

Wildlife Conservation in the Ebensuk-Mambo and Tali-Bara Communal Forest Area

**Report Submitted to the
Rufford Maurice Laing Foundation**

by

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EXECUTIVE SUMMARY

This report summarizes preliminary results of a project designed to build community based conservation capacity (CBC) by assisting local communities in the buffer zone of the Bayang-Mbo Wildlife Sanctuary (BMWS) to obtain legal tenure over their forest resources through the establishment of a community forest. The area proposed for the community forest is located in Upper Banyang sub-division (9° 30' E, 5° 10' N) and is part of the Cameroon Highlands ecoregion (see Maps 1 & 2). This ecoregion is a recognized biodiversity hotspot (WWF, 2003) and is home to a number of endangered species including the Elephant (*Loxodonta africana cyclotis*), Chimpanzee (*Pan troglodyte*), Drill (*Mandrillus leucophaeus*) and Dwarf Crocodile (*Osteolaemus tetraspis*) (IUCN, 2003). Cameroon's Forestry Law of 1994 allows for community-based conservation (CBC) in the form of co-management of protected areas, joint management of wildlife sanctuaries as well as community forests. In response to a request from the communities involved, this project aims to build the biodiversity conservation capacity of the Tali and Bara communities located in the forested gap between the BMWS and the Upper Banyang Forest Concession (UBFC) through the establishment there of a community forest. The forest area concerned favours the CBC ethos because it is not only rich in biodiversity but contributes substantially to the livelihood of the communities in the forest area.

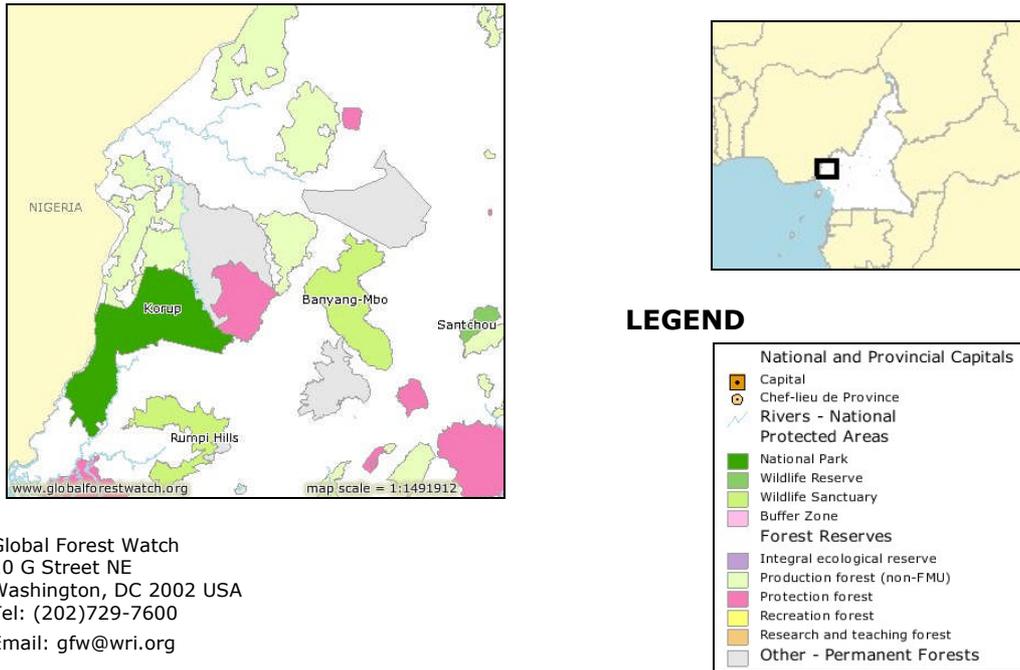
The project itself was initiated in 2003 when the chief of the Ebensuk community of Upper Banyang Sub-division put forward a request to the present team on behalf of his community and the adjacent Mambo community for technical assistance in setting up a community forest. Our response to this specific request and subsequent findings from our research efforts in the region is the subject of this report. Briefly, it was learned that the entirety of Ebensuk-Mambo's communal lands had been granted, without their knowledge or consent, to the forest concession. These circumstances led us to re-orientate the project to the adjacent Tali and Bara communities, who expressed interest in community forestry upon learning about our activities in Ebensuk-Mambo. It will be managed to generate alternative sources of income that will reduce pressures on forest resources and ease conflicts between community development priorities and conservation.

The report itself is organized into 4 sections presenting the research results and a final concluding section with future directions. The 4 sections are:

- **Section 1: Community Sensitizations and Initial Formation of Ad-hoc forest management committee**
 - Provides a log of team efforts to sensitize the communities involved, including an discussion of village politics that might affect the project.
- **Section 2: Socio-economic Surveys**
 - Presents preliminary results of forest use in the Ebensuk-Mambo and Tali-Bara communities.
- **Section 3: Community Forest Management Inventory**
 - This report is divided into two section, botanical and wildlife surveys, which point to the rich biodiversity in the Tali-Bara communal lands. This includes direct observation of Elephant (*Loxodonta africana cyclotis*).
- **Section 4: Stakeholder Discussions**
 - Summarizes the complex issues the project is presented with as it tries to implement a community forest in a stretch of forest that is also of interest to major stakeholders such as Wijma Forest Company, Wildlife Conservation Society (WCS) and government.

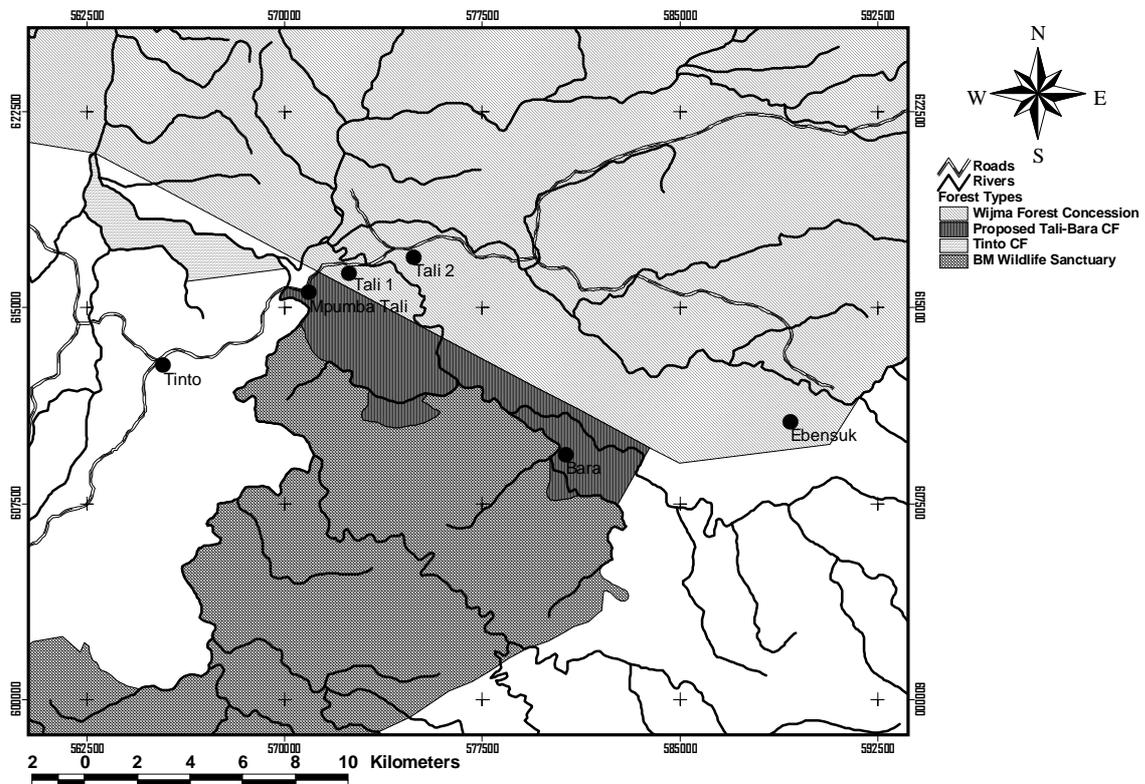
MAPS

Map 1: Location of project area in Cameroon



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 Washington, DC 2002 USA
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Map 2: Close-up of project area showing proposed Tali-Bara in centre with Banyang-Mbo Wildlife Sanctuary to the south and the Wijma forest concession to the north.



INTRODUCTION

The aim of this project has been to build community base conservation capacity (CBC) by assisting local communities in the buffer zone of the Bayang-Mbo Wildlife Sanctuary (BMWS) to obtain legal tenure over their forest resources through the establishment of a community forest. The area proposed for the community forest is located in Upper Banyang sub-division (9° 30' E, 5° 10' N) and is part of the Cameroon Highlands ecoregion (see Maps 1 & 2). This ecoregion is a recognized biodiversity hotspot (WWF, 2003) and is home to a number of endangered species including the Elephant (*Loxodonta africana cyclotis*), Chimpanzee (*Pan troglodyte*), Drill (*Mandrillus leucophaeus*) and Dwarf Crocodile (*Osteolaemus tetraspis*) (IUCN, 2003). Cameroon's Forestry Law of 1994 allows for community based conservation (CBC) in the form of co-management of protected areas, joint management of wildlife sanctuaries as well as community forests. In response to a request from the communities involved, this project aims to build the biodiversity conservation capacity of the Tali and Bara communities located in the forested gap between the BMWS and the Upper Banyang Forest Concession (UBFC) through the establishment there of a community forest. The forest area concerned favours the CBC ethos because it is not only rich in biodiversity but contributes substantially to the livelihood of the communities in the forest area.

The community forest is intended to serve as a conservation buffer zone and wildlife corridor between the BMWS and UBFC, being a conservation-oriented community forests with limited timber extraction. This forested areas contains homesteads and traditional farming lands of the Tali and Bara communities. However, the Government of Cameroon (GoC) opted for a wildlife sanctuary status for the 656 km² Banyang-Mbo in 1996 rather than a national park status (Naughton *et al.*, 1999). This outlaws hunting of endangered species and restricts logging but maintains local people's usufruct rights. The area is rich in biodiversity: Nchanji and Plumptre (2003) assert that the BMWS 'may be the only submontane habitat in Cameroon with a viable elephant population'. On the other hand, the GoC has awarded a the 728 km² UBFC to the Dutch-based firm Wijma in close proximity to BMWS, which has increased resource use pressure in the forest area, including the risk of illegal logging. Wijma is implicated in illegal logging and criticized for neglecting its responsibilities to communities in its other forest areas of operations in Cameroon (Greenpeace International, 2002, 2003). It should be noted however that thus far Wijma has fulfilled its financial obligations to local communities in Upper Banyang.

A community based conservation (CBC) approach such as community forestry as opposed to a fence-and-fine or fortress conservation approach is an appropriate model for conservation in the buffer zone of the BMWS. Advocates maintain that CBC eliminates people-wildlife conflict and reduces the social cost of conservation (Brockington, 2002; Purdon, 2003; Schmidt-Soltau, 2003). Critics of used-based approaches such as CBC have maintained that communities do not have altruistic motivations or technical know-how to conserve biodiversity (Attwell and Cotterill, 2000; Oates, 1999). While acknowledging these criticisms, it is our intention that in order to avoid future conflicts if interest between community and larger stakeholders it is necessary to build community conservation capacity and identify alternative, non-consumptive forest uses for livelihood improvement. A local example demonstrating the benefits of the CBC approach comes from Birdlife International, which has been involved in CBC for more than a decade. In 2003, the organization released satellite images of Mount Oku, a community conserved area in the Cameroon Highlands, which show a net increase in forest area over the past decade (Birdlife International, 2003). The current initiative with the Tali and Bara communities is in part inspired by the positive results from CBC on Mount Oku. But just importantly, competing land use claims in the area make necessitate a use-based approach.

The project itself was initiated in 2003 when the chief of Ebensuk put forward a request to the present team on behalf of his community and the adjacent Mambo community for technical assistance in setting up a community forest. Our response to this specific request and subsequent findings from our research efforts in the region is the subject of this report. Briefly, it was learned that the entirety of Ebensuk-Mambo's communal lands had been granted, without their knowledge or consent, to the forest concession. These circumstances led us to reorientate the project to the adjacent Tali and Bara communities, who expressed interest in community forestry upon learning about our activities in Ebensuk-Mambo. It will be managed to generate alternative sources of income that will reduce pressures on forest resources and ease conflicts between community development priorities and conservation.

SOCIAL AND ECOLOGICAL CONTEXT

Social Context

The forest area concerned is in the Upper Banyang sub-division, Manyu division of the Southwest Province of Cameroon (9° 30' E, 5° 10' N). The people of the area are known as Banyangs (*sing Manyang*) and are of the Kenyang bantoid language group spoken by over 60 000 people in 60 villages in Manyu. The village communities are acephalous and patrilineal with a high degree of cultural homogeneity. The people are mainly farmers producing cash crops such as cocoa and coffee, and food crops such as cassava and maize. Other livelihood activities include gathering non-timber forest products (NTFPs) and hunting.

A youth exodus to urban areas in search of jobs and better social amenities characterizes the communities. In Ebensuk-Mambo there is one primary school, one health centre (situated about 4km away) and a prominent market (Nfaga). The market attracts traders and buyers from within and out of Manyu division; amongst it wares are different species of bushmeat. Tinto similarly hosts one primary school and a health clinic. Farming is very conspicuous in the life style of the people in this area with Cocoa (*Theobroma cacao*) constituting their major cash crop followed by coffee. NTFPs like Njansag (*Rhicinodendron heudoloti*) are also very important in sustaining the livelihoods of the local populations, some time fetching up to 200,000 CFA francs per harvest season per household (800Fr/kg =1.6\$ US). The people are entirely dependent on their forest resources for their livelihood.

The traditional system of governance is the clan council consisting of the village chief, elders and other notables from well-regarded community associations. Modern governance associations also exist and the most significant is the clan union made up of a number of villages that lay claim to a common ancestry. The clan union is opened to every adult male and female member of the clan and usually has branches in major cities across Cameroon. While traditional authorities still have influence, their effectiveness is circumscribed by the state.

Ecological Context

The region proposed for a community forest has a typical Gaiena – Congolian climate with two distinct seasons. A long raining season from May to November, with October being the rainiest month, least rainfall is recorded in January (Nchanji and Plumptre, 2003). The annual rainfall is 34977 mm with a mean of 4082.7 +- 486.6mm, with the rainy season lasting from April – October and the dry season from November – March. The mean maximum temperature is 30.2 °C and minimum is 23.7 °C (Nchanji and Plumptre, 2003). Apart from the indicated high rainfall, this area is watered by a commendable array of water bodies. Beside the river Tandie, Mfi, and Mfu that naturally borders this area, the area is criss-crossed by a number of seasonal and slow flowing streams which become very important in volume during the raining season. These water is home to many fish species whose diversity has not yet been evaluated, including the endangered aquatic chevrotain.

In terms of soils and topography, the area is situated on inferior Precambrian formations with relatively flat relief (Letouzey, 1968). The area is generally flat with altitudes ranging from 120 – 1200m above sea level with gentle hills that reach altitudes of 1200m to the south. The soil types vary from the yellow ferric soils to sandy soils and a mixture of sand and mud in the swampy areas (hydromorphic soils). The vegetation of the area is defined by Letouzey (1968) as the Atlantic Biafran type, characterized by Legriminosae and Caesalpinoidae. This vegetation type is wide spread within 100km from Nigeria to Equatorial Guinea. The proposed forest area is effectively rich in Caesalpinaceae. Although Letouzey (1968) generalized vegetation type for the entire area, it should be noted that the area is punctuated with a variety of habitat types, rich in other indicator species like the swamps *Raphia* spp, *Uapaca guineensis*, and *Lophira alata*.

However global climate change could lead to conditions which are too dry for the establishment of rainforests, leading instead to the establishment of ecosystems that retain less biomass (such as savannahs). Such has been identified for African rainforests. They are found to be moderately water-stressed, drier and also cooler (because of being at slightly higher altitudes) than rainforests in the Amazon and Asia (Malhi and Wright, 2004). More importantly, these authors present data from the past 40 years indicating, that while all tropical rainforest regions have seen a rise in temperature (on average, 0.26 °C per decade since the mid-1970s), a strong drying trend distinguishes African rainforests.

PROJECT DESIGN

Aim

The initial aim of this project was to build community base conservation capacity (CBC) by assisting the Ebensuk-Mambo community obtain legal tenure over their forest resources through the establishment of a community forest. This was to be achieved through community sensitization on the conservation value of their forest, capacity-building in participatory forest management as well as facilitating the demarcation and legal registration of a community forest area for Ebensuk-Mambo. As described above, it was learned during the initial stages of the project that the entirety of Ebensuk-Mambo's communal lands had been granted, without their knowledge nor consent, to the forest concessionaire. These circumstances led us to reorientate the project to the adjacent Tali and Bara communities, who expressed interest in community forestry upon learning about our activities in Ebensuk-Mambo. The project is designed with the stated intention that it would have a long-term positive impact on local livelihoods, on wildlife in the BMWS and on local capacity to monitor the forest concessionaire.

Objectives

Our initial objectives were as follows:

It is important to note that after our first two visits to Ebensuk-Mambo, specific project activities related to the implementation of the community forest, though initially intended for Ebensuk-Mambo, were shifted to Tali-Bara.

- i. To sensitize Ebensuk-Mambo and other villages around the BMWS on benefits, rights and obligations with respect to managing a CF.
- ii. To facilitate the establishment of a legally approved Tali-Bara forest management committee having regulations and articles of association based on well-defined benefit sharing and conflict resolution mechanisms.
- iii. To build the capacity of community to obtain socio-economic and ecological data and draw up a simple community forest management plan.
- iv. To improve the livelihood opportunities available to the Tali-Bara rural communities

Methodology

Our methodology included:

- i. Community sensitization meetings to serve as a forum for project research team and community to interact and design work plans.
- ii. Participatory land-use assessment to understand the drivers and pressures on the forest and to obtain information on the community forest extent.
- iii. Participatory socio-economic survey to obtain data on resource use and its impact on livelihoods and structural forest change over time.
- iv. Formation of an ad-hoc forest management committee
- v. Institutional capacity building of ad-hoc forest management committee
- vi. Demarcation of community forest boundaries to delimit forest extent under community management and avoid conflict with other non-participating communities.
- vii. Community Forest Management Inventory (CFMI) to obtain baseline data on forest composition and richness for management purposes.

Deliverables to be realized by the end of project included:

- i. Data from surveys and inventory obtained, analyzed and presented to community.
- ii. Community forest boundaries demarcated.
- iii. Distribution map from Community Forest Management Inventory (CFMI) produced.

Proposed Work-plan

Activity	Month	1	2	3	4	5	6	7	8	9	10	11	12
Team arrive Ebensuk-		■											
Initial community sensitization meeting		■											
Monthly project-community meetings			■	■	■	■	■	■	■	■	■	■	■
Participatory land-use assessment			■										
Participatory socio-economic survey			■	■						■			
Formation of Forest Management Committee (EMAFMC)				■									
Institutional capacity building of the EMAFMC				■					■				
Legal Registration of EMAFMC					■	■	■						
Demarcation of community forest boundaries					■	■							
Participatory Community Forest Management Inventory				■	■					■			
Progress reports					■				■				
Simple management plan (SMP)									■		■		
Project Workshop												■	
Final report													■

The above table shows that the project was to be executed over a 12-month project. Furthermore funding restriction meant that the project was sub-divided into 3 stages of 4 months duration. Stage 1 consisted of activities from months 1-4, stage 2 from months 5-8 and stage 3 from months 9-12. This report then summarizes project activities up to Stage 1.

The results presented herein are of project activities conducted from November 2004 to November 2005. The activities executed are Stage 1 activities initially planned for 4 months but due mainly to logistical reasons and field exigencies extended to 12 months. The principal exigency was the change of geographic focus for the project from Ebensuk-Mambo to Tali-Bara.

Project execution team

The project execution team consisted of Emmanuel Nuesiri, Feka Zebedee, Mor-Achankap Bakia, and Mark Purdon (Canadian). Alfred Akumsi, Grace Ntube and Priscilla Lingondo, all from the Regional Centre for Conservation and Development (RCDC) Limbe Cameroon, were co-opted into the team due to the withdrawal of Rachel Avery and Katherine Hallewell for personal reasons.

SECTIONAL REPORTS OF PROJECT ACTIVITIES

Section 1: Community Sensitizations

Aims and Objective:

The initial objectives of community sensitization meetings were to build community capacity towards the implementation of a community forest. More specifically, the objectives of this aspect of the project were:

- To sensitize communities on the 1994 Forest Law which includes the provision for community forestry
- To sensitize communities on the different stages in the process of acquiring a community forest
- To sensitize communities on the management responsibilities of Ad-hoc forest management committee and the roles of respective members
- To develop a participatory work plan for the different activities involved in the community forest acquisition process

Sensitization activities were begun in Ebensuk-Mambo but, as is discussed in detail below, when it was learned that their communal forestlands were unable to be included as a community forest, project activities were moved to Tali-Bara. It is thus at Tali-Bara where project activities were carried out. The focus is capacity building for the community to manage the envisaged community forest in the buffer zone between the Wijma forest concession and Banyang-Mbo Wildlife Sanctuary.

Methods:

- Village meetings were held to present the 1994 Forestry Law and the provision it makes for communities to be able to acquire and manage community forest; the community forest acquisition process; and the responsibilities and benefits of the community forest;
- Forest walks were undertaken to assess land uses, state of the forest (forest condition) and to collect GPS points of the proposed community forest area;

Record of Sensitization Visits

Ebensuk-Mambo

Ebensuk-Mambo Sensitization 1 (December 2004):

The project research team in Ebensuk and Mambo villages held two village sensitisation meetings, respectively. Flip chart presentations were made to introduce community forestry and the implementation process. Presentations were preceded by answers and question session for clarification. This first meeting also provided an opportunity to carry out an initial socio-economic survey. Results of these surveys are included in section 2.

A major concern from both communities had to do with the current boundaries of the Wijma timber concession, which they believed cut across only part of their communal land. However, the exact location of the forest concession in relation to Ebensuk-Mambo communal forestlands was not known. The forestry law of 1994, states that community forestry cannot be established on forests lands designated to other purposes, such as a logging concessions. Other questions the communities had regarded whether crop farming could be part of community forest management, and how a low-income community like Ebensuk-Mambo could fund the costly process of acquiring a community forest. The project research team decided it was necessary to verify if all or some of Ebensuk-Mambo's communal forestlands were in the concession. By end of meeting a tentative workplan was agreed upon, which included forest walks to determine the extent of Wijma concession and a socio-economic survey.

Ebensuk-Mambo Sensitization 2 and Forest Walk (January 2005)

The project research team returned to Ebensuk-Mambo in January 2005 with geo-referenced maps obtained from the Limbe Botanic Garden GIS centre. The main objective of this trip was to ascertain the extent of the available community forest area in relation to the Wijma logging concession. This was planned as a series of forest walks of Ebensuk-Mambo's communal lands using a GPS. At the end of one week of GPS surveys, it was concluded that Ebensuk-Mambo communal forestlands were entirely within the forest concession. Thus Ebensuk-Mambo is unable to apply for a community forest though it can still enter into a forest co-management programme with the logging concessionaire. The project research team presented these results and their implications to the community.

The return visit to Ebensuk-Mambo also brought the project research team in contact with the peoples of Tali and Bara, where the team had a layover while awaiting transport up to Ebensuk-Mambo. It was at this first that it was first learned of the interest of the Tali and Bara peoples in a community forest. The Tali and Bara communities are located to approximately 18 and 10 kilometers, respectively, to the west of Ebensuk-Mambo, but share a common access road. Tali is located at the western edge of the forest corridor between the forest concession and wildlife sanctuary, while Bara is located directly within. However, community members of Tali-Bara were also uncertain about the extent of land available for a community forest in relation to the Wijma forest concession and wildlife sanctuary. The project research team concluded that another visit to the region was required to assess the extent of Tali-Bara communal forest lands available for a community forest.

Tali-Bara

Tali-Bara Sensitization 1 and Forest Walk (January 2005)

This trip aimed at assessing the area of the Tali and Bara communal forestlands available within the forest corridor between the Banyang-Mbo Wildlife Sanctuary and forest concession that could be managed as a community forest. The project research team carried-out forest walks guided by community members in order to map the different land uses within the corridor area. GPS points were obtained for community farm limits, village boundaries and other topographical features that were useful to upgrade the base map. From the trip, it was clear that there exists substantial communal forestland within the corridor that qualifies to be managed as a community forest. From the geo-referenced base map it was ascertained that approximately 3500 ha were available. In addition, informal sensitization meetings were held with community members, primarily in Tali 1. Based on these results, it was deemed necessary to return for more official sensitization meetings on our findings, to begin socio-economic surveys and to gain the approval of local leaders. For instance, the Chief of Tali 1 had been away during our previous two visits.

Tali-Bara Sensitization 2 (February 2005)

The focus of this trip was a sensitization meeting and workshop at Tali 1 in order to conduct socio-economic surveys of the Tali and Bara communities. Results of these surveys are included in Section 2. One important outcome of this meeting was that it was learned that the occurrence of animal-human conflicts, especially with Elephants, was increasing. This has resulted in farms being located closer to homesteads and a fear of farm expansion with has allegedly reduced the amount of food crops produced.

Tali-Bara Sensitization 3 (March 2005)

The focus of the March trip to Tali-Bara was the Community Forest Management Inventory. However, the project research team also sought to organize a small meeting in Tali 1 to raise awareness amongst woman about the community forest process. At the previous socio-economic survey in February, it had been noted that the attendance of women to the workshop was quite low. The women's meeting that was finally arranged was not a meeting proper; rather, the traditional Tali 1 women's group permitted research team to sit at one of their meetings.

Tali-Bara Sensitization 4 (April 2005)

The focus of the April trip was the Community Forest Management Inventory (CFMI). During this meeting the project research team also arranged separate meetings with the regent chief of Tali 2 and his assistant (Tabe-Talang George Enow) and two elites of Bara (Pa Eyong and Mr. Orock) through the facilitation of the Secretary of the Tali 1 traditional council (Mbongayah Taih-Ndip) to improve the level of participation of Tali 2 and Bara.

One issue that rose regarded the fact that Bara community had, in the past, applied for a community forest. While the exact circumstances of this remain unclear, it seems that had at least formed a Common Initiative Group already to manage any community forest. Another issue raised over the course of these meetings was the need to involve community elites living outside the Tali-Bara. The village leaders expressed it as their duty to alert these elites of any community developments, but also it was hoped that elites could assist the community in ways resident community members could not. Before leaving the team however learnt from a WCS community resource person that Tali 1 had sought assistance as long ago as the late 1990s (from Living Earth, which was then assisting the nearby Tinto community with the community forest process) in order to implement a community forest on their communal forestlands.

Tali-Bara Sensitization 5 and Initial Formation of Tali-Bara Ad-hoc forest management committee (May 2005)

The primary aim of this visit was to initiate the formation of the Tali-Bara Ad-hoc forest management committee (AFMC). Another objective of this trip was to broaden the village sensitizations to include the villages of Tali 2 and Bara. We used the initial formation meeting of the AFMC to invite directly members from the other two communities whose attendance at previous meetings had been low.

Upon arrival to Tali we learned that the sensitization meetings village elites had agreed to hold in Bara and Tali 2 had not transpired. For this reason, the project research team made a point to visit the communities of Bara and Tali 2 to ensure their participation in the meeting. Immediately upon arrival to Tali 1, the project research team walked the ten kilometers to Bara to ensure the community members there were aware of the initial AFMC meeting. Immediately upon return from Bara, formal meeting was held at Tali 2. One output from the both these meetings was the nomination of 5 individuals to attend the initial AFMC meeting. On May 10, the initial meeting of the AFMC was held at the government primary school in Tali 1. Present at this meeting were seven representatives from Tali 1, four representatives from Tali 2, one sole representative from Bara, and one person whose attendance was not anticipated (Table 1). It should also be noted that present at this meeting was only one woman.

Name	Villages	Name	Village
Mbu Michael Nkemeto	Tali 1	Abange Johnson	Tali 1
Mbongayah T-N	Tali 1	Ashu-Tarh Gregoroy	Tali 2
Tabe-Talang George Enow	Tali 2	Mbu Nelson	Tali 1
Hanna Agbor Bisong (female)	Tali 2	Godwin	Unknown
Ange Taboko	Tali 1	Baiyee John Tabe	Tali 1
Joseph Ayuk Ashu	Tali 2		
Agbor Napoleon	Bara		
Ako George	Tali 1		
Mbu Nelson	Tali 1		

At this meeting, a review of the different types of institutions that are eligible to manage a community forest were made (Common Initiative Group, Association and Economic Interest Group), the different positions in the committee and their responsibilities. Also during this meeting, a brainstorming exercise was conducted to bring out qualities that specific positions of the committee should have in order to occupy the different posts. At the end of this meeting, it was agreed that the participants would hold subsequent village meetings with broader representation and start figuring out those who could occupy the various positions of the AFMC before the arrival of the team in next trip.

Discussion

Overview

The forestry law specifies that communities would be duly informed if and when the GoC decides to include their forestland as part of a logging concession. In the case of Ebensuk-Mambo, the community claims that they were not informed until the logging firm paid a visit to the area to mark the boundaries of the concession. The community is aggrieved that they had no prior notification. They feel disempowered that decisions that have a direct bearing on their well being can be made without their input. The local people alleged that they had sought the establishment of a community forest before the area was designated a logging concession but the local forestry officials apparently failed to forward their correspondences to the appropriate quarters.

The people of Tali and Bara, the two communities that depend more directly on the forest resource in the forest corridor between the Wijma forest concession and Banyang-Mbo Wildlife Sanctuary are unaware of proposals to make the corridor a no-use buffer zone. While this is good for the wildlife including the forest Elephant that is confirmed to use this corridor, there is need to address the issue of livelihoods for the communities. This is more so for a community such as Bara that is located entirely in the corridor. GPS points were recorded during a forest walk in January including the location of the village of Bara and the geographical extent of Tali's farms. This confirmed that Bara is not located in the forest concession or BMWS. This is an important result for the community as there had been disturbing rumours that they were inside the concession.

Village Politics

As the project progressed in Tali-Bara, a number of issues came to the surface that could affect the success of the community forest.

- **Questionability of Tali 2's claim to the community forest:** at our April and May meetings there were some doubts, raised in particular by residents of Tali 1, about the inclusion of Tali 2 in the community forest process. During forest walks and in the participatory mapping exercise, it was unclear if Tali 2's communal forestlands were entirely within the forest concession, or whether they stretched into the forest corridor, which is being proposed as the community forest. This will have to be negotiated at future meetings.
- **Political divisions in Tali 1:** one mistake the team made in its first and second visits to Tali-Bara was to accept the hospitality of the unofficial leader of the political opposition to the reigning Chief, a man by the name of Mr. Robinson. This occurred simply because the Mr. Robinson was a former colleague of the father of one of the project research team members. Once this was realized, all subsequent team stays were arranged at the designated Regent Chiefs. However, this did make us aware of political divisions in Tali 1, though the basis of this political division remains unclear to the project research team. The project research team will take care to be diligent to ensure that residents of all political persuasions are included during the implementation of the community forest.
- **Inclusion of Bara:** while the three communities of Tali 1, Tali 2 and Bara showed a great deal of social cohesion, there is some concern that because of the poor condition of the road to Bara and the time it takes for communication and travel there, that the people of Bara will be at a disadvantage regarding the implementation of the community forest. For instance, Bara residents voiced concern about food and lodging as well as time spent away from their homesteads in order to attend the initial meeting of the Ad-hoc forest management committee. For the same reason, most project activities to date have been carried out in Tali 1, and greater effort will be need to be made by the project research team to facilitate the inclusion of the communities involved.
- **Previous attempts at community forest in the area:** it was also learned that members of Tali 1 and Bara had independently sought to establish a community forest on their communal forestlands before. A resident resource person for WCS in Tali 1 had even said a letter was available to confirm their previous application for assistance from Living Earth. Similarly, elites from Bara stated they had tried to obtain a community forest and had formed a Common Initiative Group for this purpose.

Section 2: Socio-economic Surveys

Aims and Objectives

Participatory socio-economic surveys form an important part of the community forest process because they allow communities to ascertain the various uses of their forest, who is using them and therefore to develop an appropriate management plan. Socio-economic surveys were initiated at carried out at the Tali-Bara communities only, the results of which are presented here. Because of the problem regarding Ebensuk-Mambo, such work was not carried out there. The main objectives of the socio-economic surveys were:

- To identify and involve all types of forest users and other stakeholders in the community forest planning process
- To collect socio-economic information on the three villages required for community forest management planning

Methods

Participatory workshops were held to collect socio-economic information that will be required in forest management planning. Activities carried out to facilitate socio-economic information gathering included:

Household lists

The objective of this activity was to obtain a list of the households, which need to be represented in the village forest management committee. The product of this activity is a list of all the households showing the name of the household heads, which is of important use for land tenure purposes during the future community forest attribution process. For the time being, familiarity with the household list will facilitate team interactions with community members.

Stakeholder analysis

The objective of this step was to identify all forest user groups, their stake and level dependence on the forest. Also it was important to nominate groups that need to be involved in the preparation and implementation of the forest management plan. The product is a list of identified interest groups, their stake and level of forest dependency and names of representatives of the identified interest group.

Forest product prioritisation matrix

The objective is to indicate preferences, priorities and differences for species and products between different interest groups. It was also useful to identify which products and species the forest management plan needs to concentrate on. The output is a forest product matrix showing priority species for biodiversity conservation. Such matrices were made for both NTFPs and timber.

Participatory mapping

The objective of this activity is to show which products are collected and from where in the forest and to highlight differences in dependency in forests amongst different groups in the village. The product is a participatory forest resource use map showing which products are being utilised from each part of the forest and their relative abundance.

Trend Statement

The objective of this exercise is to understand the use of forest over time. The trend statement is organized as chronological table with events at the village, forest and national level recorded.

Seasonal calendars

The objective of this step was to investigate the seasonal use of the forest and other village activities. The product of this activity is a calendar of activities carried out by the villagers at different times of the year.

Ebensuk-Mambo

The Ebensuk-Mambo communities were relatively small, with only a total of 25 households were identified (Table 2). From stakeholder analysis, farmers and firewood collectors were identified as the most important stakeholders, followed by NTFP collectors and palm wine tappers (Table 3). Hunters and trappers were reportedly only a small stakeholder. Results from the forest product prioritisation matrix (Table 4) show that in terms of market value, the most valuable NTFPs are Eru and Njansang. A high number of medical plants were collected as NTFPs, but had a low market value. In terms of timber use, three species (Iron Wood, Small leaf and Njansang) were identified as priority sources of firewood. Mahogany and Iroko were identified as priority furniture and house construction trees. Black afara and Small leaf were also identified as important for house construction. Njabe was valuable for its fruit and leaves. The peak period for forest based activities was July through to September (Table 5). Fishing was only important in March. Farm activities were apparently spread evenly throughout the year.

No participatory map was carried out in Ebensuk-Mambo do to concerns about the geographic location of village lands in relation to the forest concession. This and the trend statement were to be carried-out at future visit. When it was confirmed that the Ebensuk-Mambo communal lands had already been granted to the forest concession (without their consultation) it was deemed more important to focus project energies on the Tali-Bara communities.

Tali-Bara

In terms of households number, Tali 1 is the largest community with 68 households. Tali 2 is a close second, with 52 households. Bara however is much smaller, with only 12 households (Table 6). Stakeholder analysis (Table 7) reveals that important in Tali-Bara is farming and NTFP collection as well as firewood collection and palm wine tapping. Hunters, fishers and timber builders were identified as interest groups, but with low dependency on the forest. From the forest product prioritisation matrix (Table 8), the most valuable NTFP in terms of market value was bush mango, followed by eru and njansang. A high number of medical plants were collected as NTFPs, but had a low market value. In terms of timber use, three species (Iron Wood, Small leaf and Njansang) were identified as priority sources of firewood. Mahogany and Iroko were identified as priority furniture and house construction trees. Njabe was valuable for its fruit and leaves. From the seasonal calendars (Table 9), it is clear that the peak period for forest based activities was July through to September. For fishing this was February to April. Farm activities were apparently spread evenly throughout the year.

One important piece of information gained from the participatory map (Figure 1) is that villagers are encroaching into the wildlife sanctuary. This is understandable as the boundaries of the sanctuary are not demarcated. The map also shows little activity near Bara, which undoubtedly a result of their under-representation at the workshop. The trend statement carried-out at Tali 1 (Table 10) indicates that the community persisted in relative isolation until as late as the 1970-80s when it appears that encroachment by outside hunters increased. Such a result corroborates the study of Tataw *et al.* (2001) where it was noted that villagers complained of encroachment and pressure from external hunters.

Table 2 : Ebensuk-Mambo Household List

1. Mamy Helen Anyi	8. Akruha Stephen	14. Ma Janet	20. Ma Lucie
2. Enow simon	9. Tatoh Joseph	15. Christina Ereka	21. Banchem Martin
3. Pa Oscar Njang	10. Ma Francisca	16. Ashu	22. Ma fani
4. Anyi Mary	11. Eyong Frida	17. Ma helen	23. Ma cicilia Angeh
5. Eyong Elias	12. Agboe Aeron	18. nda reymond	24. Joseph Tataw
6. Amben Umaru	13. Chief David Formin	19. Ma Mageret	25. Martin Taku
7. Tambe Lucas			

Table 3: Ebensuk-Mambo Stakeholder Analysis

Stakeholder	Interest (Stake) & level of forest dependency for livelihood needs
Farmer	Farm Land (80 – 90 %)
Hunters/Trappers	Bush meat (5 %)
NTFP collectors	Bush Mango, Bush pepper, eru (25%)
Fishermen	Fish (5 %)
Traditional Doctors	Medicinal plants suc as roots, barks and leaves (20 %)
Tappers	Palm wine (45%)
Firewood Collectors	Wood (100%)
Timber for Building	Timber (10 %)

Table 4: Ebensuk-Mambo Forest Product Prioritisation Matrix (xxxxx = Max; x = Min; - = No Use)**NON-TIMBER FOREST PRODUCTS (NTFPs)**

Species	Market value	Edible	Medicinal use	Traditional use
Bush Mango	xx	xx	x	-
Njansang	xxx	xxx	x	-
Bush pepper	x	xx	x	-
Country Onion	x	xx	xx	-
Eru	xxx	xxxx	-	-
Monkey cola	x	xx	-	-
Cane (Rattan)	x	-	-	-
Chewing stick	-	xx	-	-
Medicinal plants	x	xx	xxxxx	xxx

TIMBER

Species	Firewood	Furniture	House construction	Edible (fruits/leaves)
Ebony	-	xx	-	-
Mahogany	-	xxx	xxxx	-
Iroko	-	xxxx	xxxx	-
Kingstick	-	-	-	-
Iron wood (azobe)	xxxx	-	-	-
Black afara	-	-	xxxx	-
Small leaf	xxx	-	xxxx	-

Table 5: Ebensuk-Mambo Seasonal Calendar

Activities	Month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Forest Activities												
Bush Mango collection							**	**	**		**	
Eru Collection	**	*	*	*	*	*	*	*	*	*	*	*
Njangsang Collection								*	*	*	*	*
Bush Pepper harvesting	*	*	*	*	*	*	*	*	*	**	*	**
Hunting	*	*	*	*	*	*	*	**	**	**	**	**
Trapping						*	**	**	*		*	
Firewood collection	*	*	*	*	*	*	*	*	*	*	*	*
Fishing												
Fishing with net	*	*	**	*								
Fishing with hook								*	*	*	*	*
Farming activities												
Land preparation (food)	*	*	*	*								
First or early planting	*	*	*									
First Hoeing			*	*	*							
Second Hoeing								*	*	*	*	*
First weeding							*	*	*		*	
Second weeding	*											
Harvesting	*	*	*	*	*	*	*	*	*	*	*	*
Land preparation (palm, cocoa and coffee)	*	*	*	*	*							
Planting								*	*			

Table 6: Tali-Bara Household Lists**Tali 1**

1. Tarh Paul	18. Rose Amina Egbemba	35. Ayissi John	52. Thompson Nkwa
2. Ashu Egbe	19. Takunaw David	36. Governor Tanyi Tiku	53. John Eyong
3. Elizerbeth Tabe	20. Dickson Egbemba	37. Ma Fany	54. Dr. Fritz Tabe
4. Mr. Nkeng	21. William Egbemba	38. Pa Eyong	55. Sakata Bienvenue
5. Pa Ekwew	22. Martha Egbemba	39. Pa Nsok	56. Philip Enow Nkang
6. Pa Batuo	23. Philip Ebang	40. Pastor Ernest	57. Tambe Klinsman Edmond Abane
7. Ma Emilia	24. Chief Orock	41. Pastor Nforten	58. Comfort Egbemba
8. Pa Stephen	25. Jacob Besong	42. Mr. Peter	59. Emmanuel Baiye
9. Nkwamy	26. Solomon Orock Etong	43. Pa Martin	60. Maria Orock
10. Sister Susan	27. Beyong	44. Ayuk Hans	61. Mbeng Tabe Tarh
11. Ta Esong Mbanda	28. William Mpei	45. Mr. Peter	62. Elizerbeth Baiye
12. Somaon Abanda	29. Ndumba	46. Ta Enowbi Maurice	63. John Baiye
13. Solomon Abanda	30. Mr. Taboko	47. Mme Mbuagbaw	64. Esther Baiye
14. Maurice Ebai	31. Pa Taboko Stephen	48. Ayissi Tataw	65. Elias Nkongho
15. Johnson Abange	32. Mr. Tabe Money	49. Ayissi Jean Claude	66. Esther Besong
16. Margaret Abanda	33. Ma Rose	50. Elias Egbemba	67. Samuel Tabe
17. Mbongaya Tai –Ndip	34. Director Tanyi Tiku	51. James Tarh	

Tali 2

1. Frambo Arra Timothy	14. Agbor Rose	27. Monica Johnson	40. Abane Rose
2. Frambo William	15. Mmoh Tahdi	28. Bisong Stephen	41. Bisong Paul
3. Tabe Tayo S. T	16. Akompay Dickson	29. Tabort George	42. Abane Mary
4. Martha Tatah	17. Mbi Beltha	30. Francisca Ebai	43. Enyang Armstrong
5. Anna Bisong	18. Oben Emilia	31. Catherine Egbe	44. Elisabeth Baiye
6. Oben Agness	19. Nken Tabi Thompson	32. Kesong Sophie	45. Nfor-ataw Micheal
7. Batuor Francis	20. Akompeh Jackson	33. Tambe Martine	46. Christina Ebangha
8. Ayang Frambo	21. Ebai James	34. Enow Grace	47. Nfortaw Walters Nkwa
9. Baiye Sammuel	22. Ashu Rose	35. Emilia Njong	48. Abane Joseph
10. Kebua Philip	23. Peter Atemboke	36. Taku Robinson	49. Nfortaw Lydia
11. Ebai Dickson	24. Ashu Joseph	37. Ewane David	50. Taku Susana
12. Ayuk Christina	25. Tong Alexander	38. Takem Ewane Johnson	51. Takem Peter
13. Alma Baiye	26. Batour Nfor Stephen	39. Victor Nga Tiku	52. Ewane S A

Bara

1. Nfo Nkwa	5. Ma Grace	9. Tambi William
2. Obi Paul	6. Napoleon Agbor	10. Napoleon
3. Oscar	7. Mbu Enow	11. Ma Regina Mbi
4. George	8. Mr. Obi	12. Christina Takem

Table 7: Tali-Bara Stakeholder Analysis

Stakeholder	Interest (Stake) & level of forest dependency for livelihood needs	Names of individuals representing each interest group in the planning process	
Farmer	Farm Land, 85% Dependency	Mbongayah Tai-Ndip Peter Ayuk Atem Tabe George	Abange Maurice Frida Ngah Tiku Abane Mary Nkem
Hunters/Trappers	Bush meat, 10 % Dependency	Ashu Egbe N Oben Frankelin	Nkowa Alain Frambo Timothy Arrah
NTFP collectors	NTFPs (Bush Mango, Bush pepper, eru), 80% Dependency	Mbu Michael Baiye Emilia	Ako George Bayee Oben Anna
Fishermen	Fish, 10 % Dependency	Enow Nathal Tambi Enow Philip	Robinson Taku
Cane Collectors	Cane, 10 % Dependency	Enow Ndumbe Tatah Agbor Takang Napokan	Yondje Jean-Pierre
Traditional Doctors	Medicinal plants (roots, barks and leaves), 50 % Dependency	Baiyee John Tabi Martha Ayuk Agbor	Grace Tiku
Tappers	Palm wine, 80% Dependency	Mbeng Tabetarh Baiye Samuel	Ndip William T
Firewood Collectors	Wood, 100% Dependency	Everybody (the only source of energy)	

Table 8 : Tali-Bara Forest Product Prioritisation Matrix (xxxxx = Max ; x = Min ; - = No Use)

Non-Timber Forest Products (NTFPs)				
Species	Market value	Edible	Medicinal use	Traditional use
Bush Mango	xxxx	xx	x	-
Njansang	xx	xxx	x	-
Bush pepper	x	xx	x	-
Country Onion	x	xx	xx	-
Eru	xxx	xxxx	-	-
Monkey cola	x	xx	-	-
Cane (Rattan)	x	-	-	-
Cashew nuts	x	xx	-	-
Chewing stick	-	xx	-	-
Medicinal plants	x	xx	xxxxx	xxx
TIMBER				
Species	Firewood	Furniture	House construction	Edible (fruits/leaves)
Ebony	-	xx	-	-
Pangal	-	x	x	-
Mahogany	-	xxx	xxxx	-
Iroko	-	xxxx	xxxx	-
Kingstick	-	-	-	-
Erybroma	xx	xx	-	-
Iron wood (azobe)	xxxx	-	-	-
Black afara	-	-	xxxx	-
Small leaf	xxx	-	xxxx	-
Njabe	-	xx	-	xxxxx
Njansang	xxx	-	xx	-
Bibolo	-	xxx	-	-

Table 9: Tali-Bara Seasonal Calendar (Two stars indicate peak periods)

Activities	Month											
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Forest Activities												
Bush Mango collection							**	**	**			
Eru Collection	**	*	*	*	*	*	*	*	*	*	**	**
Njangsang Collection								*	*	*		
Bush Pepper harvesting	*	*	*	*	*	*	*	*	*	**	**	**
Hunting	*	*	*	*	*	*	*	**	**	**	**	*
Trapping						*	**	**	*			
Firewood collection	*	*	*	*	*	*	*	*	*	*	*	*
Fishing												
Fishing with net	*	**	**	**								*
Fishing with hook								*	*	*	*	*
Farming activities												
Land preparation (food Crops)	*	*	*	*								*
First or early planting	*	*	*									
First Hoeing			*	*	*							
Second Hoeing								*	*	*		
First weeding							*	*	*			
Second weeding	*										*	*
Harvesting	*	*	*	*	*	*	*	*	*	*	*	*
Land preparation (for palm, cocoa and coffee)	*	*	*	*	*							
Planting						*	*					

Figure 1: Tali-Bara Participatory Map

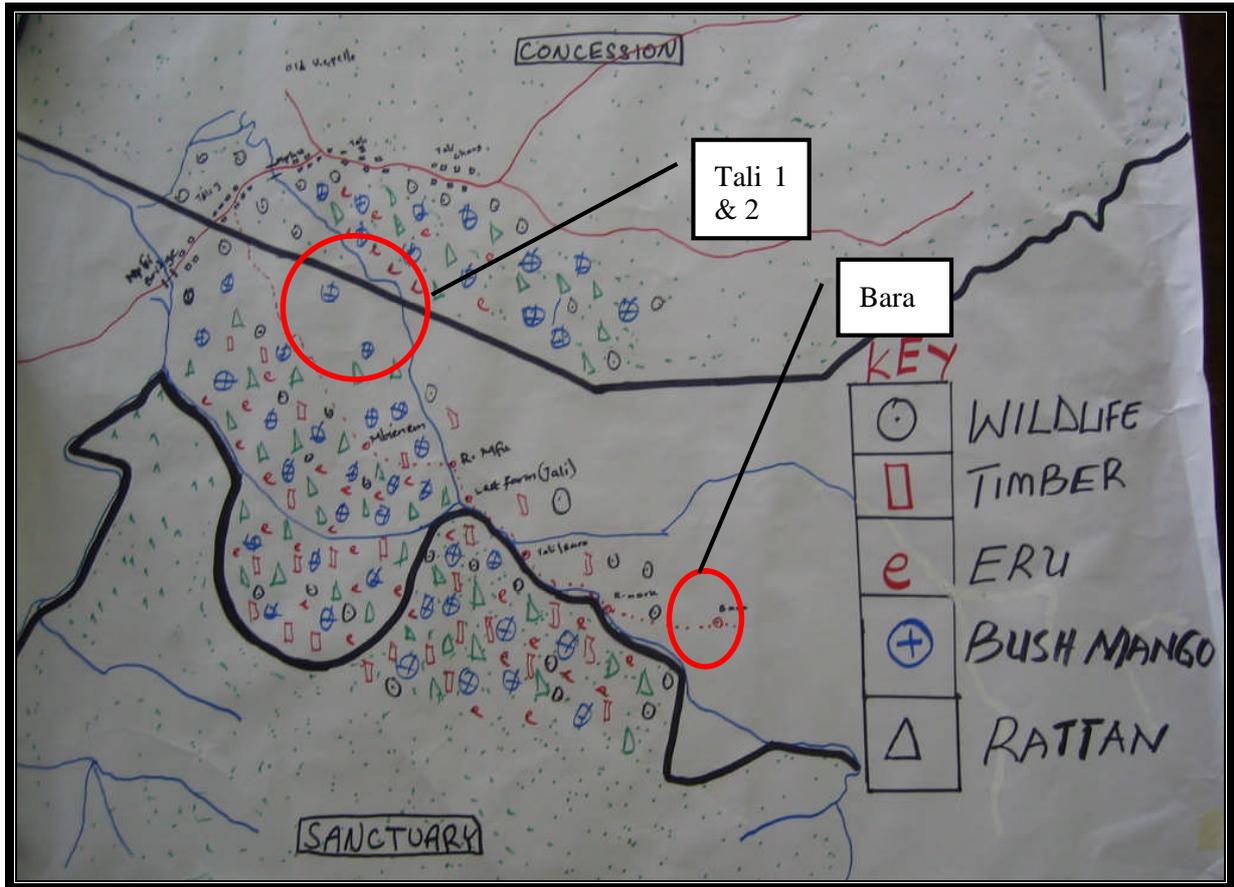


Table 10: Tali-Bara Trend Statement

Date	Village situation	Forest Situation	National Situation
1922	Opening of Tali Native authority primary school	Forest was very close to the village	
1930s	Tali people settled along the foot path. No road in the area and people used only foot paths to go other villages All the bridges over the streams were hammock	Farm sizes were just half a hectare and less forest clearance.	Colonial period (German era)
1940s - 50s	Death of Chief Egbemba and Division of Tali into Tali one and two Coming of Basel mission (Presbyterian) into the area	Creation of Bayang Mbo Council forest Reserve Use of Dane guns to hunt Use of hand saw to saw exploitable mature species Timber was harvested only for home use and wood would season for two use before use	Colonial Period (British era)
1960s	Arrival of Catholic church in the village Bombing of old German bridges and the construction of the present bridge over River Nfi Construction of motorable roads where footpaths formerly ran	Animals came quite close to the village and species hunted included Bush cow, duikers, monkeys deer etc all for home consumption. Lots of forest around and farms were just five miles away from the village	Post Independence period
1970s –80s	Tali Native authority school became a Government primary school	Use of chain saw to exploit timber Animals quite close to the village Lots of forest around	
1990s	Lots of outside hunter arrive into the village Construction of modern zinc houses	Change of status from Banyang Mbo Council Reserve to Banyan Mbo Wildlife Sanctuary WCS started her intervention in the area. Indiscriminate hunting by outside hunters	Creation of Tinto Sub-Division Creation of Tinto Rural Council
2000	Lots of outside hunters from Bertoua, Akwaya	Indiscriminate hunting by outside hunters	
2004		Arrival of Wijma timber company	

Discussion

Results presented here are from Ebensuk-Mambo and Tali-Bara socio-economic surveys. Both communities show a high degree NTFPs use while timber exploitation was limited to artisanal and non-commercial use. In terms of NTFPS, both communities were already commercially involved in the exploitation of bush mango, njangsang and eru. The sustainability of their production should form the basis of future marketing strategies and ecological research in order to ensure that business continues in a way that causes minimal disturbance to the forest.

It is also apparent from the participatory mapping exercise that some encroachment is occurring into the Banyang-Mbo Wildlife Sanctuary (BMWS). There are a number of reasons for this. From forest walks carried out after socio-economic surveys were conducted, the project research team learned that the trail connecting Bara to Tali 1 passes on the southern shore of the River Mark. The trail is not new by any means, having been established as a proper road by the Germans at the start of the 20th century. This river forms the however northern limit of the BMWS. Unfortunately, it appears then that this section of the BMWS was established over a traditional transport route for the Bara peoples, along which they still have a number of farms. Another similar reason is that the boundaries of the BMWS are not clearly indicated along the border. For these reasons, the encroachment observed is understandable.

Finally, while results might be representative for the smaller Ebensuk-Mambo communities, further refinement of these socio-economic surveys is required for Tali-Bara. The February workshop, which was held, to sensitize community members and also collect socio-economic information was carried-out in Tali 1. It was under-attended by residents from Tali 2 and Bara.

Section 3: Community Forest Management Inventory

Aims and Objectives

The purpose of the Tali-Bara community forest project has been to assist the community in obtaining legal tenure of their forest resources. One step towards this is the development of a Community Forest Management Inventory (CFMI), the information from which is used in the elaboration of the Community Forest Simple Management Plan (MINEF, 2002). The CFMI is designed to assess timber, non-timber and wildlife resources. For the purposes of this report, we distinguish between the botanical surveys and wildlife surveys that together make up the CFMI.

The CFMI is currently called to cover between 1% and 0% of the total proposed community forest area, though this is subject to change. It should be noted that this inventory does not anticipate exploitation, which requires instead a more detailed inventory to be executed (Bennett, 2002). The CFMI was carried-out during two visits: 9-17th March and 6-16th April.

The CFMI had the following objectives:

- Providing the community with survey skills to be able to manage and monitor resource use within the community forest area in future
- To collect quantitative information about availability and distribution of forest resources. Such information will be useful to inform management decisions of the community proposed forest (e.g. total protection of endangered species, regeneration of protected species and sustainable use of more available species etc.)
- To obtain necessary quantitative and qualitative information that will be used in the demarcation of the suitability of different areas of the community forest for different land-uses and production of final map
- To provide baseline data for future research and resource monitoring.

Methodology

Team Selection and Training

The inventory team was selected during a village meeting of the Tali 1 traditional council in March. Nominations for the inventory team were made from those present at the meeting. The project research team sought representation from all user groups: farmers, hunters, traditional council, NTFP users and timber exploiters. A part from group representation, other criteria were considered such as an individual's physical fitness, knowledge of forest resources, knowledge of the forest area. While the project research team sought to include women, the traditional council objected to their participation considering the physical nature of the activity and the need to camp during inventory trips.

A preliminary training exercise was done with village representatives. Community representatives were taught how to use the compass, measuring tape, GPS, chain and diameter tapes in the cutting of line transects and the collection and recording of inventory data on inventory sheets. After the training, a field-testing exercise was done the next day at Transect 1. Tree identification was done by local names and their scientific names confirmed from consulting the literature. Furthermore, a trained botanist from Limbe Botanic Gardens accompanied the project research team in April to confirm tree species names. The team was trained to collect information on locally important species only. The importance of species was identified by the inventory team based on either its commercial or subsistence usage. These species were compared with information on timber and non-timber forest resources obtained during the February socio-economic surveys.

Inventory layout

Wildlife and botanical surveys were laid-out in the field using the methodology below.

- The inventory consisted of a series of parallel line transects running at a bearing of 180⁰. A preliminary desktop work was done to lay transects in a systematic manner on a map of the area at intervals of 500m. Transects were laid to cut across most of the topographical features of the area like hills, streams, mashes and gullies to enable the sampling of a cross section of the different ecological zones
- Fieldwork involved using the compass to cut transects following predetermined lines on the map
- Trees and plants (relevant to priority uses) found on or near the transect (within 10m) were recorded together with basic data such as tree diameter. Sitings of wildlife and evidence of wildlife were recorded as well as topographical features found along and near the transects
- To carry out the surveys, line transects of variable lengths were randomly established in the forest in a north-south orientation. Transects were subdivided into plots of 20m x 250m .

In reality, the deployment of transects needed to be more efficient in terms of space and time. For this reason, when walking the space between transects oriented at a bearing of 180 (Transects 1, 2, 4 & 6), a bearing of 90 degrees was maintained as a transect as well (Transects 3 & 5). A diagram of the way transects were established in the field is shown below in Figure 2 while a summary of the field effort at the Tali-Bara proposed community forest is shown in Table 11.

Figure 2 : Diagram of Transect Orientation Deployed during the Community Forest Management Inventory

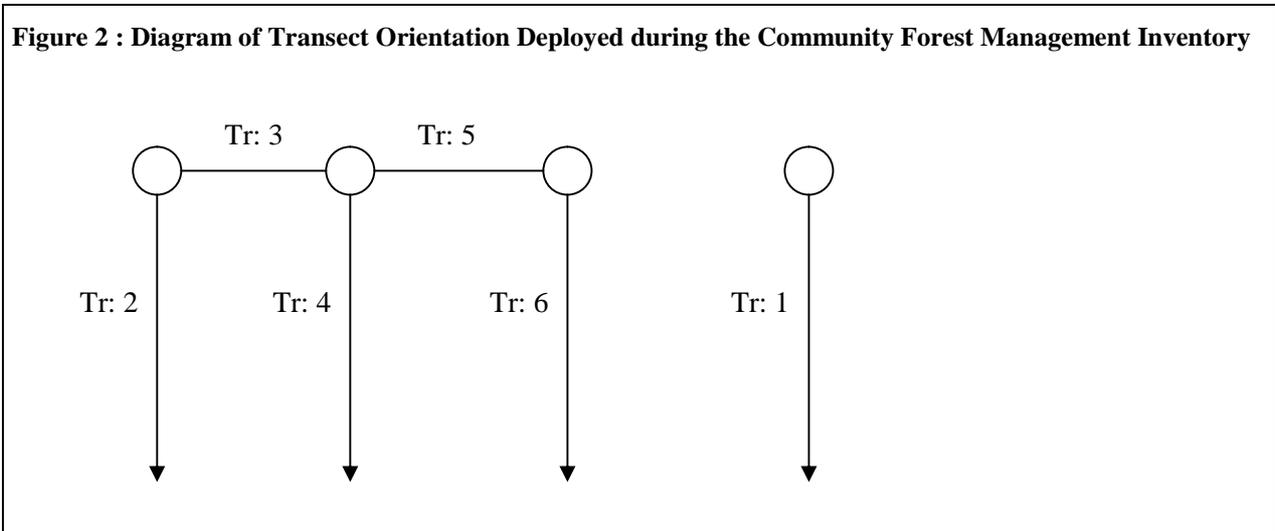


Table 11 : Summary of Transect Field Effort at the Tali-Bara proposed community forest

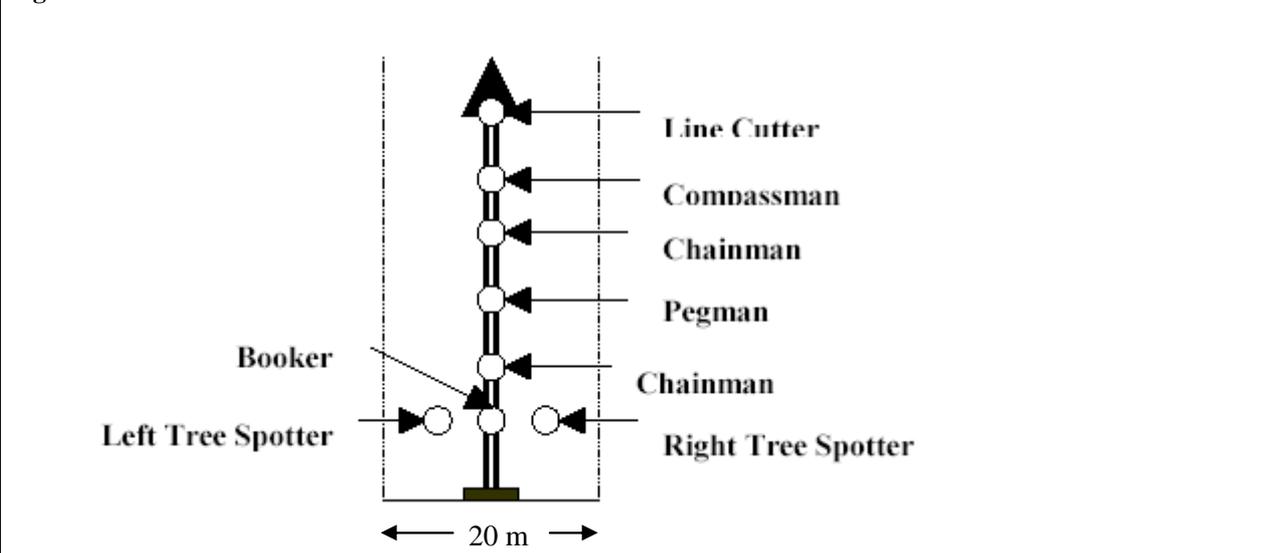
Transect	Length (km)	No. Plots	Area (ha)
1	2.00	8	4
2	1.00	4	2
3	1.25	5	2.5
4	1.00	4	2
5	1.75	7	3.5
6	2.50	10	5
Total	9.5	38	19

Composition of inventory team and roles

The field team was made up of the following members: line cutter, a compass man, two spotters; two girth takers and two chainmen (Table 12, Figure 3).

Table 12: Members of CFMI team and their roles	
MEMBER	ROLE
Compass man (1)	Read compass direction and direct line cutter
Line cutter (1)	Cut transect along determined bearing
Chainmen (2)	Measure distance along transect using 50m rope along transect
Peg man (1)	Provide pegs to chainmen
Booker (1)	Record inventory data on standard inventory sheets
Tree spotters (2)	Identify the different tree species.
Girth takers (2)	Take diameter of trees and identify animal signs

Figure 3: Members of CFMI team and their roles



Inventory field methodology

- From a starting point at the southern part of the proposed community forest (see map), the line cutter sets off on the calculated bearing, guided by the compass man.
- Behind the line man and the compass man comes the chainmen one pulling a 50m rope with two knots. The second rope man tells him when he is 50m from the start point. They then pull the rope tight to form a straight line. The chainman on the back then shouts out the peg number to be recorded and the peg man then puts in the peg number 1.
- The tree spotters then advance up the line (one on the left and the other on the right) identifying and measuring the diameter of all trees (agreed to be locally important) from 20 cm in diameter and above, found within 10m on both sides of the line. Each time they measure a tree, they call out its name (common name) and diameter to be recorded by the booker. Important NTFPs and evidence of wildlife existence are also identified and counted.
- The slope of the area is measured by the compass man using a clinometer and the necessary slope correction made to obtain the actual horizontal distance.
- Roles of different team members were changed at different times to expose everyone to the different experiences involved in the different roles and to mitigate fatigue.
- When the team leader is satisfied that all the trees on the 50m section of the line have been booked, he tells the leading chainman to go on another 50m and the whole process is repeated.

- Signs, sightings, nests and sounds of wildlife and human activities were also observed along the transect as part of the wildlife survey. Aging of duiker and elephant dung was done using three categories shown in Table 13.

Table 13 : Elephant dung categories (source White and Edwards, 2000)

Fresh dung: still shining with flying insect and strong smell
Recent hung: have its form, but no longer shining
Old dung: still has overall form but partly or completely broken down.

Data Analysis

Data from botanical and wildlife surveys were entered into an Excel spreadsheet, which was used to produce meaningful statistics about the forests studied (see Table 14). These were analyzed using descriptive statistics e.g. frequency tables, histograms, ANOVA and the Shannon's diversity index. For the purpose of this analysis, transects were treated like plots while plots were treated like quadrats.

Table 14 : Statistics derived from botanical and wildlife surveys

Stem Density per Hectare = $n/\text{area in hectares}$ (where n = number of trees counted)	
Frequency Encountered = number of quadrats (plots) in which species occurs	
Relative Density =	$\frac{\text{No. Individuals of Species}}{\text{No. Individuals of All Species}}$
Relative Frequency =	$\frac{\text{Frequency of Species}}{\text{Frequency of All Species}}$
Encounter Rate (for the wildlife surveys only) = n/L (where L = length of transect)	

Results: Botanical Surveys

From the two CFMI trips carried-out in March and April totalled 0.5% (19 ha) of the total proposed community forest area. This means that a minimum of 19 ha needs to further be surveyed in order to reach the CFMI threshold of 1% of the total proposed community forest area, which is required by law.

Vegetation results from line transects

Total transect length cut was 9.75 km, equalling a total sample area of 19.55 ha. All transects ran through a series of habitats with different landscapes and soil types including the *Raphia spp* dominated swamps (liable to flooding in the raining season with hydromorphic soils) to secondary forest seriously disturbed by man and the forest elephant (*Loxodonta cyclotis*) and populated by pioneer species like *Musanga cecropoides* and *Herpatorium spp*.

Tree species encountered along these transects including measures of abundance and frequency is presented in Table 15. A total of 1402 individuals tree were enumerated in the transects, belonging to 38 species and 27 families with a Shanon diversity index (SDI) of 3.27. The mean number of observed plants was 71.9 stems/ha. The most abundant family was Myristicaceae and the most abundant species was *Pycnanthus angolensis*. Tree species also observed in the area include: *Anijeria robusta*, *Anthrenella congolensis*, *Ficus vulgera*, *Symphonia grandifolia*, *Tapaura africana*, *Synsepalumstipulatu*, *Desbodesia myrocarpa* and a host of lianas like the *Lavigeria microphylla*, *Piper guineensis*, etc. From visual observations in the field, it was evident that elephant disturbed forest abounds in areas of stunted shrubs, lianas and other pioneer plant species like rattan. Primary forest dominated areas were of low relief and about 2-3km from the viillage. Changes in forest/vegetation type varied along transects with distance from settlement areas.

Timber

When summed across all transects, the tree population structure shows a negative significant exponential curve (Figure 4; $R^2=0.9221$); a similar pattern was observed for individual transects. In terms of exploitable wood stock, there was generally 14 stems/ha were found to be greater than 60 cm in DBH (Table 15); trees above 60 cm DBH are legally exploitable in Cameroon. Currently, timber exploitation in

this area is basically for subsistence and fuelwood is gathered from dying trees on farms. Furthermore, a more sophisticated survey (detail inventory) would be necessary for the community forest to actively exploit its timber (MINEF, 2002).

Non-timber forest products (NTFPs)

A list of important NTFPs in the area is found in Table 17. the proposed community Forest area was found to be rich in these NTFPs. Of potential economic importance is rattan, which was the major NTFP in terms of abundance, recorded in the proposed Tali-Barah community forest area. Locally referred to as “Molongho”, rattan is abundant in this area with most of it concentrated in the secondary forest areas, but also around primary forest that have been disturbed by elephants and man. Rattan species observed in the area include: *Lacosperma secundiflorum* (most valued because of its large diameter), *Eremospatha macrocorpa*, *L. acutiflorum*, *Lacosperma laeve*, *Eremospatha hookeri*. There is no sign of commercial exploitation of rattan in Tali nor Bara, but occasionally local people harvest this resource for subsistence. This is probably due to the lack of commercial transport routes, poor transformation and processing technology and available market. The development of a sustainable off take strategy for this products in the area would provide a serious boost to the development of the current forest structure.

Figure 4: Tree population structure summed across all transects

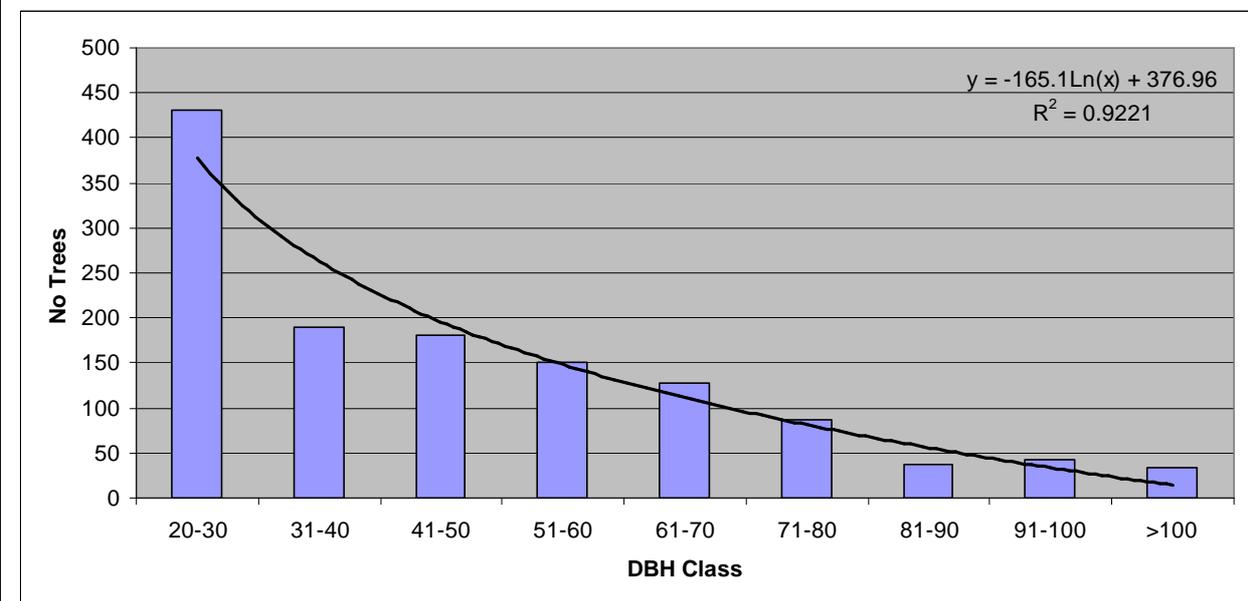


Table 15: Statistical survey of major tree species encountered over the course of the transect

Family	Scientific name	Local name	Abundance			Density			Frequency	Rel. Frequency	Rel. Density
			Total	>60 cm	<60cm	Total	>60 cm	<60cm			
Anonaceae	<i>Annicktia chlorantha</i> (Oliv.)Seten and P.J Maas	Quinine	13	5	8	1	0	0.4	11	3.4	0.9
Anonaceae	<i>Monodora brevipes</i> Benth		26	17	9	1	1	0.5	17	5.3	1.9
Apocynaceae	<i>Alstonia boonei</i> De wild	Milk stick	7	3	4	0	0	0.2	3	0.9	0.5
Apocynaceae	<i>Funtumia elastica</i> Preuss Stapf	Rubber	70	0	13	4	0	0.7	5	1.6	5.0
Apocynaceae	<i>Voacanga africana</i> stapf		15	0	15	1	0	0.8	5	1.6	1.1
Bombacaceae	<i>Ceilliba pentandra</i> (L.) Gaertn	Boma	41	32	9	2	2	0.5	13	4.1	2.9
Burseraceae	<i>Dacroides edulis</i> Oliv.	Plumb	59	0	59	3	0	3	18	5.6	4.2
Ceasalpinaceae	<i>Albizia furruginea</i> (Guill and Perr.) Benth	Small leaf	49	0	49	3	0	2.5	1	0.3	3.5
Ceasalpinaceae	<i>Microberlinia bisculata</i> A.Chev	Tiger wood	26	16	10	1	1	0.5	17	5.3	1.9
Combretaceae	<i>Terminalia ivorensis</i> Engl.and Diels	White afara	23	15	8	1	1	0.4	5	1.6	1.6
Combretaceae	<i>Terminalia superba</i> A.Chev.	Black afara	51	25	26	3	1	1.3	9	2.8	3.6
Ebenaceae	<i>Diospirus spp</i>	Ebony	10	2	8	1	0	0.4	6	1.9	0.7
Euphorbiaceae	<i>Drypetes preussi</i> (Pax) Hutch		54	12	42	3	1	2.2	8	2.5	3.9
Euphorbiaceae	<i>Uapaca Guiniensis</i> Mull.arg	Berong	112	0	112	6	0	5.7	7	2.2	8.0
Fabaceae	<i>Pterocarpus sauyaxi</i> Jacq	Cam wood	42	2	40	2	0	2.1	4	1.3	3.0
Guttiferae	<i>Garcinia manii</i> Heckel	Chewing stick	22	15	7	1	1	0.4	12	3.8	1.6
Huaceae	<i>Afrostryax kamerunensis</i>	Contry onion Bush	22	0	22	1	0	1.1	3	0.9	1.6
Irvingiaceae	<i>Irvingia gabonensis</i> Aubery- La comte ex O-Rorke) Baill	mango	48	0	48	2	0	2.5	12	3.8	3.4
Leguminosae	<i>Ptetrapleura ptetrapleura</i> (Schum and Thonn.) Taub		7	0	7	0	0	0.4	5	1.6	0.5
Meliaceae	<i>Carapa procera</i> D.C		13	1	12	1	0	0.6	7	2.2	0.9
Meliaceae	<i>Entandphragma grandifolia</i>	Mahogany	49	0	49	3	0	2.5	14	4.4	3.5
Meliaceae	<i>Entandphragma Ivorensis</i>	Mahogany	38	0	38	2	0	1.9	6	1.9	2.7
Mimosaceae	<i>Piptadeniastrum africana</i> (Hook.f) Brenan	Small leaf	78	6	72	4	0	3.7	3	0.9	5.6
Moraceae	<i>Chlorophora excelsa</i> (Welw.) Benth	Iroko	32	21	11	2	1	0.6	18	5.6	2.3
Myristicaceae	<i>Pycnanthus angolensis</i> (Welw.) Warb	Carobot	157	23	134	8	1	6.9	14	4.4	11.2
Myristicaceae	<i>Stautia stipitata</i> Warb		10	0	10	1	0	0.5	5	1.6	0.7
Ochnaceae	<i>Lophira alata</i> Banks ex Gaertn .f.	Iron wood	62	9	53	3	0	2.7	4	1.3	4.4
Olocaceae	<i>Srombosia grandifolia</i> Hook. F		50	12	38	3	1	1.9	8	2.5	3.6
Pandaceae	<i>Panda oleasa</i> Pierre		7	0	7	0	0	0.4	14	4.4	0.5
Rhizoporaceae	<i>Poga olesa</i> Pierre		30	1	29	2	0	1.5	8	2.5	2.1
Rubiaceae	<i>Morinda Lucida</i> Benth		18	4	14	1	0	0.7	7	2.2	1.3
Sterculiaceae	<i>Kola spp</i>		29	13	16	1	1	0.8	13	4.1	2.1
Verbenaceae	<i>Vitex grandifolia</i> Gurke		45	18	27	2	1	1.4	21	6.6	3.2
Mavaceae	<i>Eribloma oblongum</i>		42	16	26	2	1	1.3	15	4.7	3.0
Euporbiaceae	<i>pepperwood</i>	Pepper wood	15	0	15	1	0	0.8	1	0.3	1.1
Euporbiaceae	<i>Rhicinodendron heudeloti</i>	Njangsang	30	12	18		14	0.9	5	0.8	2.1

Table 16 List of tree products collected in the proposed Tali-Bara community forest area

Family	Scientific name	Common name	Use
Anacardiaceae	<i>Trichoscypha acuminata</i> Engl	Bush bonbon	Fruit eaten
Annonaceae	<i>Annickia chlorantha</i> setten and P.J maas.	Quinine	Back used as anti malarial drug
Apocynaceae	<i>Alstonia boonei</i> De Wild	Milk stick	Back used as anti malarial drug
Burasaraceae	<i>Dacryodes edulis</i> Oliv	Bush plumb	Fruit eaten
Euporbiaceae	<i>Rhcinodendron heudoloti</i>	Njansang	Fruits used as soup thickener.
Guttiferae	<i>Garcinia kola</i> Heckel	Bitter cola	Stimulant also used to calm gastric pains.
Guttiferae	<i>Garcinia manii</i> Oliv	Chewing stick	Roots used in brushing teeth.
Hulaceae	<i>Afrostryax kamerunensis</i>	Country onion	Back used to flavor porish food and color soup “Bongo”
Irvingiaceae	<i>Irvingia gabonensis</i> (Aubery-la Comte ex O’Rorke) Baill	Bush mango	Seeds used as soup thickener and fruit mesocarp eaten when ripe
Laguminosae	<i>Tetrapleura tetraptera</i> (schum and thon) Taub	Achu spice	Fruit used for soup flavoring
Pandaceae	<i>Panda oleasa</i> Pierre	-----	Seeds edible
Rhizophoraceae	<i>Poga oleasa</i> Pierre	-----	Seeds edible used for vegetable oil

Table 17 : List of products derived from shrubs, lianas and palms collected in the proposed Tali-Bara community forest area

Family	Scientific names	Common name	Used
Gnetaceae	<i>Gnetum buchelzianum</i>	Eru (sorce)	Indigenous vegetable
Gnetaceae	<i>Gnetum africanum</i>	Eru	Indigenous vegetable
Icacinaceae	<i>Lavigera Microphylla</i> (Oliv.)Pierre	Bush carrot	Edible fruit
Malvaceae	<i>Kola Lepidota</i>	Monkey kola	Edible fruit
Maranthaceae	<i>Marantochlora sp</i> ¹	Ngongo leaf	Wrapping leaves
Palmae	<i>Elias guineensis</i>	Raphia	Palm wine
Palmae	<i>Raphia sp</i>	Raphia	Raphia wine
Zingiberaceae	<i>Aframomum sp</i>	Alagatar pepper	Seeds used as soup spice and some local medicine

¹ Many species of the same genus and with similar leaves have the same common name.

Results: Wildlife Surveys

Species presence

Six species of large mammals (body weight greater than 4 kg) were observed during the survey (Table 18), including elephant (*Loxodonta africana cyclotis*). These were mostly observed in the extreme southern parts of the area where old dung, one new dung and a call was recorded. Of the other eight species, most were monkeys including the *Cercopithecus erythrotis* which was easily distinguished from other monkeys that could not be easily identified. Other species recorded include the terrestrial tortoise *Kinixys erosa* and the dwarf crocodile. Most of the large mammals were found in the southern portion of the proposed community forest area, these are sites, which are occasionally visited by hunters. Ruminants (e.g. duikers) were more abundant in the north, near farmlands.

During the surveys, encounter rates were very low: only six species were sighted, while we recorded the calls of an elephant once, bush cat six times during the nights, monkey twice and tree hyrax twice in the nights. The encounter rate per species and per observed sign is presented in Table 19. Avifauna observed during the survey are presented in Table 20. Apart from field observations, the local people report seasonal visits by elephants and the forest buffalo *Syncerus caffer* to farms in quest for food.

Human presence and hunting

Generally 25.9 human signs/km were recorded in the entire area of the transects (Table 21). Signs varied from old and newly planted traps to bullet shells, cut trees, abandoned tin containers, and footpaths to temporal huts (bush houses). The highest encounter rates for traps (wire snares) and footpaths were around farms and in the secondary forests. The two abandoned temporary huts were found about 3.5 km and 3.75 km from Tali village. Bullet shells were randomly distributed.

The major threat to wildlife in the proposed community forest is hunting and trapping. Hunters in this area are both resident and non-residents come from diverse cultural backgrounds. The adjacent Mbo settlers in the extreme south of the BMWS often hunt as far as into the proposed community forest area. There are about 19 permanent and seasonal hunters/trappers in the Tali –Bara villages. Of these numbers 11 are indigenes, while the other are immigrants from the Northwest, and Center provinces of Cameroon. The temporal hunters (ie, 26%) hunt and trap basically for subsistence usually around their farms and surrounding forest while the permanent hunters/trappers exceed the area of the proposed community forest and enter into the BMWS. While the village is host to two prominent elephant hunters of the region (father and son), no elephant has been poached in the community forest area for the past 10 years. About 21% of these hunters solely depend on hunting / trapping for their livelihood. They hunt during the dry season and combine trapping and hunting during the rainy season when forest fruits attract animals. See Table 22 for mean monthly wildlife consumption per hunter in the Tali-Bara communities.

Bush meat and wildlife management

Hunting is carried out indiscriminately without any fear of wildlife regulations. Although the people acknowledge the fact that some of these hunted animals are threatened and endangered animals, there are very little or no alternatives for income and protein sources. We do note that WCS has recently initiated a piggery in the Tali 1 in order to promote pork consumption and ease pressure on wildlife. However, most community residents hunt and keep bones of animal skulls as trophies in their houses. Proceeds from wildlife “bush meat” are a popular economic resource in the Upper Bayang area as a whole. Although the people of the area acknowledge a decreasing animal population, they express their discontent about the elephant pressure on their crops and the unscrupulous seizure of their bush meat by forestry officers.

The legislation on wildlife includes the 1994 Forest, Wildlife and Fisheries Law. According to this legislation, exploitation of any wildlife considered as not threatened (ie, Category “C”) is subject to a hunting permit, delivered by the forestry administration. The capture or shooting of any vulnerable or endangered species is tolerated for research purposes (in which case a special permit is issued by the administration in charge) or self-defense. The law also gives allowance for the acquisition of a community hunting ground by communities, although none exist in Cameroon yet.

Table 18 : List of large animals encountered during wildlife survey

No	Common Name	Sc name	Observed sign	Number	Forest area	Status ²	Use ³
1	Porcupine	<i>Atherurus Africanus</i>	Path	26	Secondary Forest	V	CS
			Foot prints	10			
			Live	1	Undisturbed fr area		
			Nest	3			
2	*Bush pig	<i>Potamocheirus porcus</i>	Feeding signs	9	Near stream	E	C
			Mouth dig	13	Near stream		
			Foot prints	5			
3	Tortoise	<i>Knixys erosa</i>	Live	2	Undisturbed Fr area	NT	S
4	*Frutambo blue duiker	<i>Cephalophus monticola</i>	Foot prints	20			
			Recent dung	6			
5	*Sleeping Deer	<i>Cephalophus dorsalis</i>	Foot prints	16	Undisturbed Forest area, stream banks		C
			Recent dung	7	Secondary forest		
6	Pangolin (Kattabeef)	<i>Manis spp</i>	Feeding signs	7	Undisturbed Fr area	NT	S
			Digging signs	2			
7	*Antelope		Foot prints	8	Secondary forest	NT	
			Digging signs	1	Secondary Forest		
8	*Elephant	<i>Loxodonta cyclotis africana</i>	Old path	18	Shrubby forest	E	C
			Recent track	2	Stream bank		
			Call	1			
			Old dung	15	Disturbed primary forest		
			Recent dung	1	Undisturbed forest		
9	Squirrel		Live	5	Secondary forest	LR	S
10	Rat mole		Nest	1	Secondary forest		
11	Mongoose (Company beef)	<i>Atilax paludinosus</i>	Foot prints	5	Secondary forest	NT	S
			Food remains	3	Secondary forest		
			Caught in wire snare	2	Farm forest boundary		
12	*Monkeys		Live		Secondary forest		
			Call		Secondary forest		
13	Dwarf crocodile		Live	1	Undisturbed fr area	T	CS
			Nest	14	Stream bank		
			Footprints	6	Stream bank		

² Status: V=Vulnerable, E=Endangered, T=Threatened, NT=Not Threatened, LR=Low Risk

³ Use: C=Commercial, S=Subsistence, CS=Commercial & Subsistence, * = large mammal

Table 19: Animal encounter rates per km in the surveyed area

Species	Signs Observed						
	Path	Foot print	Sight	Nest	Food remains	Dung	Call
Porcupine	2.67	1.03	0.10	0.31			
Bush pig		0.31			2.36		
Tortoise		0.00	0.21				
Frutambo		2.87				0.93	
Deer		1.64				0.62	
Pangolin	0.21				0.72		
Elephant	2.05					1.64	0.21
Squirrel			0.51				
Rat mole				0.10			
Mongoose		0.51	0.21		0.31		
Dwarf crocodile		0.62	0.10	1.44			
Monkey			1.54				1.23

Table 20: List of birds observed during survey period in the proposed Tali-Bara community forest area

Common name	Scientific name
Scaly Francolin	<i>Francolinus sqamatus</i>
Palm nut vulture	<i>Gypohierax angolensis</i>
Waggle duck	
Black Kite	<i>Milvus migrans</i>
Dove	<i>Turtur Tympanistria</i>
Grey parrot	<i>Psitaccus erithacus</i>
Giant kingfisher	<i>Megaceryle maxima</i>
White crested Hornbill	<i>Tockusalbocristatus</i>
Cardinal Wood Pecker	<i>Dendropicos fuscescens</i>
Weaver Bird	

Table 21: Encounter rates for signs of human presence in the surveyed area

Transect	Length (km)	Path	Bullet shells	Huts	Traps	Cut sticks	Bullet shells	Huts	Traps
1	2.00	1.00	6.00	0.00	16.00	7.00	6.00	0.00	16.00
2	1.00	4.00	4.00	0.00	35.00	51.00	4.00	0.00	35.00
3	1.25	0.00	0.00	0.00	4.00	1.60	0.00	0.00	4.00
4	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
5	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	2.50	0.40	0.80	1.14	1.20	0.80	0.80	1.14	1.20

Table 22: Mean monthly wildlife consumption per hunter in Tali-Bara communities and conflicts

Name	Mean consumption per hunter in Tali-Bara per month	Conflicts with human on farms
Porcupine	7	Major threat to planted corn, cassava, young cocoa and young palms.
Bush pig	2	Major threat to cassava tubers <i>Manihot esculentus</i> , cocoyams <i>Colocasia spp.</i>
Blue duiker	10	Maize <i>Zea mays</i> , Beans
Grass cutter	9	Maize <i>Zea mays</i> ,
Anthelope	6	Maize <i>Zea mays</i> , Beans
Elephant	-	General destruction of food and cash crops
Ratmole	16	Destruction of mature corn
Company beef	15	-
Monkey	30	Fruit crops + plantain
Bush cat	9	-
Dwarf crocodile	3	-

Section 4: Stakeholder Discussions

Aims and Objectives

As a wedge of land between two permanent forest areas, the BMWS and Wijma forest concession, it was to be expected that these two actors would seek to influence land management in the area. It was necessary to begin discussion with other major stakeholders to learn of their concerns and avoid conflict. In particular these stakeholders were government (Provincial and Divisional MINEF delegates and other authorities), the Wildlife Conservation Society (WCS) and Wijma. The project research team met with the following stakeholders:

- i. MINEF Provincial Chief of Wildlife in February and again in April 2005
- ii. WCS in February and again in March 2005
- iii. Wijma timber company in May

Meeting Summaries

Meetings with Provincial and Divisional MINFOR Delegates

The project research team is convinced that a community forest will help safeguard the Tali-Bara forest in the long term. However the government forestry officials expressed an ambivalent attitude, which was non-committal. This was hardly surprising given that their focus is more on the activities of the timber concessionaire and to some extent the wildlife sanctuary.

Meetings with WCS

WCS is concerned about conservation in the project research area and were discussing with forestry agency on formally declaring the zone a buffer zone with no use characteristic. WCS is particularly concerned about the impact the logging concession might have on hunting of elephants in the sanctuary given recent evidence of innovative strategies developed by hunters in the sanctuary (see Nchanji, 2005). However given that they were reducing their focus on the wildlife sanctuary, they were in the process of facilitating the creation of 'NATURE CAMEROON' as an exit strategy. This NGO is expected to execute community based conservation initiatives in the area at the exit of WCS.

Meetings with Wijma-GWZ

Our sole meeting with Wijma-GWZ was at their Nguti office. The person in charge there, Mr Leblanc, informed us that the Douala office handles management issues and he provided us the contact details of their Douala office. Meanwhile he mentioned that Wijma is seeking Forest Stewardship Certification (FSC) so might be interested in community issues.

CONCLUSIONS AND FUTURE DIRECTIONS

Project Review

The project reported herein was initiated at the behest of the people of Ebensuk-Mambo who were interested in obtaining a community forest. Research results reveal that the forestlands surrounding both their communities and that of the neighboring Tali-Bara communities is rich in biodiversity and is home to the forest Elephant (*Loxodonta cyclotis*). Results from our socio-economic surveys reveal that the communities depend almost entirely on the forest resources for their livelihood. The initial thrust of the communities was to be able to apply for to the government that their forestlands be accorded the status of community forest. This would have bestowed legally recognized management rights over the forests in the hands of the community.

However, we found out that all the Ebensuk-Mambo community forestlands are part of a logging concession awarded to Wijma, a Dutch logging firm in Cameroon. The law states that communities cannot apply for community forest on logging concessions. This aggrieves the Ebensuk-Mambo communities as they maintained that they did express their interest to the local forestry authorities before the area was designated as a timber concession. They are further unhappy about the fact they were not consulted before their forestlands were included in the timber concession. While 10% of the timber royalties from the concession is shared amongst direct impact villages such as Ebensuk-Mambo, they do not yet have the means to verify if the amount received is indeed the full share of their entitlements. The communities feel disempowered and this could lead to further irrational exploitation of the forest. In the course of our research in the area, we were asked by the neighboring Tali-Bara communities to assist them in addressing their forestry concerns.

Conservation Value of the Tali-Bara Community Forest

The project research team decided to work with the Tali and Bara communities because our initial findings showed that these communities are located within the 3500 ha buffer zone between the forest concession and wildlife sanctuary. The corridor has a high conservation value as it is used by wildlife moving between the concession and the sanctuary. Increased use of this forest corridor by wildlife as a response to disturbance in the concession could lead to increased human-wildlife conflict if not properly managed. Results from our botanical and wildlife surveys confirm the biodiversity value of the forestlands surrounding the Tali-Bara communities. Animals listed as threatened and endangered that were observed during our wildlife survey include: Monkey (*Cercopithecus* spp.), Dwarf Crocodile, and Elephant (*Loxodonta africana cyclotis*).

Community Based Conservation Capacity Building

With each visit to Tali-Bara we are building community momentum towards the establishment of the community forest. In continuing this work, it will be important to take into consideration local political issues that the communities are facing. The project research team has taken note of the instances of corruption and elite capture of the community forest process that has occurred in other parts of Cameroon (Oyono, 2004a, b, c). It will be important to insist on open and transparent community policies for including less-favoured groups such as youths and women in the process. It will also be necessary to better involve the Bara community, as most project activities to date have been carried out in Tali 1.

The Politics of Implementing a Community Forest in the BMWS Buffer Zone

Other regional stakeholders, particularly WCS, have recognized the conservation importance of the Tali and Bara communal forestlands. The WCS Cameroon Regional Office team managing the Banyang-Mbo Wildlife Sanctuary (BMWS) has proposed that the corridor be declared a restricted-use buffer zone. Unfortunately the local communities in this forest corridor are not aware of the WCS led proposal, and are more interested in having a community forest. WCS is aware of this interest but does not have any plans to get involved with community forest issues in the area. However they are helping to set up a local NGO, which may be more favourably disposed to community conservation.

Last Word

This report presents results from research executed around the Banyang-Mbo Wildlife Sanctuary (BMWS) in the Mamfe forest area, Manyu division, Southwest Province Cameroon. The Ministry of Forest and Wildlife (MINFOF) manages the BMWS with technical support from the Wildlife Conservation Society (WCS). The northern portion of the BMWS is within a kilometre of the southern boundary of the Upper Banyang forest concession managed by Wijma logging firm. The area of research interest is the zone between the BMWS and concession, a zone of elephant traffic. Project results have been brought to the attention of the managers of the on-going German Development Bank (KfW) funded Sustainable Natural Resources Management Programme for the Southwest Province (SNRMP-SW).

The area of intervention is also part of the focal region of the WCS facilitated local NGO 'NATURE CAMEROON' working to improve livelihood opportunities for communities around the sanctuary. Furthermore the area has secured the long-term commitment of the Regional Centre for Development and Conservation (RCDC) Limbe Cameroon, the foremost local NGO promoting community forest. RCDC's commitment is ensuring continuity of project's team effort. This report would not have been possible without the individual and collective efforts of Feka Zebedee, Mor-Achankap Bakia, Mark Purdon (Canadian), Alfred Akumsi, Grace Ntube and Priscilla Lingondo. The skills and personal capacities of team members were greatly enhanced during the research process.

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