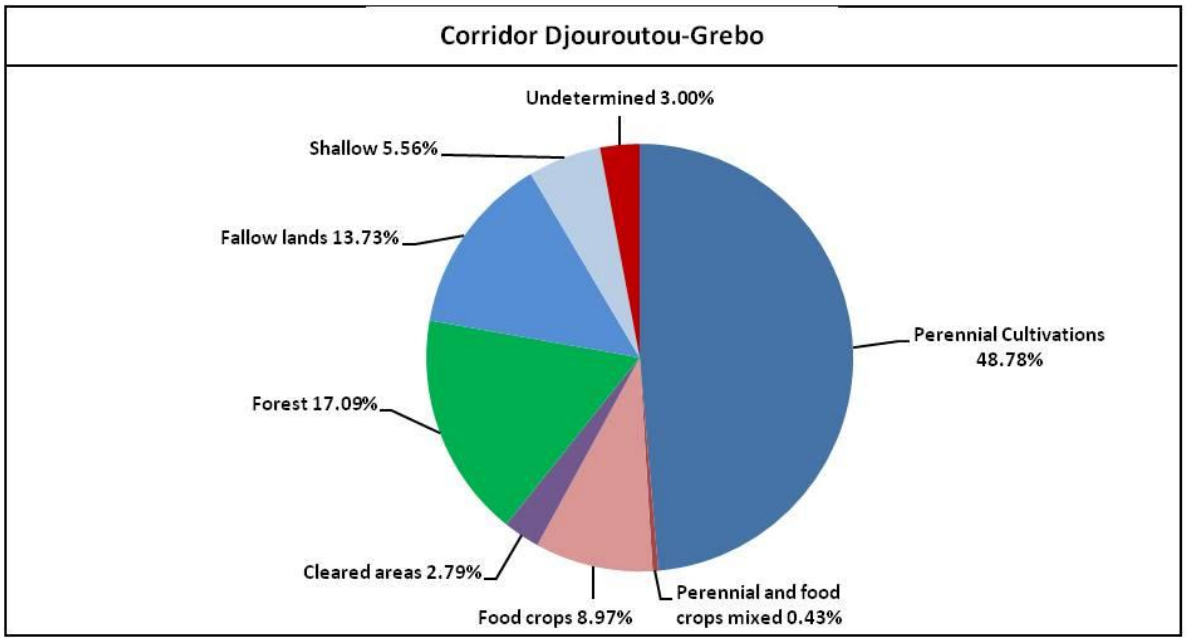
5. Land use analyses and human activities

The field teams not only collected data on faunal presence signs but also identified the environment and the different types of land use within the 2 corridors. For the Taï-Grebo corridor, land use was noted for **96 %** of the corridor area and **86 %** for the Djouroutou-Grebo corridor. We noted that in both areas, **plantations were the most common land use**, whether these were for perennial plantations or food crops, fallow lands or cleared areas (**70.5 % for Taï-Grebo and 74.7% for Djouroutou**). The remaining forested have been more maintained in the Taï side of the Djouroutou-Grebo corridor, in the South with **17.09 % of coverage** (graph 1 and 2). The proportion of cleared areas in the Djouroutou-Grebo corridor was more important than in the Taï-Grebo corridor, as the remaining forests were too. This

show the threat upon the remaining forests and the need of a rapid action to preserve these habitats within the corridors.



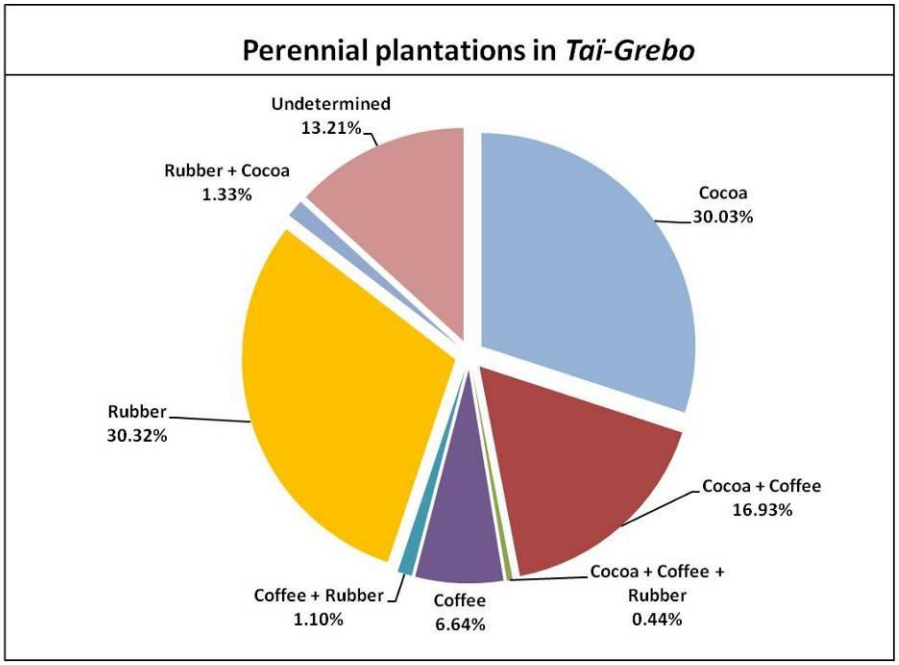
Graph 1: Land uses in the Taï-Grebo corridor



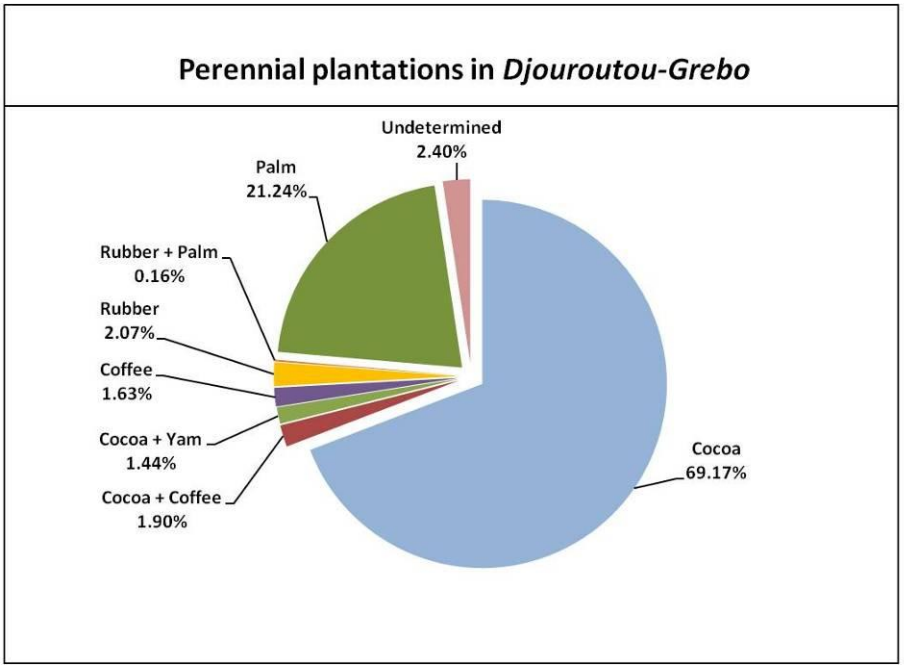
Graph 2: Land uses in the Djouroutou-Grebo corridor

Perennial plantations within the corridors:

Crops and plantations being the most common land use in the corridors, we found it relevant to detail the different kind of crops and plantations in both corridors. Overall we noted that the most common perennial plantations were **cocoa and rubber trees in Taï-Grebo**, **cocoa and palm in Djouroutou,** whereas **rice** was the most common annual crop in both corridors (graph 3 and 4). A map showing the distribution of the different lad uses is shown in figure 5.



Graph 3: Perennial plantations within the Taï-Grebo corridor



Graph 4: Perennial plantations within the Djouroutou-Grebo corridor

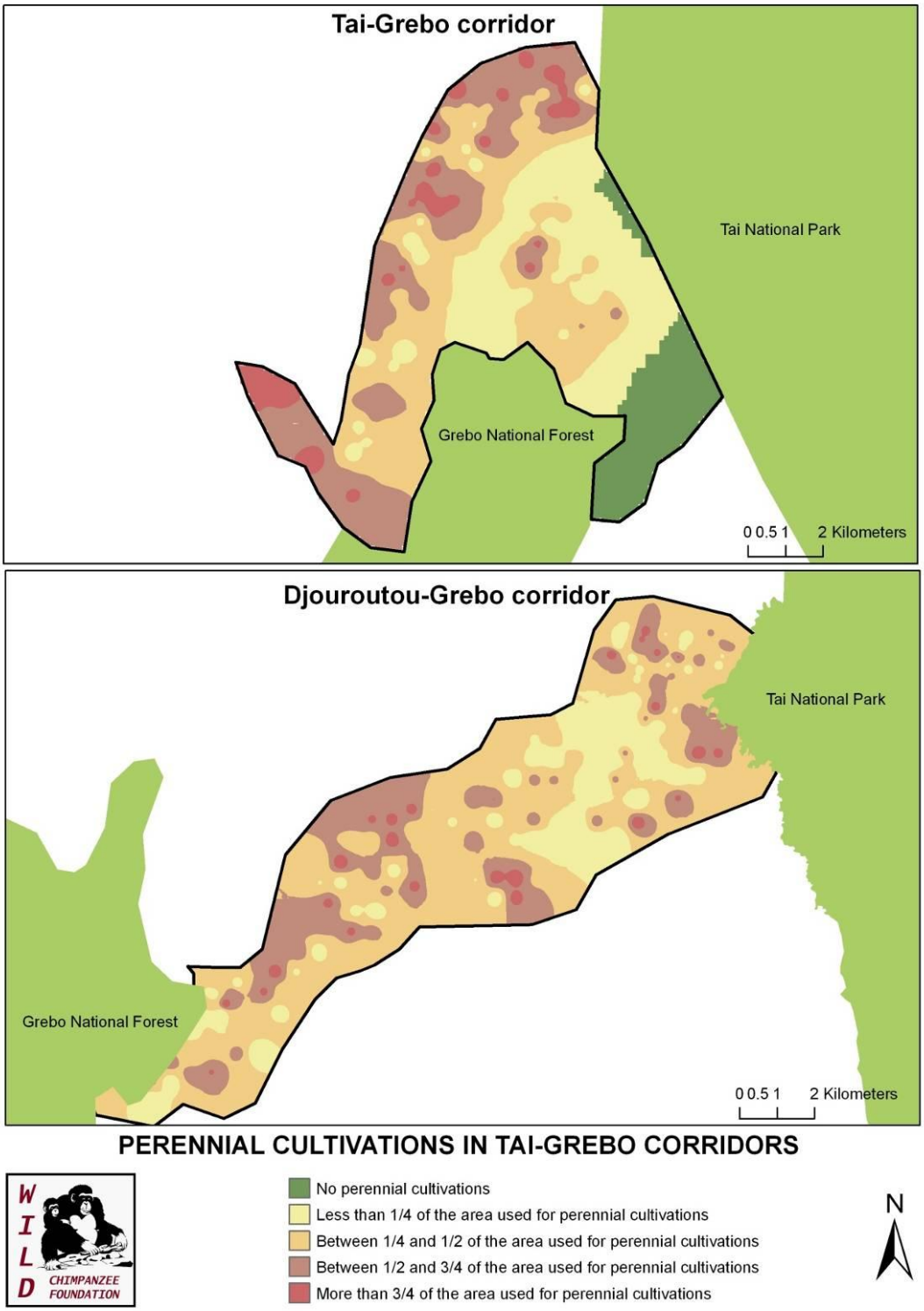
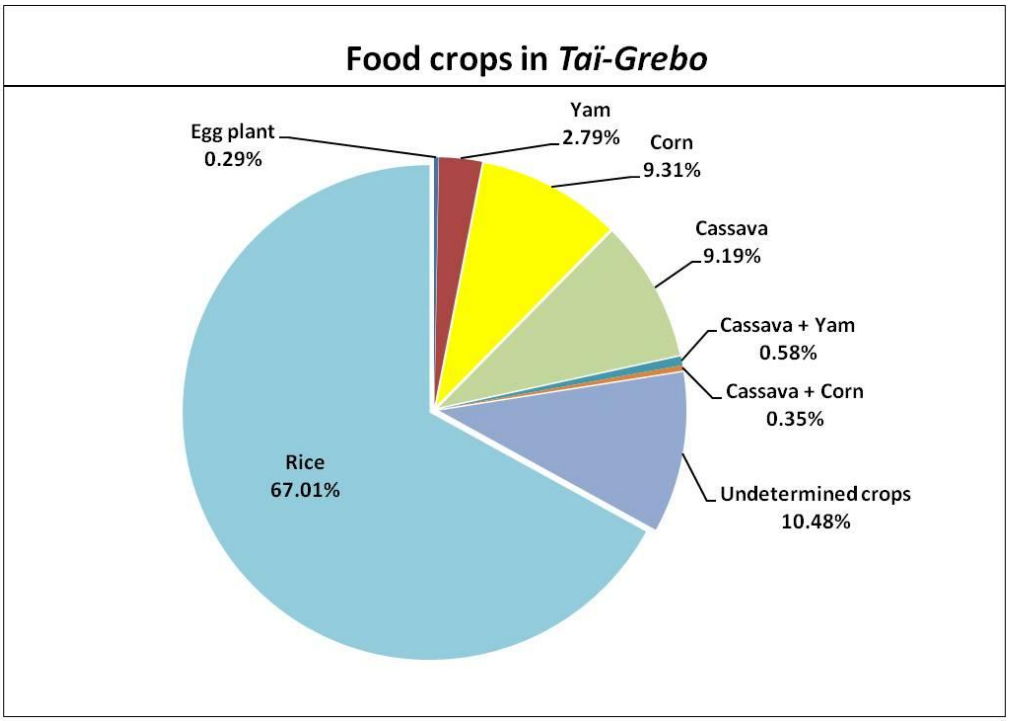


Figure 7: Perennial plantations in the corridors

Food crops within the corridors:

Graphs 5 and 6 show the percentage of the different kinds of food crops found in plantations in the 2 corridors.

Graph 5: Food crops within the Taï-Grebo corridor



Graph 6: Food crops within the Djouroutou-Grebo corridor

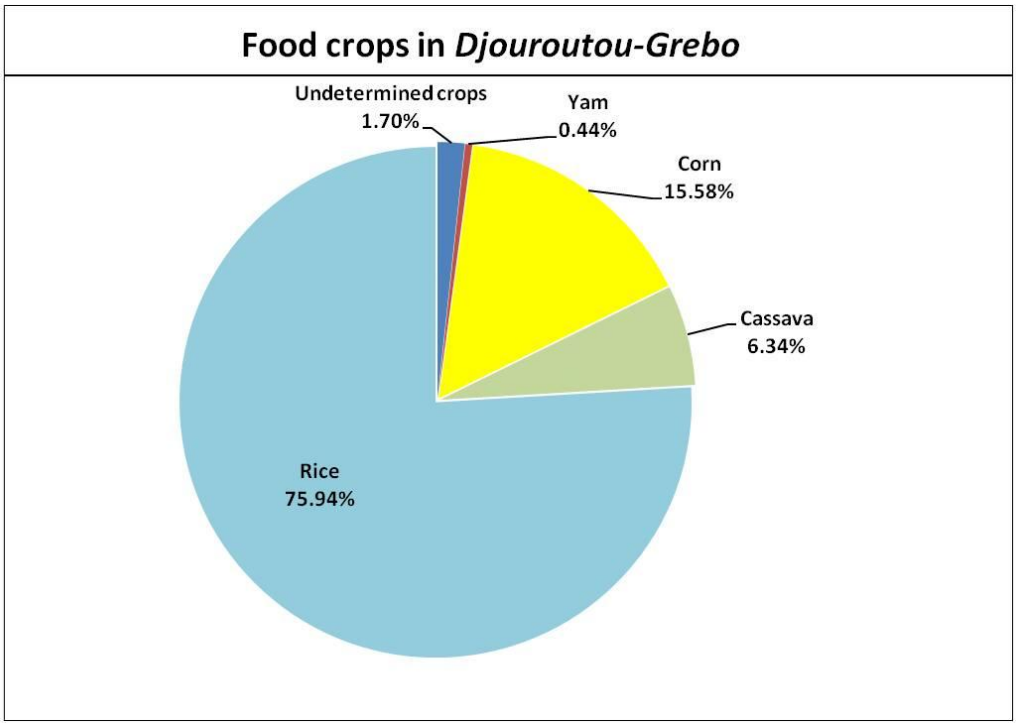


Figure 8 shows the spatial distribution of the various food crop plantations:

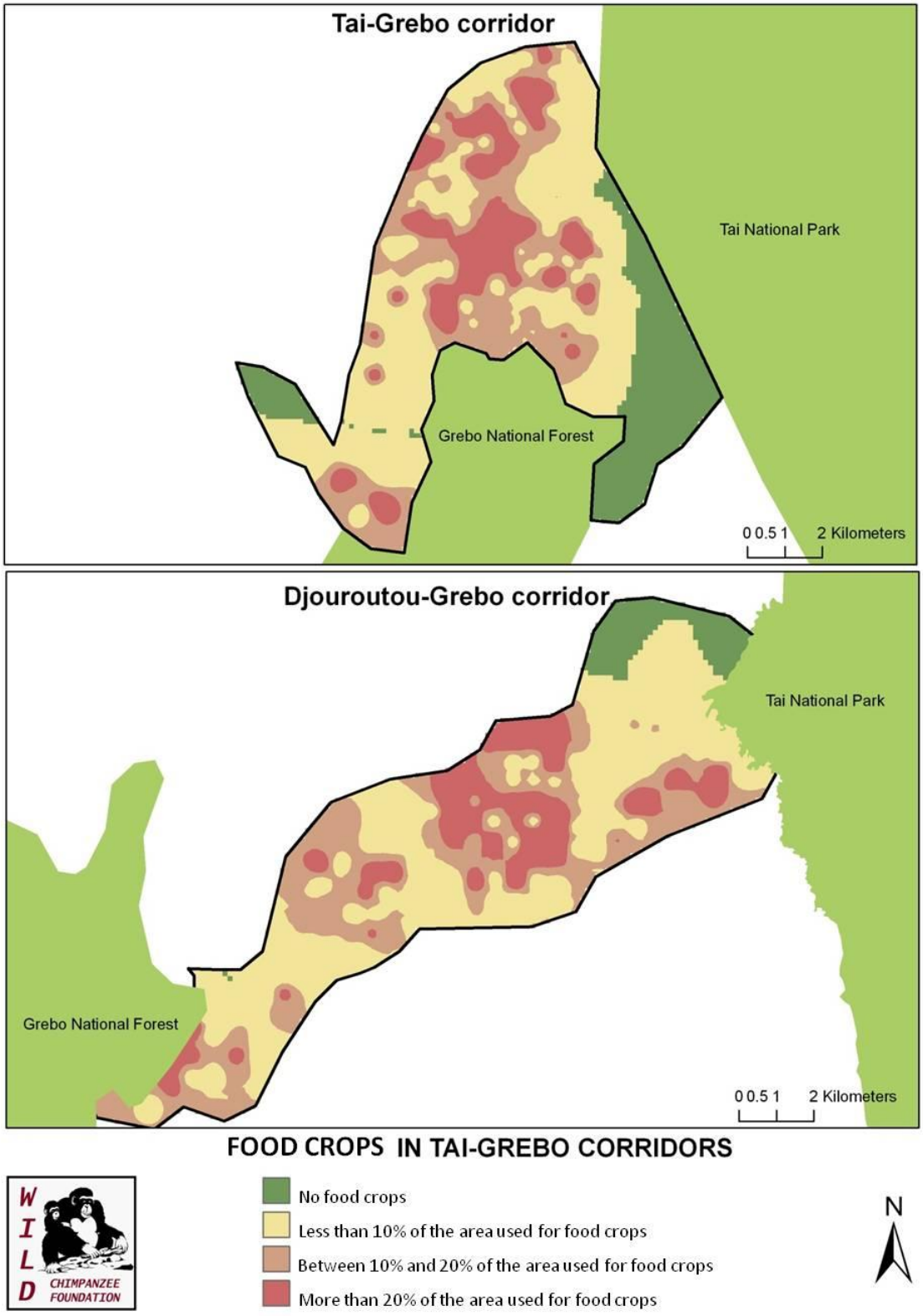


Figure 8: Food crops in the corridors

Other human activities :

The second main human activity within the corridors was poaching, followed by fishing and logging. This was the case for both corridors, as in Taï-Grebo poaching represented 52.30% of the other human activities and 83.04% in Djouroutou-Grebo (table 5). The most common poaching practice was **trapping**, as we noted an encounter rate of about 1 trap every 2 km in the corridors. Fishing was practiced along the river banks, and logging activities represented no more than 4% of the human activities within both corridors. Figure 9 show the spatial distribution of the observed poaching presence signs.

Table 5: Proportion of other human activities

Activity	Observation	Observations on transects	Observations along rivers	Encounter rate (km^{-1})	Importance of the activity
TAÏ-GREBO CORRIDOR					
Fishing	Fisherman camp	0	2	0.01	4.93%
	House	0	9	0.05	
	Other	1	3	0.02	
Poaching	Gun shoot	1	0	0.01	52.30%
	Empty gunshell	15	22	0.20	
	Poacher path	9	0	0.05	
	Trap	52	60	0.62	
Logging	Cut tree	0	5	0.03	3.29%
	Other	1	4	0.03	
Other activities	Undetermined camp	40	2	0.23	39.47%
	Pirogue	0	13	0.07	
	Road	60	5	0.36	
TOTAL HUMAN ACTIVITIES Taï-Grebo		**179**	**125**	**1.68**	**100%**
DJOUROUTOU-GREBO CORRIDOR					
Fishing	Fisherman camp	0	3	0.02	5.36%
	Fisherman path	0	2	0.01	
	Fisherman on water	0	1	0.01	
Poaching	Gun shoot	3	0	0.02	83.04%
	Empty gunshell	8	22	0.22	
	Gunshell	0	1	0.01	
	Trap	22	37	0.43	
Logging	Cut tree	0	4	0.03	3.57%
Other activities	Pirogue	0	1	0.01	8.04%
	Road	5	0	0.04	
	Digging of a Gambian pouched rat burrow	0	1	0.01	
	Villages	2	0	0.01	
TOTAL HUMAN ACTIVITIES Djouroutou-Grebo		**40**	**72**	**0.80**	**100%**

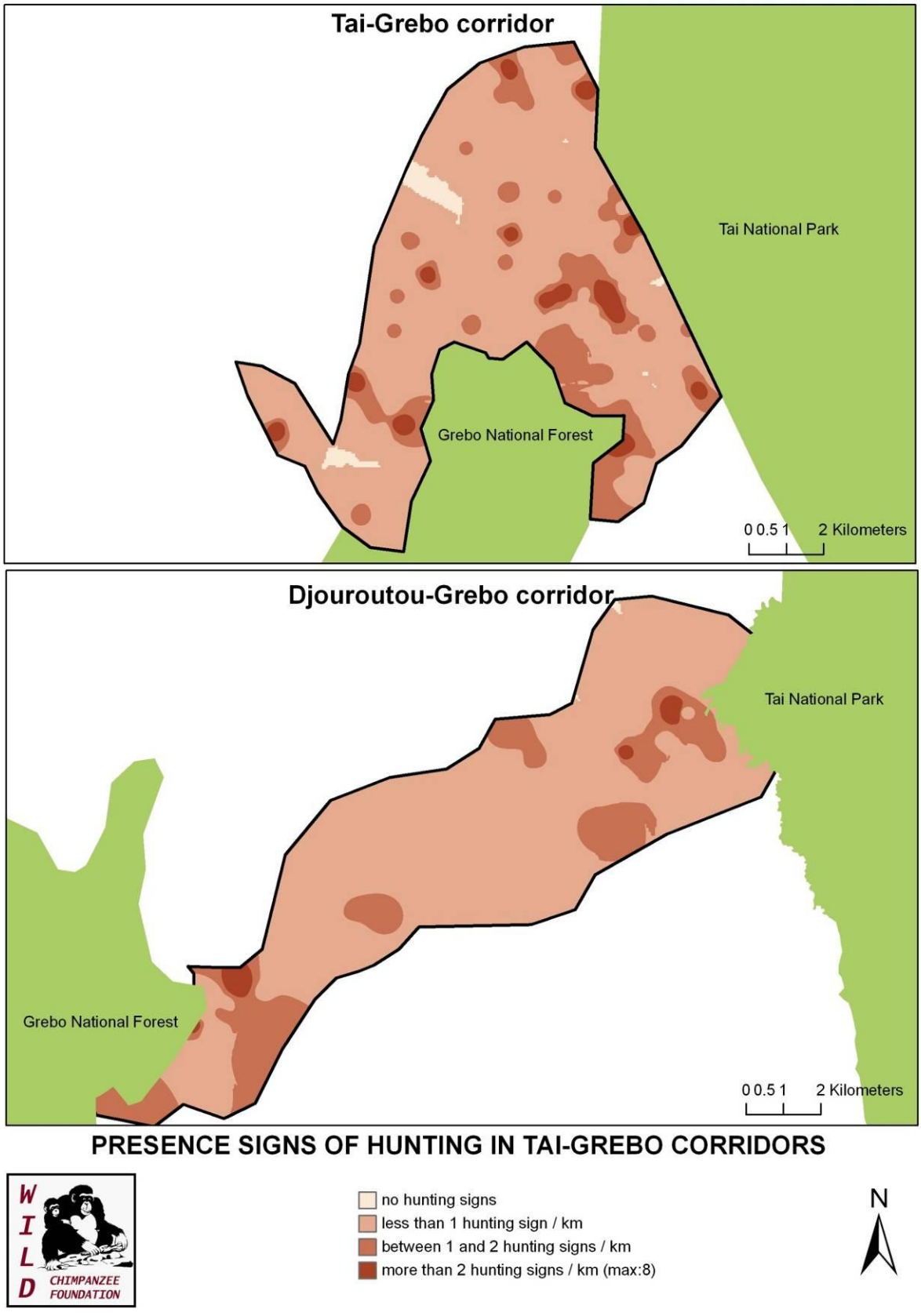


Figure 9: Spatial distribution of the poaching activity signs

Remaining forests and land clearance :

The analyses allowed us to identify the areas still forested within the corridors. They were found **mostly in the South of the Taï-Grebo corridor, at the Eastern and the Western tips**. For the Djouroutou-Grebo corridor, we noted forests **in the areas adjacent to Taï NP and Grebo NF.** Areas where forests were identified were also noted and figure 10 (next page) shows a spatial distribution of these areas regarding the percentage land cover. Figure 11 shows the spatial distribution of the cleared areas within the two corridors.

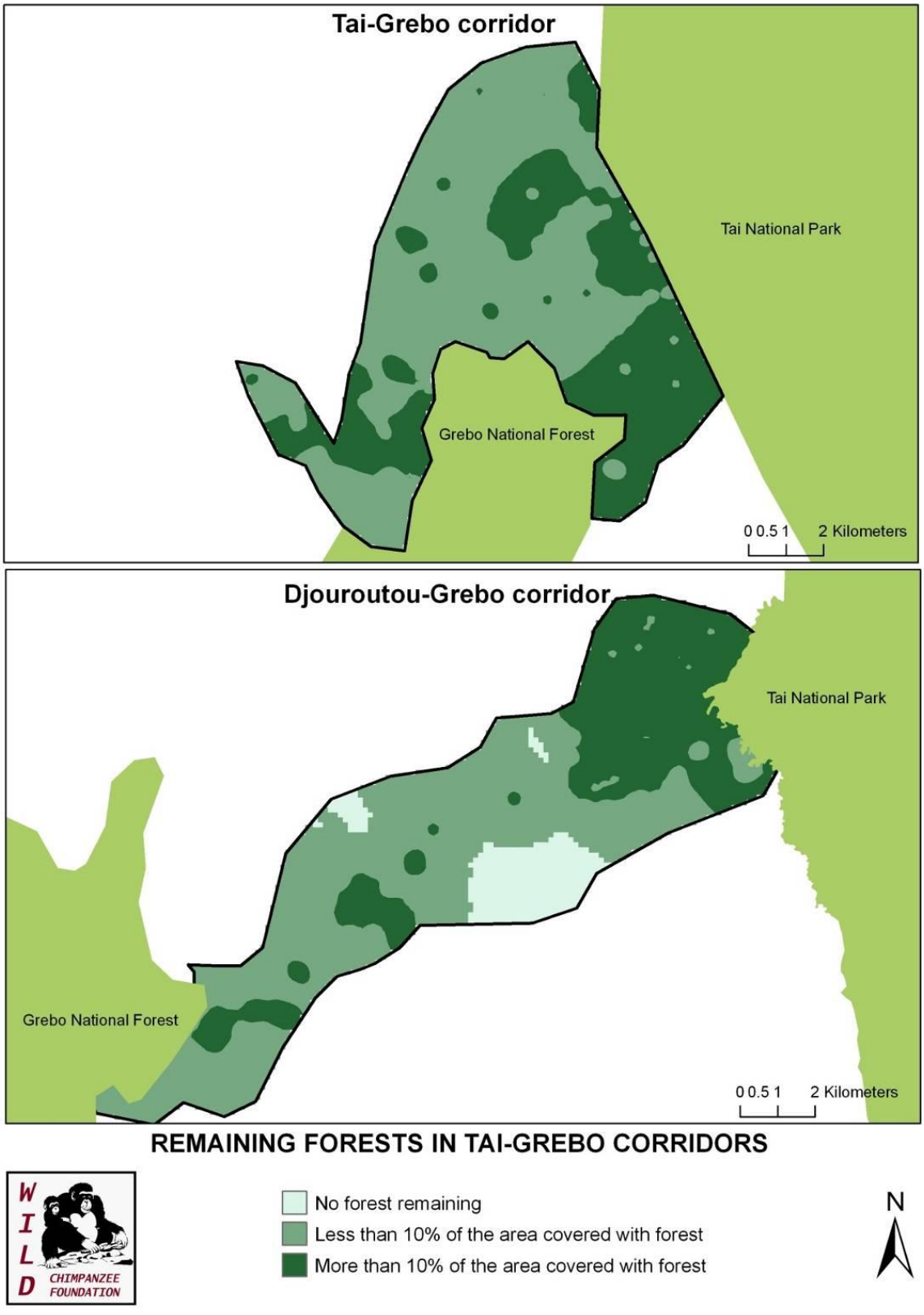


Figure 10: Spatial distribution of the remaining forests

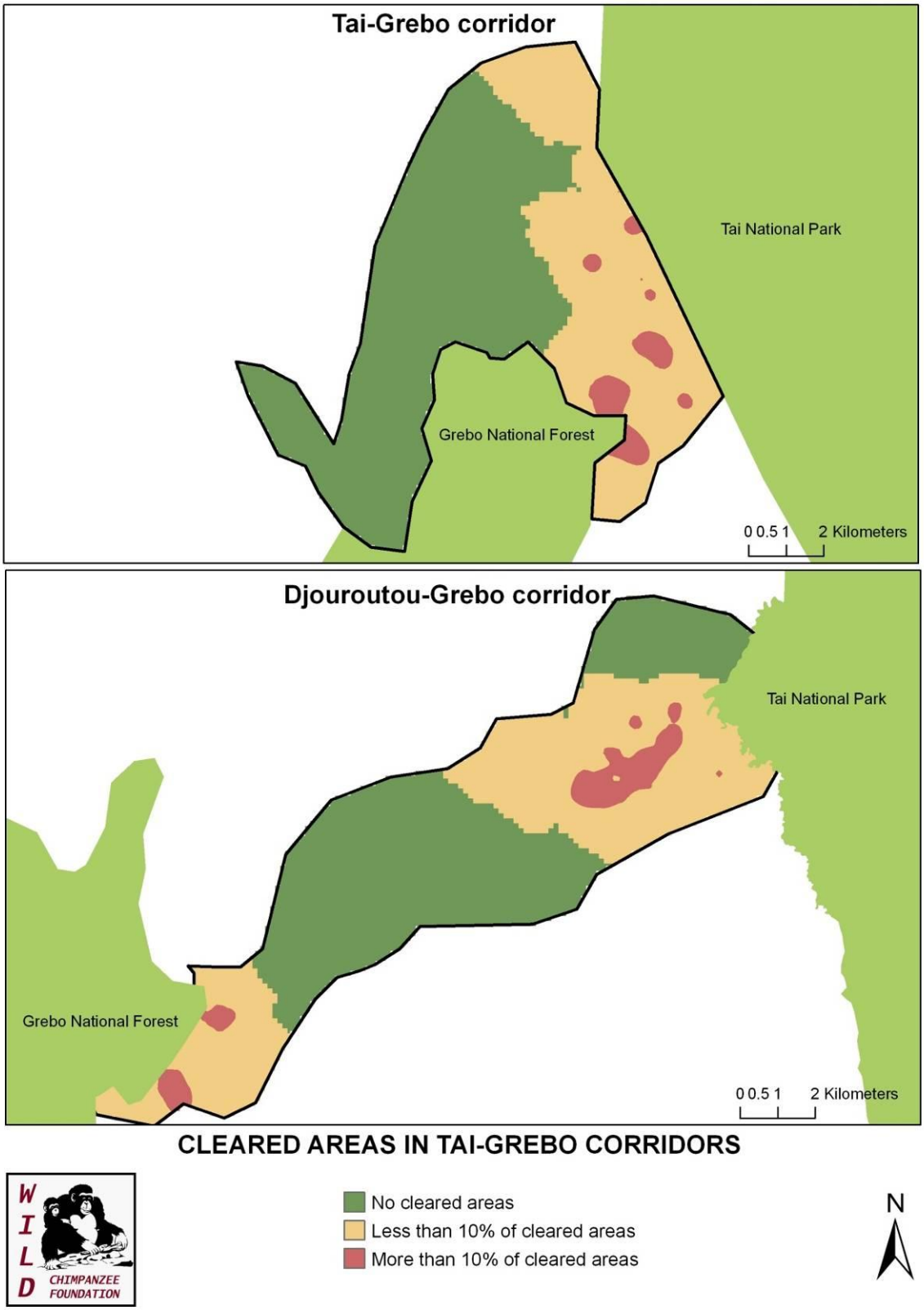


Figure 11: Spatial distribution of the cleared areas

When compared to the spatial distribution map for the duikers, we found that those animal populations were mainly present in these forested areas, although these areas are threatened by the anthropogenic clearing for plantations with 0.56% for Taï-Grebo and 2.8% for Djouroutou-Grebo of the total surface having been recently cleared for agricultural practices.

3.DISCUSSION, CONCLUSION AND OUTLOOK

This report will act as a basis for further implementation of conservation measures within the corridors and the Taï-Sapo Forest Complex. The results generally show that though the corridors are largely used by the local communities for their agricultural practices **there is still some forest remaining and that these areas are still used by local wildlife**. This means there is a potential for these 2 identified areas to be set as landscape corridors to connect the Taï National Park with the Grebo National Forest. Nonetheless, it is also evident that poaching is common within these zones and that the animals in the area are largely threatened by this. Various actions thus need to be carried out in order to facilitate the creation of the landscape corridors, to reduce poaching and to increase the support from the local communities to stop clearing land for further plantations. Proposed activities are discussed further below. Lastly, this survey has allowed us to estimate the abundance of animals within the corridors and will this aid in monitoring the wildlife populations in the same areas in the future.

1. **Reforestation:**

It is essential that reforestation is carried out in the two identified corridors, as our survey shows that the majority of the area has been deforested for plantations. In order to do so, the local communities would need to be central to the project and encouraged to assist in the planting of trees. The tree species selected would be profitable for both the wildlife and the local communities (see agro-forestry below). This will be discussed with the population and the authorities. A 100-200 m-wide reforested band along each river bank will be proposed, with the local populations deciding on how it should be managed.

2. Development of agroforestry:

Within the reforested band of the corridors, as well as outside, agro-forestry practices will be both encouraged and proposed to the local farmers that have their plantations in that area. In 2011, a study by an independent consultant to evaluate the possibility of developing sustainable agricultural and the use of non-timber forest products in the Taï-Grebo corridors will be carried out, under STEWARD funding. Results from this study will help identify the local community members concerned as well as which produce will be most profitable for the local populations. Moreover, by working in collaboration with Rainforest Alliance for example, workshops could be prepared to help the local farmers in developing these new farming techniques as well as forming local farmer cooperatives which will be beneficial to them as by forming cooperatives; farmers can aggregate their produce and therefore get a better price, as they will be better informed of the market price. Most importantly, if these new practices are adopted in the region, forest cover can be increased and maintained and thus the landscape corridors would potentially be used by the local wildlife.

3. Development of the non-timber forest products:

We also would like to support the production of non-timber forest products (NTFP). As this report states, we noticed that most of the land is used for plantations of cocoa, coffee, or rubber as these products are sold widely and generate a lot of income for the populations. Nevertheless, there are many indigenous species of plants that are not exploited anymore, and for certain cases even disappearing. Plants such as raphia, used to make furniture or build houses, some large-leaves plants used to pack food products, or wild nut picking to do local sauces are just some examples of what could be exploited. The study mentioned above will also identify the most beneficial and profitable NTFPs for the region.

By re-developing these techniques, the local populations would benefit more from the protection of the forests in the rural areas and would potentially be more accepting of the landscape corridor and reforestation. Animals would also use the corridors to migrate without diminishing the fertile land surface for the local communities.

4. Education and sensitization (theater, IEC, school competitions, medias):

To further educate the local population, three local school theatre groups have been set up in the past by the WCF in collaboration with professional theatre group "Ymako Teatri". Such groups could carry out educational theatre performances about the benefits of the landscape corridors and reforestation in the villages concerned by the project, as theatre has been shown to be an effective means of getting messages across to local populations. Additionally, IEC days (Information, Education, Communication) could assist in building capacity of various key actors for the conservation of the Taï National Park specifically for developing their ability to initiate sensitization activities on their own as well as to assist in local development within the corridor areas. As such, the participants would include local government staff for the sector, local volunteers for conservation and development and local NGO members. By carrying out all different forms of education, including also extracurricular programs aimed at young school children, actions taken towards the conservation of the park and the implementation of the transboundary landscape corridor would be facilitated by increasing the awareness in the concerned populations, by having local people in the region who understand and know the initiative and could therefore discuss the project with anyone interested or concerned about how they could benefit from it.

5. Regular biomonitoring to assess the evolution of the corridors and orientate the management actions:

It is important that in the following years, regular surveys to monitor the evolution of the wildlife populations need to be carried out within the corridors, following the same methods used in this initial study. Results from these surveys will then be used as a tool in guiding the conservation actions carried out by WCF and its partners, such as the OIPR, in order to successfully, create and preserve these two landscape corridors for the Taï-Sapo Forest Complex.

6. Communication improvement between stakeholders from both countries

In order to improve the harmonization of the conservation activities across the Taï-Sapo Complex, a priority action involving the increase of knowledge sharing amongst the

transboundary partners (OIPR, FDA, SODEFOR, WCF, other NGO, private sector) would be essential. In order to do so, it would be recommended to set up a steering committee involving all the aforementioned stakeholders to oversee all activities on both sides of the border. Additionally, technical committees for land uses, legislation and PES (Payment for the Environmental Services) should be set up to coordinate and harmonize the respective conservation actions. As such, results from surveys such as this one could be easily shared and discussed with all partners.