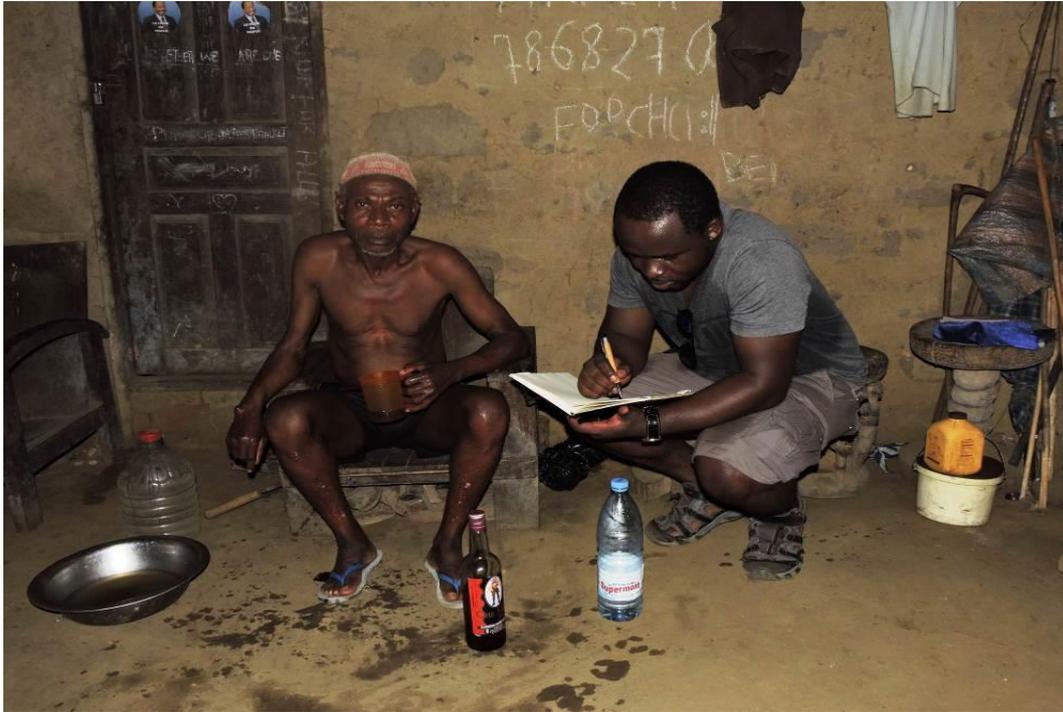


Title: Enabling sustainable great apes conservation in the Tofala Hill Wildlife Sanctuary (THWS), South West Cameroon



Project Leader interview a key informant in Egombu village

Report to Rufford Small Grant Foundation (RSGF), UK

Prepared by

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¹RCESD carries out capacity building, interdisciplinary research projects and policy engagement activities. Bringing social and natural scientists together, we work in and across the areas of environment, development and governance. We aim at generating new thinking and practical solutions. Our work looks at how environmental integrity and social justice can be achieved in a dynamic and complex globe that we find ourselves in

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EXECUTIVE SUMMARY

The Tofala Hill Wildlife Sanctuary (THWS) is located in the Lebialem-Mone Forest Landscape, South West Cameroon. Despite its biodiversity importance, it is faced with anthropogenic activities, which threaten its biodiversity and most especially the survival of cross river gorilla in this landscape. Household surveys through questionnaires, in-depth interviews, focus group discussion and field observations contributed in the collection of data that were analysed using content analysis and descriptive statistics. The main results revealed that local community members' access to forest resources is a threat to wildlife conservation and vis-versa. Basics and enabling factors permits individuals to directly benefit or negotiated for rights to benefits from forest resources. The diverse and unreconciled interests in forest access were observed as the main driver of unsustainable forest management. Forest management has proven difficult in the THWS because it is perceived as a threat to livelihood by local community members. Access to forest resources presented strengths and opportunities, as well as weaknesses and threats to wildlife conservation. Based on the results, we can argue that restricted access to forest resources in the THWS will not improve equity, resource use efficiency or sustainability if 'satisfactory incentives' are not made available to the local community members concerned. While recommending that the full participation of local people is needed to negotiate and reconcile existing conflicts in forest access, we also warn that regulations to control extraction of forest resources should take into consideration the shift in extraction pressure that may result. Agriculture is one of the main reasons for forest encroachment and conservation efforts can only be achieved if the agriculture capacity of the local people is built to sustain forest management. Supports that aim at developing the agriculture capacity of the local people will obviously boost conservation efforts. In addition, conservation education needs to be conscious of traditional values and should be able to motivate clearly how conservation strategies will protect sacred values and build agriculture capacity to be less reliant on the forest. Furthermore, there is an urgent need to invest on efforts that enhance local people to take up action research aim at advising the implementation of the great apes conservation project and to build local expertise for effective project implementation.

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1.0 INTRODUCTION

The proposed Tofala Hill Wildlife Sanctuary (THWS) is located in the Lebialem-Mone Forest Landscape, South West Cameroon. With a surface area of about 15000 ha, it is home to two great apes (Cross River Gorilla and the Cameroon-Nigeria Chimpanzee) and 24 other identified large mammals (Nkemnyi et al. 2012). Despite its biological richness, it is faced with anthropogenic activities, which threaten its biodiversity and most especially the survival of great apes found in this landscape (Nkemnyi et al. 2013). This project advanced the argument that "Environment-development linkages have not been able to achieve the sought-after 'win-win' outcomes because of the problem strategies and policies" and that "the prospect of local people sustaining community-based natural resource management (CBNRM) for social justice, livelihood security and conservation needs is centred on how well programmes are embedded in sociocultural relations, politics, resource needs and uses and landscape changes" (Dressler et al. 2010; Ribot & Peluso 2003). In the first phase of this project titled "*the environment-development Nexus and great apes conservation in the Tofala Hill Wildlife Sanctuary, Cameroon*", we identified the main gaps to sustainable conservation in the THWS to be centred on access to forest resources. Local communities considered conservation strategies as restricting their access and rights to forest benefits. On the other hand, conservation promoters considered local consumption of forest resources to be a major threat to sustainable conservation. The differences in management views gave rise to lack of community trust on conservation strategies, management conflicts, and intentional forest conversion to farmland among other issues (Nkemnyi, 2013). The inability to provide sustainable solutions to conservation conflict were linked to inadequate quality research to inform management decisions and insufficient capacity of field staff in managing conservation conflicts and enabling participatory management. As a result of poor strategies, local people are not convinced that the long-term objectives of the conservation project will protect their interests. This is also the main reason why they continue with unsustainable forest exploitation (access) despite conservation efforts and targeted livelihood support.

This project investigated the hypothesis that understanding access to forest resources is important in defining policy mechanisms that can affect change in resource management (Ribot & Peluso 2003). By dwelling on access as the main research question the study analysed how access to forest resources is gained, controlled and maintained in the THWS. The study further analysed how capital, knowledge, authority and access to social identity and access via negotiation of other social relations are shaping access and forest management in the project area. The study also evaluated the implications of forest access to use efficiency, equity and sustainability in order to identify policy mechanisms that can affect changes in forest resource management, enable sustainability, well-being, justice and cooperation.

1.1 Project Goals and objectives

The main goal of this project was to build local capacity on forest management and to evaluated the interests of stakeholders in accessing the THWS.

Objectives

- To build field staff capacity in conflict management and participatory approach to community-based conservation through a workshop
- To identify and map the mechanism by which access is gained, maintained and controlled in the THWS
- To define innovative strategies that can enable sustainability and participatory management using the logical framework approach

2.0 PROJECT LOCATION, STRATEGIES AND ACTIONS

2.1 project location

The project was carried out in the THWS located in the Lebialem-Mone Forest Landscape (LMFL), South West Region of Cameroon (figure1). This forest landscape covers approximately 15000 hectares. The LMFL is located specifically between the UTM coordinates 615,000 – 645,000 m N and 560,000 – 612,500 m E with an area of approximately 800 km². There are 10 villages living adjacent the proposed THWS (Bamumbu, Igumbo, Banti, Folepi, Bechati, Besali, Bangang, Nkong, Fossimondi and M'mockbin) with a population of approximately 35,000 inhabitants (Nkembi *et al.*, 2008). All the ten communities participated in this project. The inhabitants are made up of four ethnic groups; the Banyangs, the Mundani (dominant ethnic group), the Moghamo and the Nweh. These forest adjacent communities depend mainly on the forest for their livelihoods, with the main occupations being farming, hunting and fishing.

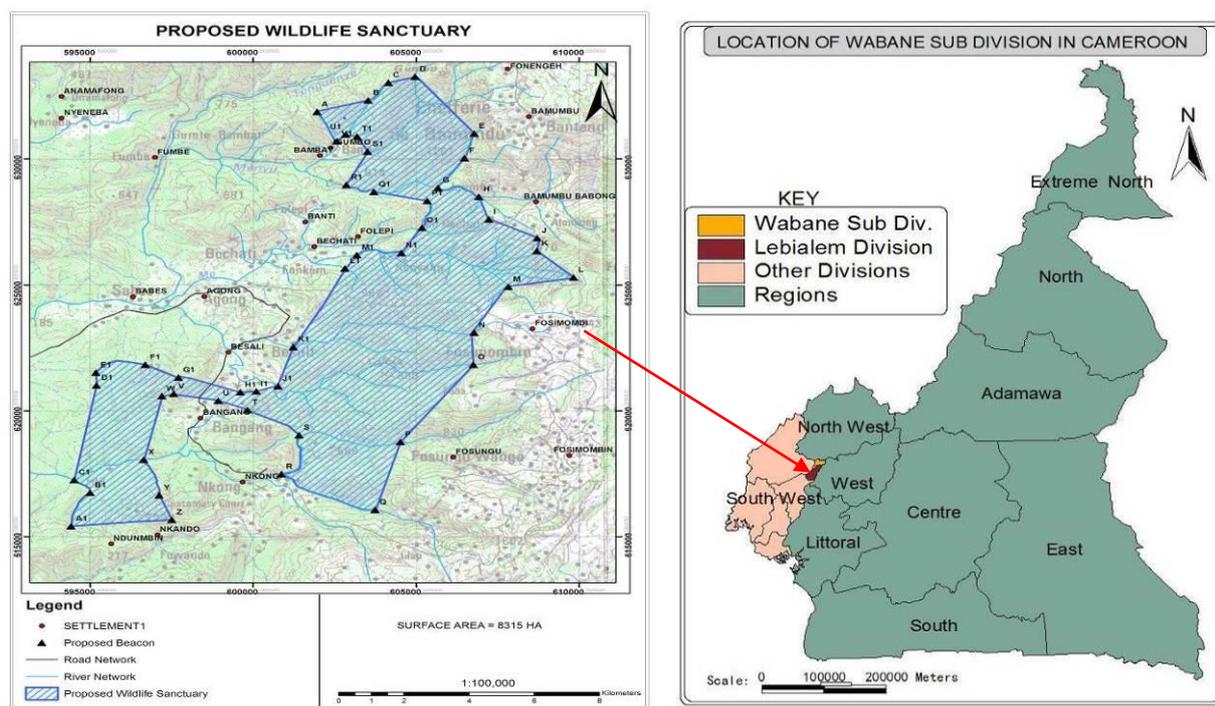


Figure 1: Map of Cameroon and the proposed THWS
(Source: ERuDeF& ACF, 2007)

2.2 Strategies and actions

In a 3-day workshop, 18 field staff working in the project area were trained on participatory approach and conflict management techniques. Before and during the workshop, participants were engaged in literature and interactive discussions on the concepts of complexity, conflict management and participatory approaches to wildlife conservation. During the workshop, together with the resource persons participants analysed how each concept can be implemented in the project area. Participants were also offered the opportunity to share their field experiences and learn from each other during group discussions in the workshop.

In identifying and mapping the mechanism by which access is gained, maintained and controlled in the THWS we made use of questionnaires, field observation and focus group discussion. The analysis of access involved identifying and mapping the flow of benefit of forest resources, identifying the mechanism by which the different actors involved gain, control, and maintain the benefit flow and its

distribution and an analysis of the power relations underlying the mechanisms of access involved in instances where benefits are derived. The study also analysed how access mechanisms (capital, labour, knowledge, authority, identities and social relations) contributed in shaping local stakeholders ability in benefiting from forest resources. We administered questionnaires 241 household across 10 villages (Mock mbin, Fossimondi, Bamumbu, Folepi, Bechati, Banti, Igumbo, Besali, Nkong and Bangang). In addition, a total of 128 interviews were conducted: 119 with key informants in the ten local communities and nine with the local government and local NGO involved in wildlife conservation in the study area. At least 10 key informants were interviewed per community. Key informants were selected in collaboration with local field guides and the community head (chief) of each community. Interviewees were selected from each of the following categories: local council, men, women and youth all from different households. During the interview, interviewees were guided by questions, which enabled them to express their views on access to forest resources and how they are currently involved in forest management in their community. The questions also guided interviewees to reveal the challenges and opportunities presented by their interactions with forest resources. Similarly, five local government and four NGO staff were interviewed on their interests in forest resources in the THWS and how they were able to gain, maintain and control access. Questionnaires and interviews were also supported by field observation.

The logical frame approach (logframe) was used in redefining innovative conservation strategies for the great ape conservation project. Logframes are best suited for analysing the level of success of already existing projects (IUCN 1997). The logframe provided the basis for evaluating effectiveness, efficiency and relevance of the project. The logframe was carried out through a 3-day workshop involving key stakeholders. It consisted of two phases (the analysis and planning phase). Each phase consisted of three steps. The analysis phase began by the analysis of the existing situation of the project and the development of objectives for addressing the project needs and concluded by developing the strategies needed to achieve the desired results for the project. In the second phase (planning phase) a logframe matrix was developed from the strategy analysis. This matrix stated the objectives/activities of the redesigned project, indicators, means of verification and assumptions for objectives/activities



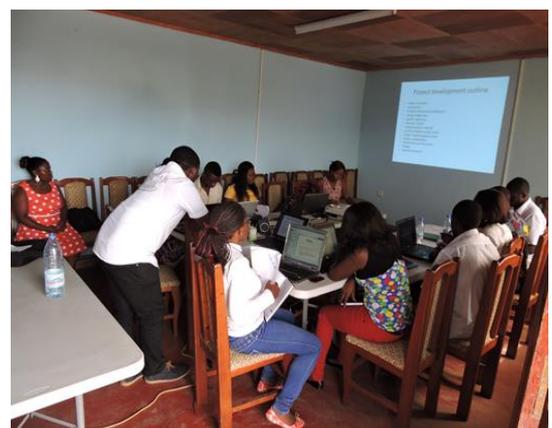
Questionnaire administration in Besali community



Questionnaire administration in Bechati community



Focus group discussion in Folepi community



Logical framework analysis exercise

3.0 RESULTS AND DISCUSSION

3.1 Capacity building for 18 field staff on participatory and conflict management

We identified 18 field staff involved in the Tofala Hill Wildlife conservation project and invited them for a training workshop in collaboration with their respective institution. Invitations were served 3 months before the training date and participants were given reading materials on participatory approaches to conservation and conflict management in protected area. After studying the workshop materials, participants were asked to prepare a short essay on both topics (participatory management and conflict management) with reference to a particular field situation they have been engaged in. During the three day workshop, participants were able to present their essays. There was a discussion session after each presentation, which involved the contribution of invited experts. Participants were able to learn from the experience of different experts and from the experience of other workshop attendant.

Participant presentations were accompanied by lectures and short working session on participatory approaches and conflict management. Participants were presented with different project and field scenarios that demonstrate conflicts and they had to suggest the possible way of solving the challenges. At the end of the workshop, participants were impressed with the challenging tasks presented during the workshop and attested that it actually increased their scope of analysis for solving conflicting situations in the field and encouraged dialogue between stakeholders.



Small working groups during the training workshop



Participants presenting their case study during the workshop



3.2 Access to forest resources in the THWS

3.2.1 Stakeholders and forest related activities in the THWS

In term of forest access, two primary stakeholders were identified: the non-profit organisation (NGO) promoting conservation and the local community members (LCMs). The forest is important to the NGO because of its biodiversity values. For the LCMs it is a source of livelihood and also has sacred values. "...our ancestors live in that forest..." stated the chief of Bechati village. The main livelihood activities that contribute to household income included farming, hunting, business and waged labour (Table 1).

Table 1: Main activities to meet the Income needs of households during the year

Activity	Frequency	Percent	Valid Percent	Cumulative Percent
Farming	206	84,1	84,1	84,1
Hunting	10	4,1	4,1	88,2
Business/waged labour	26	10,6	10,6	98,8
Others	3	1,2	1,2	100,0
Total	245	100,0	100,0	

Farming (84.1%) contributed the most to households' income. The Pearson correlation between the main activities to meet the income needs and how often individual used the forest was significant at 0.01 significant level (2-tailed). Bush fallow was the main farming practice for LCMs. This farming system promotes deforestation as primary forest is occasionally destroyed. Medicinal herbs and plants are widely consumed locally in the place of modern medicine. NTFP harvesting also constitute a minor but important forest activity for the local people. The most harvested NTFPs according to the LCMs were *Gnetum africanum* (eru) and *Cola acuminata* (red cola). There was no significant difference between income generating activities amongst the six studied communities ($\chi^2=16.369$, $p \geq 0.05$, $df=15$).

3.2.2 Factors shaping access to forest resources THWS

This study grouped factors shaping access to forest resource in the THWS into two categories: basic factors and enabling factors. Basic factors included authority, identity and labour. These factors formed the basic rights that enable LCMs to access forest resources without external (third-party) negotiations. On the other hand, enabling factors are factors that do not necessary gives the individual the direct right to access forest resources. However, these factors provide the opportunities for negotiating access rights. This included knowledge, capital and social relations.

3.2.2.1 Basic factors shaping access to forest resources in the THWS

Authority, identity and labour were identified as the basic factors shaping access to forest resources in the THWS. In-depth interviews revealed that access to land and forest resources was as a result of first occupancy. The first occupants have authority over the land and resources in the area occupied. Subsequent, occupants adhered to the rules and regulars put in place by the first occupants. As the number of occupants increases, the first occupant who normally is the head of the community ('fon') appoints other individuals (chiefs and 'bekem') to assist in leadership. These occupants' shared a common identity which described them as clans or ethnic groups. The labour force of clans or ethnic groups was a key determinant of the amount of land/resources they could secure or occupy. The secured land/resources were then shared among the community members and it became their properties. They subsequently had the rights to transfer it from one generation to another. Land/resources were also reserved for general community use (common property).

This study also revealed that the increase in population and development opportunities across the different communities (clans) in the study area has played a lot on the basic access factors. Free access to farming land which use to be the right of communities members are now limited (Table 2). In some cases community members had to purchase a piece of land for farming which was not a previous practice. Notwithstanding, some communities (Fossimondi, Besali, EGumbuo and Bechati) attested they still have land assigned for general use, which permit community members willing to extend their farmland to do so without any financial charges.

Table2: Means by which local community members first acquire land for your farm

	Frequency	Percent	Valid Percent	Cumulative Percent
Inherited	199	81,2	81,2	81,2
Cleared a virgin forest	28	11,4	11,4	92,7
Bought it	14	5,7	5,7	98,4
hired/borrowed	4	1,6	1,6	100,0
Total	245	100,0	100,0	

Majority (92.7%) of community members still inherit and clear a virgin forest land for a farm land. However, other need to buy or hired a piece of land in other to practice farming, which was not a previous practice in the communities. This was an indication that access to land/resources were now limited and in order to control access a price value was placed on it. Access control to forest resources was also governed by customary laws put in place by traditional leaders (Village Traditional Council). However, this was reported not to be effective as they were no mechanisms put in place to monitor laws.

3.2.2.2 Enabling factors shaping access to forest resources in the THWS

Capital, knowledge and negotiation of social relations were identified as enabling factors shaping access to forest resources. Through enabling factors, the local NGO advocating biodiversity conservation was able to gain access to forest resources. The NGO knowledge on wildlife conservation and forest management contributed in the negotiation of access to forest resources. In addition, the activities and field presence of the NGO enabled the creation of social ties with the local government and other stakeholders alike, strengthening the NGO in negotiating conservation activities despite the challenges involved. This also explained why despite the pessimistic nature of most LCMs on the long term impact of wildlife conservation, there were limited abilities to oppose the conservation project. In addition, the social identity and the power-relations within which the NGO is situated in the local context were stronger than the LCMs voices within the same setting. Furthermore, the financial capability to hire labour for conservation activities enables the NGO to maintain access in the THWS. The NGO ability to control access to forest resource was supported by the Cameroon forestry and wildlife law, which restrict the exploration of endangered species and forest exploitation for commercial purposes without legal permits. However, there was no field enforcement of this law. Thus, local people could still access restricted forest resources. A summary of different actors, services, factors shaping their access processes and the source of power underlying access revealed diverse interests in forest resources (Table 3).

Table 3: Actors, services, factors shaping access and the source of power underlying access

No	Stakeholders/Actors	Services provided by the THWS	Factors shaping access processes			Source of power underlying the mechanisms of forest access
			Gain Access	Control Access	Maintain Access	
1	Local community Members (LCM)	<ul style="list-style-type: none"> - Source of livelihood (income and employment) - Cultural value (home for ancestors and gods) - Recreation and landscape value 	Authority, identity, labour, capital, knowledge	Authority, information	Labour, markets, information	Customary law
2	Local NGO (ERuDeF)	<ul style="list-style-type: none"> - Biodiversity conservation, landscape, recreation, carbon sequestration - Employment (research/conservation activities) 	Identity, negotiation of social relations, knowledge, capital	Negotiation of social relations	Identity, negotiation of social relations, technology, capital, knowledge	State law
3	Local Government	<ul style="list-style-type: none"> - Forest resources, biodiversity and landscape 	Identity, authority	Authority, identity	Identity, authority	State law
4	Donors	<ul style="list-style-type: none"> - Biodiversity, landscape, recreation, carbon sequestration 	Identity, capital	Capital	Identity, capital	Convention
5	Business groups	<ul style="list-style-type: none"> - Source of goods and raw material (farm produces and NTFPs) 	Identity, capital	Capital	Capital, negotiation of social relations	Custom/state law
6	Tourists	<ul style="list-style-type: none"> - Recreation 	Identity, capital	Negotiation of social relations	Identity, capital	Custom/state law
7	Researchers	<ul style="list-style-type: none"> - Research 	Identity, capital, knowledge	Negotiation of social relations	Negotiation of social relations, identity, capital	State law, convention

3.2.3 The impact of forest access on wildlife management in the THWS

Access by the NGO presented strengths and opportunities, as well as weaknesses and threats to wildlife conservation (Table 4). Conservation could be very beneficial to forest and wildlife if conflicting interests were resolved. The presence of conflicting interests was observed as the main driver of unsustainable management. *"We have started cutting down the forest to cultivate our crops; when the forest finally disappears, the NGO will go away because there will be no more forest left for conservation..."* noted an interviewee in the Fossimondi community. *"We thought the NGO was only interested in the animals in the forest but now we see that they are also interested in taking away our entire forest and they do not even care what we go through. After all, they do not live in this community...."* noted another interviewee in the Bamumbu community. Although the LCMs and the NGO succeeded in maintaining their access and protecting special interests in the forest since 2004, these respective interests on forest resources had been conflicting. While the NGO was advocating for sustainable use of forest resources (which limits forest usage by the LCMs), local people on the other hand perceived the conservation agenda to be a threat to livelihoods. As a fight-back mechanism, one of the studied communities (Fossimondi) recently started a campaign to cut down forest under their custody (customary rights) for farming. They anticipated that if they convert all forested land under their custody to farmland, no forest would be left for conservation. Similarly, across the other nine communities, there were no efforts to practice sustainable forest management. *"Our forest is too small and it is just enough to serve our future children; we do not have any forest to give out for the purpose of conservation...."* noted an interviewee in the Folepi community.

Table 4: SWOT analysis of the impact of forest access on wildlife management in the THWS

	Impact of forest access on wildlife management
Strengths	<ul style="list-style-type: none"> - Improve forest resource availability - Improve forest management and environmental sustainability - Improve ecological services - Improve biodiversity - Improve land use planning
Weaknesses	<ul style="list-style-type: none"> - Forest encroachment - Over exploitation - Lack of equity and social justice
Opportunities	<ul style="list-style-type: none"> - Biodiversity conservation - Encourage livelihood diversification - Collaborative management - Local capacity building - Improve local livelihoods
Threats	<ul style="list-style-type: none"> - Limit livelihood options for local community members - Threat to cultural values - Create room for marginalisation - Forest encroachment and illegal exploitation - Deforestation - Marginalisation of local community members

To lobby more LCMs support and to reduce over dependence on forest resources, the NGO made efforts to provide alternative livelihood support to targeted LCMs (hunters and farmers). Livelihood support

provided included beekeeping, piggery farming and setting up of oil mills to facilitate palm oil production. However, this did not have substantial impact on reducing access to forest (Figure 2).

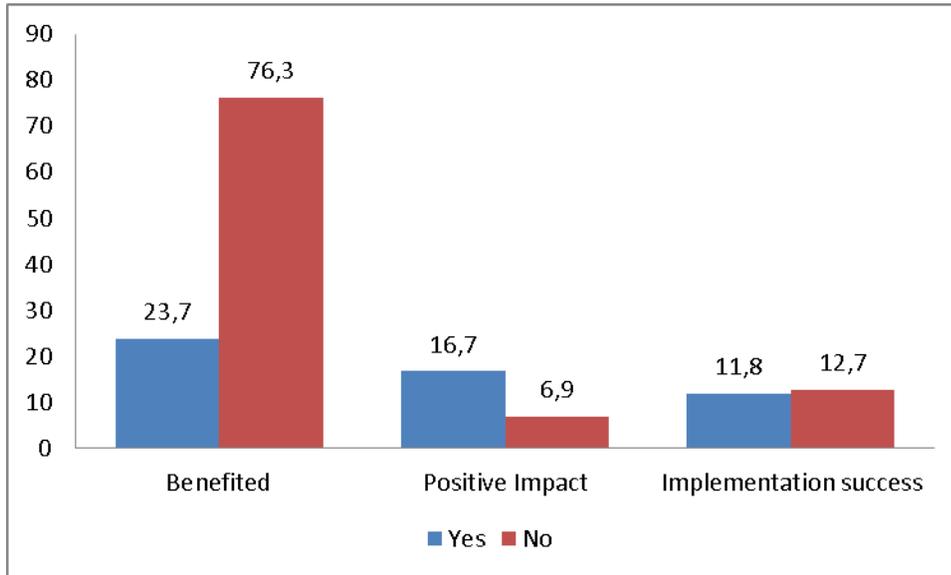


Figure 2: An illustration of the studied population that benefited from livelihood support, the impact generated by the support and the success rate of implementation.

Only 23.7% (n=58) admitted to have benefitted from alternative livelihood support from the conservation project. 16.7% (n=41) attested that it had an impact on their livelihood and 11.8% (n=27) attested that the project they received support on was successfully implemented. However, field observation and interviewees also revealed that, they project were not sustainable because of poor monitoring and evaluation. Thus, apart from the oil mill project which was still in place, most of the projects ended prematurely.

Interviews also revealed that the support received to establish alternatives livelihoods that were not forest-based did not match the benefits they normally received from forest resources. Thus, LCMs were not satisfied with the efforts of the NGO in providing alternative livelihood support. They were not also convinced to engage on sustainable forest management practices.*we cannot leave the forest, if the government preferred the animals in the forest to us, then it will have to forcefully take us out of the forest. We are ready to fight for our forest....* noted an interviewee in the Fossimondi community.

3.3 Enabling sustainability and participatory management in the THWS great ape project

The analysis from the logical framework (Table 5) highlighted five priorities interventions (activities):

Narrative Summary	Verifiable Indicators (OVI)	Means of Verification (MOV)	Important Assumptions
GOAL To enable sustainable great apes conservation in the THWS	Sustainable management of great apes is achieved in the THWS	-Field visits -Project reports -Interviews -Pictures and videos	-Absolute stakeholders collaboration -Funds available
PURPOSE Effective Management is achieved	Stakeholders can effectively manage the implementation of the project	-Project reports -Field visits -Interviews	-Absolute stakeholders collaboration -Funds available
OUTPUTS Reduced habitat destruction and increased great apes survival	Habitat destruction is reduced and a favourable environment exists for great apes	-Field visits -Project report	-Absolute stakeholders collaboration -Funds available
ACTIVITIES	Inputs		
Build local capacity on sustainable agriculture practices	Local people trained and received technical support to engage on sustainable agriculture practices	-Reports -Pictures/video	-Absolute stakeholders collaboration -Funds available
Build local capacity and leadership on action research in great apes conservation	Local people trained and have the capacity to lead action research in great apes conservation	-Reports	-Absolute stakeholders collaboration -Funds available
Reconcile conservation education strategies with culture and tradition	Conservation education strategies that reconcile conservation action with culture and tradition are adopted	-Reports -Interviews -Videos	-Absolute stakeholders collaboration -Funds available
Improve the state of knowledge on conservation challenges	Research is conducted and results available to inform project implementation	-Published manuscripts -Reports	-Absolute stakeholders collaboration -Funds available
Promote and provide alternative livelihood options that promote great apes conservation	Alternative livelihood options that promote great apes conservation are available to the local people	-Report -Pictures/videos -Field visits	-Absolute stakeholders collaboration -Funds available

4.0 CONCLUSION

This study argues that, though environment-development interventions may be well designed to deal with complexity, implementation is a major challenge and therefore outcomes often do not turn out as anticipated. To be able to address implementation challenges, there is a need for effective monitoring and evaluation which should be accompanied by in-depth research to advise on appropriate innovations to deal with the identified challenges. This study shows that LCMs access to forest resources is a threat to wildlife conservation and vice-versa. The effort to strike a balance between conservation and local livelihoods has been challenging and has also resulted to mixed perceptions among local people. Though conservation strategies enabled targeted livelihood support in some local communities, the support has not been able to motivate LCMs to fully support conservation strategies.

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