CHAPTER 10

Rural societies and multiple land use practices : perceptions of conservation and development projects within the framework of multiple land use systems in Central Africa

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1. Introduction

Despite persistent efforts by Central African governments and the international community to reduce poverty in rural areas, local and indigenous populations are still very poor. Triggered by continuous poverty and failures of policymakers and economic operators to bring about meaningful developmental changes in their lives, a cross section of indigenous and local populations is increasingly questioning the motives of conservation[49] and development initiatives (Pullin *et al.*, 2001). This is catalyzed by the paradox that even though Central Africa is so rich in terms of natural resources, its population remains very poor and this is manifested in the absence of socio-economic and health infrastructure especially in rural communities, despite the presence of numerous conservation and development projects (CEFDHAC, 2007).

According to some stakeholders, there is dissonance between the theory and practice of conservation and development, mainly because conventional theories hold that it is possible to promote local development and sustainable use of natural resources. However, in practice, local communities are often still unable to meet their basic needs, and this has resulted in anger, further alienating some stakeholders (including local communities) from the conservation discourse (Sutherland *et al.*, 2004). For example, an in-depth analysis of the causes of poaching in the Bouba N'Djida and Lobeke National Parks in Cameroon and the Conkouati Douli National Park in the Republic of Congo revealed that frustration and the lack of an inclusive conservation strategy have caused a segment of the local population to collude with poachers in order to have their own share of the booty and to reduce the population of elephants which destroy their crops (ECCAS, 2013). Unfortunately, and contrary to expectation, some stakeholders are of the opinion that some conservation organisations (e.g. Ngoila Mintom in Cameroon) and some large-scale agro-industrial concessions (e.g. Herackles Farms) have stymied their development efforts, mainly because the conservation areas and agro-industrial concessions deprive them of access to ancestral farming and forest lands.

Also, there is increasing suspicion about the strict command and control management of national parks, which is a persistent threat to rural peoples' livelihoods. For example, rural residents are often excluded from accessing or managing the resources in these Protected Areas (PAs), which in turn negatively affects their subsistence. This is often because there is a lack of basic alternatives available to help cope with strict government conservation efforts in lands that have been expropriated from them by the governments. Rural populations complain that some of their basic human products are found only in national parks ; indeed, recent IUCN studies have shown that forest products can contribute 25-40 % to rural incomes (up to 75 % for hunter-gatherers). There is also the issue of human-elephant conflict, where increasing numbers of elephants and other animals harbored in PAs and forest concessions destroy crops planted on rural populations' agricultural lands. Empirical evidence has shown

49 In this chapter "Conservation" has to be understood as conservation of the environment, wildlife and flora to the exclusion of any other activity of human exploitation (apart from tourism).

Photo 10.1 : Transporting fuelwood – Yangambi, DRC

that these issues have not only created some outright conflict between indigenous populations and decision makers (Eyebé *et al.*, 2012), but have also prompted some decision-makers and conservation actors to start sincerely rethinking and redefining their strategies in an effort to stop this increasingly confrontational attitude from escalating. Some conservation researchers and practitioners are of the opinion that it is equally important to exchange and analyze project failures and lessons learned, in addition to successes, in order to obtain a realistic understanding of conservation impacts and to make consequent improvements (Knight, 2006 ; Sutherland *et al.*, 2004).

This increasing poverty of rural population is partly inflated by the duality of current land management practices in the region where some key environmental/land policies and legislations are at variance with some major contemporary development and conservation objectives. For example, persistent conflicts between legal/constitutional and customary resources "ownership" or tenure have precipitated latent and overt conflicts linked to the management of natural resources because some segment of the rural population strongly feels that they have been disenfranchised of their ancestral lands and rights.

Historically, it should be recalled that land use practices in most Central African countries date back to the pre-colonial and colonial periods when most colonial masters (French, British, German, Belgian and Spanish) used their respective laws and tools to manage lands in their colonies. After independence, most countries simply adopted these colonial laws in their new legal and policy frameworks. However, not long afterwards, they started encountering some major implementation hurdles at the local level because indigenous populations remained steadfast to their pre-colonial traditional and customary land rights that supported socialization between members, guaranteed economic benefits, advocated for socio-cultural continuity and consolidated their territorial and administrative gains. After all, cultural gatekeepers like village chiefs and elders were expected by their subjects to protect these important traditional values, which, at times have been at variance with some key legal resources ownership provisions of current nation-state. These implementation hurdles and "voids" have partially provoked the on-going revision processes of the land tenure laws (Cameroon and DRC), forestry and wildlife codes (Cameroon, DRC, Congo, etc), environmental law (DRC), etc. Although multiple land use practices exists today (e.g. agro-industry, protected areas (PAs), community hunting zones, mining, etc), most contemporary land use planning and implementation laws, strategies, tools, methods recognize three main zones (i) extractive resource (economic operators), (ii) community zones (for community

use and management, and (iii) Protected Areas (for conservation of natural resources).

This chapter aims to explore local perceptions of conservation and development projects, notably by evaluating projects results (successes and failures), identifying the effects of resource policies and proposing key recommendations to ensure that the desired outcome of conservation and development projects are attained at the local level. It will also be an opportunity to tackle these problems through the eyes of local and indigenous peoples who sometimes have the opinion that the continuous desire to conserve natural resources sometimes pushes other stakeholders to forget about their plight and the important role they can play in the entire project cycle to ensure positive impact. In other words, it is an exploratory work that aims to understand and evaluate local and indigenous populations' perceptions on conservation and development projects. We will use qualitative and quantitative data to evaluate whether the different land use management strategies currently being proposed are advantageous or detrimental to local communities in terms of the sustainability of their livelihood options and the sustainable use of natural resources. Most development actors are increasingly interested in the quantification of socio-cultural and economic benefits accrued from the implementation of development and conservation projects at the local level. After all, it is evident that the perception of conservation and development options can trigger either positive or hostile actions by the local population. Positive perception could depend on the presence of infrastructure (roads, health centers, schools, houses, etc.) and on the effective inclusion of the local and indigenous populations in conservation and development actions through pre-defined good governance structures. Also, because we are dealing with socio-cultural institutions at the local level, it is important to analyze how these different land use options impact local institutions, local laws and regulatory frameworks, social statuses and roles, and how changes in these land use options are gradually influencing behavioral change through socialization and cultural diffusion. For example, how do local populations interact with strangers, migrant workers and park managers, and how does this influence their attitudes towards the management of local conservation and development interventions. In this chapter, we will assess the impact of the various land use options, patterns and practices on the livelihoods of dependent communities, on the conservation of natural resources at the local level, and on dependent communities' perceptions of the conservation and development practices going on around them.

Box 10.1. Contribution of natural resources to the earnings of rural households in Cameroon and the Republic of Congo

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The local communities and indigenous peoples of the forest zones depend on natural resources daily for food, clothing and hygiene. A study[50] on how natural resources contribute to their earnings was conducted in 2012 through interviews of 160 rural households in Cameroon and 70 in Congo.

Contribution of natural resources to household earnings

Two types of earnings were analyzed: monetary earnings and earnings in kind (independent consumption of natural resources). Figures 10.1 and 10.2 show the contribution of timber and non-timber forest products, crop/livestock/fishery products and other sources of revenue (employment, commerce, money transfers, etc.) to the average annual earnings of these households in Cameroon and Congo respectively and distinguish monetary resources from resources in kind (subsistence consumption). Table 10.1 estimates their monetary value.

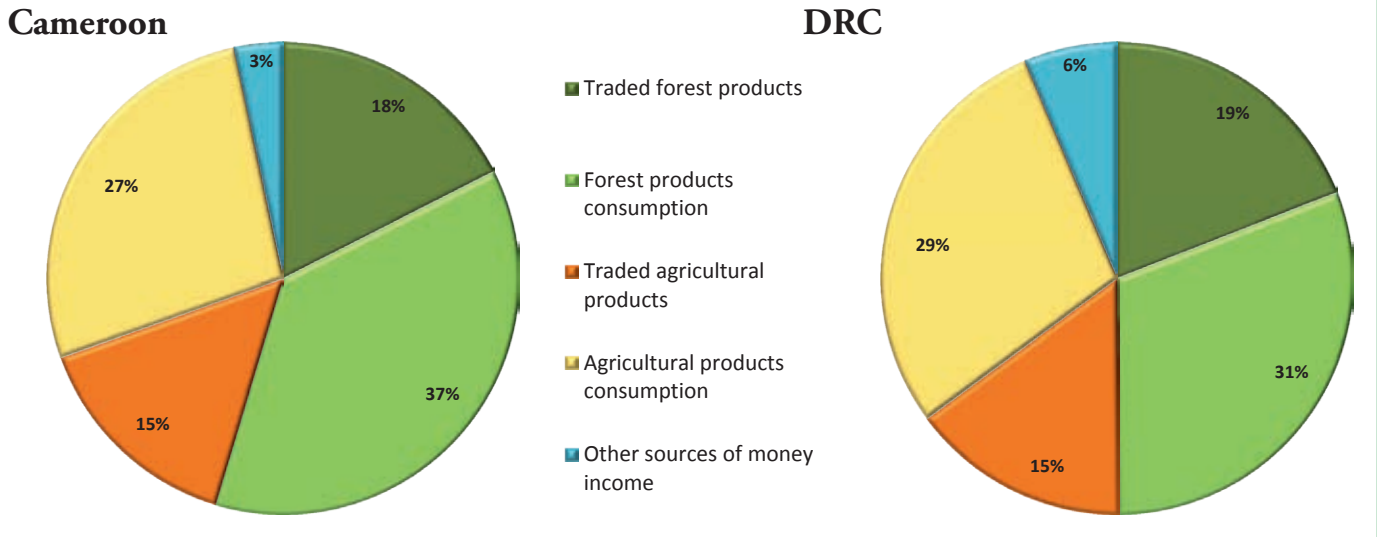

Figure 10.1: Contribution (in %) of natural resources to the annual earnings of households in Cameroon and in Congo

Table 10.1 shows that in Cameroon the earnings derived from forestry products are close to those derived from farming and fishing, whereas in Congo agricultural earnings far exceed those derived from forestry products. The other sources of income represent only 8.5 % and 14.7 % of global earnings respectively.

Table 10.1: *Contribution of various sources of earnings to the average annual earnings (in CFA) of Cameroonian and Congolese households (2012)*

	Cameroon	Congo
Forestry products	3 371 827	2 693 379
Agricultural and fishery products	3 559 685	3 577 148
Other sources of income	647 305	1 077 635
Total annual earnings	7 578 817	7 348 162

Source: Survey 2012

The difference between these two countries is linked to the presence in Cameroon of a number of NGOs which assist local inhabitants to derive greater value from non-timber forest products and to market information systems which place farmers in contact with buyers. The earnings also differ according to ethnic groups: the Bantous, who are more oriented towards the market economy, have higher earnings than those of the Baka in Cameroon and the Bayaka in Congo, who are more subsistent.

50 For this study the toolbox for measuring forest dependence-poverty developed by the International Union for the Conservation of Nature (IUCN), the Overseas Development Institute (ODI), the International Center for Forestry Research (CIFOR) and Winrock International was used.

Origins of natural resources

The various natural resources are derived from different environments, whether natural or cultivated.

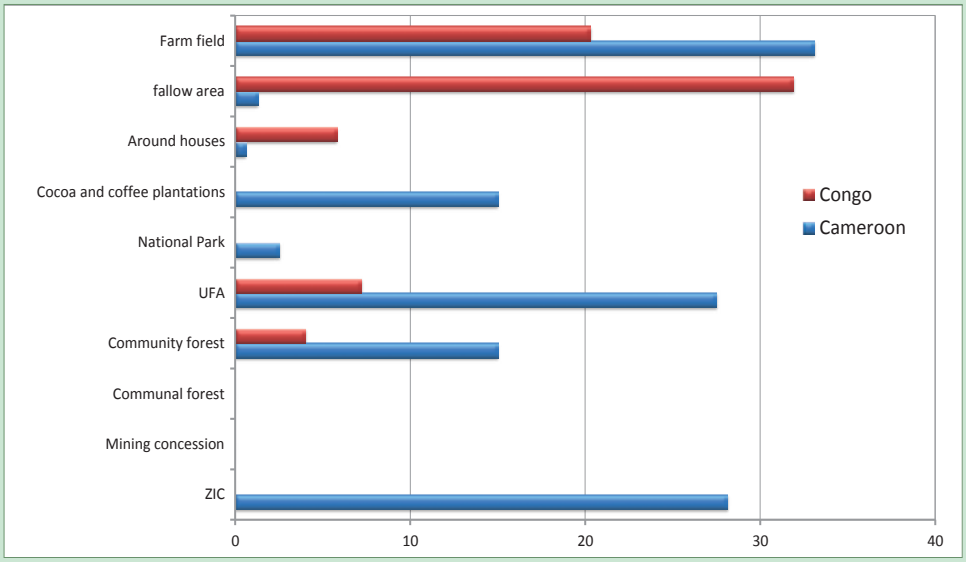

Figure 10.2: Distribution of places of origin of natural resources in Cameroon and Congo (%)

In Cameroon, households exploit natural resources mainly from their fields, the Forest Management Units (UFA), the hunting areas (ZIC), the community forests and the cocoa and coffee plantations, whereas in Congo these resources are mainly derived from fallow areas, then fields used for crops and UFAs, but with differences according to ethnic group (table 10.2).

Table 10.2: *Principal places of harvesting (in %) of households according to ethnic group in Cameroon and Congo*

	Congo		Cameroon	
Principal places of harvesting	**Bayaka**	**Bantou**	**Baka**	**Bantou**
Fields under cultivation	7.1	29.3	36.3	30
Fallow areas	60.7	12.2	2.5	7.5
Around houses	0	9.8	1.3	0
Cocoa and coffee plantations	0	0	1.3	28.8
National park	0	0	2.5	2.5
UFAs	17.9	0	28.8	26.3
Community forests	10.7	0	23.8	6.3
ZICs	0	0	32.5	23.8

For the Bantous, field crops are the main resources, whereas the Bayaka harvest mainly from fallow areas. The Baka obtain resources mainly from the forests (UFAs and community forests), fields under cultivation and ZICs.

The modes of land use and the resources derived from them by different communities gives rise to numerous conflicts, which makes it difficult to define a common view of sustainable natural resources management. However, local communities and indigenous peoples should take part in REDD+ projects because they are the ones primarily concerned by climate change. It is necessary to evaluate how REDD+ mechanisms will affect these local communities, how they will enable traditional land rights to be respected and how they will guarantee the equitable distribution of the benefits and obligations resulting from these projects.

2. Contribution of multiple land use practices to local development

2.1 Overview of the issues

Although different land use practices have been studied over the years in Central Africa, there has been very little evaluation of the socio-cultural and economic impacts of these various land use practices on rural communities. In fact, most governments and non-governmental organizations showcase the validity and reliability of various land use methodologies rather than analyze how communities perceive these land use practices and the socio-cultural, environmental and economic impact of these practices at the local level.

Perhaps this is because some conservation organizations are either solely interested in biodiversity conservation, or they only see the improvement in rural peoples' livelihoods as a means to an end, instead of as an end in and of itself. These views by conservation organizations often determine how local communities perceive conservation actors and projects. Empirical evidence has shown that these perceptions might also depend on the impact these projects have on livelihoods and socio-cultural practices. This brings us to the question of why some conservation and development projects fail at the local level, despite the zeal of Government and international community to succeed. As said earlier we need to start thinking about the actual impact of these land use practices on local communities. For example, although the forest sector contributes, on average, between 5 and 13 % of the GDP of Central African countries (FAO, 2002) and 6 % to Cameroon's GDP (COMIFAC, 2010), local communities still remain very poor (Yanggen, 2010 ; Angu, 2010). Are these interventions bearing fruits or hindering the full involvement or participation of local poor populations ? It is also important to understand how traditional and customary land use management practices are at times at variance with modern management options masterminded by "external actors" (policy makers, NGOs, donors, etc.).

Although we need some time and resources to carry out a comprehensive analysis of the link between land uses options/planning, conservation and the sustainable livelihoods of local communities, some field experiences are already giving room for such an analysis. However, although we do have some field datasets, they seem to be so limited that they could hardly be used to make generalization. Also, many times practitioners lack an appropriate evaluation methodology to determine whether they are meeting their goals. In short, the planning process is still in its embryonic phase, but thanks to the efforts of participatory planning (e.g. the USFS planning guides) countries have started taking the matter seriously.

Because of this scarcity of field data, the authors of this chapter are not suggesting they have all of the answers to these questions. However, we strongly believe that the initial results of these case studies should be used to provoke discussions that will ultimately pave the way for a comprehensive evaluation of the impacts of the various land use practices proposed by conservation and development projects in rural areas in the future. This discussion is vital right now, when conservation and development actors are almost unanimous in their opinion that we can only attain sustainable conservation if we put local communities at the fore-front (i.e. using a people-centered approach to conservation) (Yanggen, 2010). We hope subsequent versions of the State of the Forest Report or other publications could draw from our examples to enrich future publications.

2.2 Rural populations, customary institutions and traditional land use practices in Central Africa

In Central Africa, rural societies are socio-cultural entities that are generally composed of two or more villages and are recognized by the government as a management unit. Because land use activities are key to understanding and predicting behavioral patterns in rural communities, it is important to understand and define the socio-economic activities (e.g. agriculture, hunting, forest harvesting, artisanal mining, slash-and-burn agriculture, etc.) that characterize rural societies. Additionally, because each village has a historically-defined territory where its inhabitants collectively commune and share available resources, values and norms, there are often conflicts when part of their territory is allotted to a foreign company or designated as a national park, especially when this occurs without seeking their consent.

Typically, a village (or grouping of villages) is composed of the village chiefs and the traditional village council (often the heads of main lineages and dominant socio-cultural groups), manage the collective natural resources within the territory. The village chiefs are often descendants of the apical ancestor or founder of the village, and they are usually believed to ensure the link between the village inhabitants and their ancestors and sometimes land fertility (such as ensuring abundant wildlife or agricultural production). The village chief is often considered the peace maker, because his role is to negotiate and find common ground during conflicts, order the repartition of agricultural lands, and control hunting and forestry activities on farmlands or concessions. Because most villagers believe in them, especially as cultural gate-keepers, these traditional institutions have remained in place in some form, even during the colonial and post-colonial periods. Access and use rights to lands and forest resources are also negotiated in a system of traditional authority, clans, family lineage and individual households (Akwah and Yoko, 2006). We noticed that local populations in some of our study areas, especially in the Sangha Tri-National (TNS), Dja-Odzala-Minkébé (TRIDOM), Bikoro, Bateke Plateaux etc. are strongly attached to their customary institutions, where land is considered a common

Photo 10.2: Brick-making ovens are big wood consumers – Kisangani, DRC

heritage as both a physical and cultural inheritance from ancestors. However, with the promotion of community-based management by the government and local communities receiving the proceeds derived from community management, we are gradually witnessing an urban to rural migration, especially in south-eastern Cameroon (Angu, 2001 ; Angu, 2010b) ; this is in contrast to the normal rural-urban migration occurring in most countries (UN, 2012). This is mainly because villagers who migrated to the cities in search of a better lifestyle were confronted with immeasurable hardships in towns, and seeing new opportunities and initiatives in rural villages, they changed their minds and went back to the villages. However, their time spent in the cities somewhat alienated them from village values and patterns, and their return to the village has often created conflict with fellow villagers, especially the village chiefs and other village elites, over natural resource management.

Empirical field data gathered from project sites in Central Africa, notably in Bikoro (DRC) and the Trinational Sangha (TNS-Cameroon, the Congo and the CAR), the Bateke Plateaux (Gabon), revealed that the main authorities regulating access to community land and forest resources at the village level are the customary chief, the local administrative chief and the heads of families or clans. The customary chiefs are the main custodians of community natural resources because they mediate and resolve local-level conflicts related to forests and other land use practices. Traditional practice dictates that people who are not native to the village such as migrant workers cannot have direct access to land and forest resources. Clans, families and even groups of villages can negotiate their access to land and forests via the customary chief, village elders or heads of families with customary claims to the land or forest. Moreover, any migrant or non-native that needs farmland has to consult with the customary authority to gain access to the land, or he can rent land from natives of the village. Minority or vulnerable groups such as Pygmies find it difficult to integrate themselves in the society because they must negotiate their access to land and forest resources by sharecropping and, if necessary, donating gifts to the customary chiefs and head of families or clans (as in the case of Bikoro). Also, since most of the societies are patrilineal, tradition holds that women cannot have direct access to land except via their husbands or other siblings. Single women and widows without children usually negotiate their access to land through the heads of families and the customary chief. The customary chief and the head of family or clan with a customary claim to the land or resources typically negotiate and distribute parcels of the forest land. However, this differs from matrilineal societies where women can have direct access to land (e.g. some southern parts of Gabon). It should be noted that traditional land tenure systems in rural African societies are very flexible, with mostly unwritten land policies and laws.

However, in most countries in the region, especially the DRC, Congo and the CAR, the governments have not yet finalized and vetted provisions that will enhance the role of communities in natural resource management (e.g. the signing of an implementation decree of community forestry) (Hoare, 2010). This often results in conflict between local populations and large-scale economic operators who use their land for either large-scale plantation farming or mining. Also, the ability of local communities to attain and mobilize resources to improve their livelihoods is often constrained by their inability to effectively engage in forestry and development interventions (Bartley *et al.*, 2008). Also, most national laws and codes recognize local communities as user groups with only use rights to natural resources, while embedded customary institutions retain de-facto property rights at the local level (Klaver, 2009).

This demonstrates the importance of culture to the daily lives of rural communities in Central Africa, and, contrary to expectations, why it is difficult to cede key customary socio-cultural policies and laws that rural communities have upheld for many years or decades. Conservation or development projects should take into consideration these societal traits when building their projects and programs, because otherwise the chances there are greater that they will not succeed (Waylen *et al.*, 2010 ; Ostrom, 2009).

2.3 Decentralized management of natural resources and multiple land use practices in rural Central Africa

The concepts of decentralization and deconcentration are very important to our analysis of the impacts of multiple land use patterns and practices on socio-economic development and conservation at the local level. The deconcentration and decentralization of authority are old administrative and political practices from the colonial and post-colonial Congo Basin countries (Oyono, 2009). Deconcentration is a process whereby power is devolved to nominated subordinate authorities who are given the power to make decisions in the name of the central power (e.g. regional or provincial governors, senior divisional officers, divisional officers, etc.). Territorial decentralization, on the other hand, is a form of power organization where the government creates decentralized public personalities, with specific attributes and functions, and gives them the necessary resources to perform their job, while retaining the power to supervise them (Owona, 2011). In many of the countries in Central Africa, the decentralized decision-making authority belongs to councils.

Decentralization of natural resource management, notably forest management, is generally called technical or sectoral decentralization. Here, the government devolves some of its powers and management responsibilities to actors or institutions at lower levels of the political, administrative and territorial hierarchy. This form of decentralization is more recent and less well-known to the public at large (Ribot, 2007). Table 10.3 summarizes the experiences with the decentralization of forest management in the sub-region.

Table 10.3: *Recipients and purpose of the decentralization of natural resource management in five countries of the COMIFAC*

Countries	Beneficiaries	Categories or Sectors
Chad	Councils	Tree planting
Cameroon	Councils	Forest
Congo-Brazzaville	Councils	Forest
Burundi	Councils	Tree planting
Rwanda	Councils	Tree planting

Devolution, which is another component of transfer of management power and responsibilities, could be seen in the following mechanisms in Central Africa (Oyono, 2009).

The following mechanisms illustrate devolution, which can involve the transfer management powers and responsibilities: the management of community forests and hunting zones in Cameroon (currently being implemented), the process of creating and managing community forests or concessions in the DRC (yet to be implemented), the creation of community conservation areas in eastern DRC (currently being implemented), the creation and management of community forests in Gabon (Community forest decree came out last January 2013, but pilot projects have been going on through the *Comité Communautaire de Gestion Locale* found in the buffer zones around the national parks), and the management of *Reservas de Poblados* in Equatorial Guinea (currently being implemented).

Because it is difficult to quantify the socio-economic impact of forest decentralization and the devolution of power and responsibilities (to local structures) on local development and conservation objectives, the efficiency of decentralized

Photo 10.3: Protection of a young tree in village area

natural resources management is hard to measure. However, efforts to decentralize natural resources management in Cameroon over the past 10 years appear to have resulted in the empowerment of local communities and the construction of socio-economic infrastructure like schools, health centers, etc. Unfortunately, the analysis is complicated by the lack of a comprehensive and transparent public database to measure whether these schemes are effectively contributing to local development and the sustainable management of natural resources. For example, the implementation of the Congolese model, where socio-economic benefits could be measured in terms of the availability of basic needs (water, houses, roads, involvement in development projects, etc), is highly awaited, because it can act as a source of inspiration and comparison for other devolution models among the Congo Basin countries (notably the community forests in Cameroon and, to a certain extent, in Gabon). Also, the Congolese model could show some improvement in the recognition of the rights of communities in land use planning and zoning (Hagen *et al.*, 2011). This could be done by making sure that realistic policies and laws are conceived and implemented at the local level (Eyebe *et al.*, 2011).

There are several methodological difficulties that constrain our results (Ebamane, 2009). In all the countries, especially in Cameroon, revenues derived from the management of council forests are earmarked for multiple uses, including local development (Cuny, 2011). However, it is very difficult to measure development results. Although numerous socio-economic infrastructures have been established, they do not yet meet the needs and expectations of the population because they have been only partially implemented due to poor planning and organizational deficiencies. For example, neither the first nor the second editions of poverty reduction strategy documents anticipated the expected contribution of the decentralized management of natural resources on local development.

Does the decentralization of forest management favor conservation and local development? To understand this complex question, we feel it should be analyzed holistically (i.e. socially, politically, economically, technically and strategically). However, although it is very difficult to obtain a comprehensive research report on this, it is certain that decentralization of forest management has favored conservation and local development (e.g. COVAREF (to some extent) in the TNS (Cameroon), tourism projects management by local communities in the Volcanoes National Park in Rwanda). This can only be possible not only if local communities respect their management plans or other sustainable management norms but also if other stakeholders like Governments respect their own part of the bargain. Unfortunately, we have witnessed numerous cases of the illegal exploitation of natural resources because of weak monitoring by the line government ministries, insufficient collective action by local communities, and inadequate institutional arrangements by local government officials (Oyono, 2006). Also, some

field experiences in Cameroon have shown that management by council forests results in both good and bad ecological outcomes, depending on the harvesting practices used and the degree that conservation laws and policies were enforced (Cuny, 2011). It should be noted that, with the exception of Community Forestry management in Cameroon and its generally negative balance sheet, with the exception of pockets of successes in some areas, there has been no comprehensive analysis of the outcome of decentralized forest management in Central Africa.

In the eastern DRC, community conservation has advanced significantly thanks to the efforts of conservation organizations like Conservation International, WWF, and Dian Fossey Gorilla Fund International (DFGFI) over the past 20 years. Natural reserves in North Kivu are positive examples of how the 2002 Congolese Forestry Law has promoted decentralized management far beyond the expectations of stakeholders (Oyono and Lelo Nzuzi, 2006). A pilot community conservation project, which is based on mutual learning of key local stakeholders, is also currently being implemented in Bikoro in the Equator Province in the DRC (Taylor, 2011) ; because of the strength of local institutions, powerful traditional chiefdoms, governed by *Mwamis* (customary chiefs), guarantee the respect for and protection of management norms and arrangements, as well as the collective action of the local population in controlling the resources. This mechanism, which is also being implemented in Rwanda and Burundi, is synonymous to decentralized management, and it is showing positive results in the sustainable management of natural resources (Mehlman, 2010).

Our field experiences highlight three lessons learned :

1- Decentralized management of forests and power devolution are not only new concepts, but are also not welcomed by the central government authorities, especially in countries that have a strong tradition of centralization (e.g. most Central African countries). However, because of the fear of conflicts, widespread corruption and mismanagement, most countries are now using this model to facilitate sustainable forest management. It is therefore important for stakeholders to encourage countries to continue, especially because it is a slow and cumbersome process.

2- It is important to institute national revenue databases and monitoring programs in all countries. Currently, it is difficult to measure the exact contribution of this mechanism to rural development and the sustainable use of natural resources because of the absence of national databases.

3- Decentralized management and power devolution could promote development and ecological sustainability if the devolved powers and responsibilities are sustained by well-defined institutional arrangements, backed by real political will and respect for the rights of local communities. These rights would be protected judicially. It might also be interesting to know when local rights could be juxtaposed or substituted to the rights of other actors like private sector. Should we reduce state land (and the global size of concessions) or, on the contrary, define and implement different land use options in and out of state lands ?

It is urgent to carry out comprehensive ethnographic research on the contribution of decentralized forest management and power devolution to poverty alleviation and conservation in Central Africa. Establishing national databases to monitor how the local councils' funds derived from tree planting are invested is essential to determine if and how these funds are contributing to local development. If restructured and adapted, the experiences with the Annual Forest Royalties program (AFR) in Cameroon could serve as an example of these practices in other forest countries. The AFR is a tax levied to logging companies to facilitate local development in areas adjacent to their logging concessions. It is also important to study how to adjust our decentralization efforts to the on-going REDD+ process in countries of the sub-region.

2.4 Multiple land use practices within the framework of conservation and development project in rural Central Africa

Keeping in mind local land tenure and decentralization dynamics, it is now important to examine different land use practices, their contribution to local development and conservation, and how they are perceived by local actors. In fact, there is insufficient evidence to show whether these conservation and development projects are succeeding or failing. Data from field projects reveal that decades of conservation and developmental projects have inculcated varying perceptions by rural communities, largely depending on their degree of success or failures (Knight *et al.*, 2006; Pullin *et al.*, 2001).

Photo 10.4: Charcoal market – Kisangani, DRC

2.4.1 Community forests and related community forest concessions

A community forest is a forest area legally managed by local and indigenous populations to improve their livelihoods and foster conservation objectives. According to the Cameroon Forestry Law n° 94/01 of January 1994 and its Implementation Decree n° 95/531PM of August 23, 1995, "community forestry aims to increase the participation of local populations in forest conservation and management in order to contribute to raising their living standards" and "to secure substantial benefits for village communities as well as to motivate them to better protect forest cover". This definition is similar to the intentions of the community forestry policies in other central African countries, notably in the DRC, Gabon and the CAR. However, field data show that these policies are not fully in practice because of three main implementation hurdles. First, the possession and management of community forests is a technically complex and challenging endeavor for local communities who are typically lacking in experience and training, especially if they are not supported by external elites, NGOs or other government or private projects (Oyono *et al.,* 2006; Cuny, 2011). Second, some communities become discouraged because the procedure to acquire a community forest is bureaucratic, cumbersome and expensive (Angu, 2007). For example, in Cameroon where community forestry is more advanced, a modest estimate of the development of a simple management plan is close to $ 30 000. This is prohibitively expensive for many rural communities, and it helps to explain why a large sector of the population has a negative perception of community forests. For example, the Kongo Community Forest in South East Cameroon had numerous conflicts with government officials because they found it very difficult to elaborate and revise their Simple Management Plan because of lack of financial and technical resources. Finally, since many communities lack the necessary capacity to exploit forest resources commercially, some solicited large economic operators to help them fund the process and, unfortunately, some funders take advantage of villagers (Angu, 2010). The situation is the same in some community forests where community committee members have contracted small-scale loggers to harvest timber (e.g. Ngola-Achip Community Forest of the TRIDOM landscape), and the villagers are either not aware of the activities, or receive very little money from the sale of wood (e.g. $ 48 per cubic meter) (Angu, 2007). Many community forests in the TRIDOM landscape (Kongo, Ngola Achip, etc.) have not had positive outcomes because of the poor management of the forest by the elites, some local NGOs and small scale exploiters who dictate the management process. In 2007, during the Annual Exploitation Certificate in Cameroon, there were only 142 operational community forests with a maximum surface area of only 500 000 hectares. Technical constraints have generated additional

financial costs (Julve *et al.*, 2013) that are not compensated by markets to sell their goods.

Available data reveals that there are about 470 designated community forests in Cameroon today. However, only 200 have signed the *Convention Définitive de Gestion* (Definitive Management Agreement) with the government, and in 2012, only 142 were in possession of certificates authorizing them to exploit their forests. Gabon only has two community forests while the DRC (Nord Kivu) has six functional community conservation zones. It should be noted that these zones were initially created by local communities and later vetted by the central administration as nature reserves. Equatorial Guinea has about 49 *Reservas de Poblados*, with a total surface area of about 59 780 ha, according to INDEFOR-AP (*Instituto Nacional de Desarrollo Forestal y Gestion de Areas Protegidas*).

In the middle of 2000, annual revenues from community forest management in Cameroon increased from CFA 1 480 000 ($ 2 960) to about CFA 23 800 000 ($ 47 600), including all administrative and management costs. In 2011, more than half of the community forests under exploitation in Cameroon generated from CFA 10 000 000 to CFA 15 000 000 ($ 20 000-$ 30 000). These revenues included salaries for employees and the compensation of management committee members. Community revenues are generally used for socio-economic development projects at the local level (schools, health centers, community water projects, rural electrification, community agriculture, markets, education, etc.). The Ngola-Achip Community Forest in eastern Cameroon generated CFA 34 000 000 during their first five years. However, the contracts they signed with some economic operators were not lucrative, even after increasing the price of their products from CFA 24 000 ($ 48) per cubic meter between 2001 and December 2003 to CFA 34 000 ($ 68) per cubic meter in 2004 (Angu, 2007).

Although these sums might seem impressive, the average revenue per person derived from the exploitation of community forests is very small (Beauchamp and Ingram, 2011), and their impact in terms of community and private infrastructure is equally limited (Ezzine *et al.,* 2008). Community forests cover a limited surface area in the village (Lescuyer, 2012), and they are mostly managed by only a handful of people with little transparency and accountability to the communities. This has frustrated many community members and created discord with the promoters of these projects such as the government, NGOs and the private sector. Also, these operational difficulties have promoted corruption and illegal practices (Castadot, 2007 ; Ndume, 2010). As a result of these shortcomings, various actors have gradually relegated the issue of sustainability and equal sharing of cost and benefits to the background (Assembe-Mvondo, 2006). Furthermore, the corrupt practices and lack of perceived impact has decreased the zeal of communities to obtain and manage community forests through this mechanism. This partly explains the reluctance of other countries in the sub-region to develop community forestry initiatives. Community forestry is perceived negatively because of these failures to deliver positive, broad-based community benefits. Conflicts are also rampant between rural communities and the government, because local communities are often not involved in negotiations and they experience negative outcomes from the exploitation of these resources. For example, many local communities feel that although some of their activities are laudable, they have gradually been hijacked by these actors. Also, women often feel disempowered by the system because they believe that their voices are sidelined, and, even if they are involved, their participation is marginal.

Photo 10.5 : Sale of construction poless

The "command and control" strategy dominates the management of community forest concessions. For example, the authority of customary chiefs concerning land allocation and management has been gradually eroded. Data from projects in the Bikoro area (DRC), TRIDOM and TNS, have revealed that well-to-do and politically-connected village elites and economic operators have helped to establish police posts and administrative procedures (or have consolidated existing ones) to boost their influence and indirectly undermine their legitimate authorities, thus thwarting calls for land tenure reform and good governance. Local administrative authorities have constitutionally-backed legal powers, which are directly recognized by the government (as in the case of Bikoro). These people compete with customary chiefs for power, and their "illegitimate" interference has led to numerous conflicts and pseudo-management. In some areas, the power of the customary chiefs with respect to the access to and use of forest resources is very strong at the village level, while in other areas (like Dja, etc.) local elites and local administrative authorities dilute or influence the power of the village chief. However, even if the power of customary chiefs is well respected, this power is not statutorily legal, as it is only recognized by the state via the negotiation of social responsibility contracts (*cahiers des charges*) with the logging companies or through the creation of a Community Forest Simple Management Plan, in which the state is the real power broker. Because they negotiate their powers through government officials, most economic operators (big or small) pass through powerful elites, bypassing traditional village structures. Also, most members of the community forest committees are well-to-do and educated villagers, who have a high social status, are actively engaged in the organization, and can speak well in public, instead of the poor and less privileged villagers (e.g. Pygmies and women).

Because of these disparities it is only logical to say that some elites and some influential members of the management committees benefit more from these projects than the less privileged villagers who find it difficult to make contributions to the organization. As a result, many villagers do not have the willingness to participate in decision-making meetings resulting in a general lack of communication between the villagers and the executive committee.

From the above analysis, we have gathered the following lessons learned and recommendations. In theory, community forests were conceived as a way to facilitate the decentralized and sustainable management of forest resources. However, in practice, there have been numerous problems with their implementation, notably with effectively securing the rights of local and indigenous populations to manage natural resources. Furthermore, although there was some initial political will by the governments of the regions to secure the rights of local populations through their forestry laws and other regulatory frameworks, administrative bodies resist implementing these policies either because they (administrators) think that local populations rights and prerogatives are being usurped by other local partners or because they believe that local populations are incompetent and cannot sustainably manage the resources (Ribot, 2002 ; Oyono, 2004). There are six recommendations which may help to arrest this sad situation :

1. Create incentives for specialized administrative bodies, especially deconcentrated bodies, to cede part of their management powers to local actors ;

2. Train communities to master the whole process, enabling them to become empowered citizens ;

3. Improve governance at the local level ;

4. Carry out an inclusive and participatory land tenure reform process that includes all stakeholders ;

5. Generate seed money to help communities elaborate and implement their community management plans ; and,

6. Connect communities with lucrative markets to help them sell products from their community forests.

2.4.2 Council Forest

Although council forest, that is forest owned by a local council, is only modestly implemented in Cameroon, with eight council forests currently being exploited, a segment of the rural population where council forests are working complains that they have not yet felt the impact of council forests on their daily lives. Furthermore, some countries like DRC are hesitant to implement this policy because they are discouraged by the lack of concrete outcomes for rural communities; however it is possible that there has been a lack of documentation on the impact of these projects on the livelihoods of local populations (Becker and Tchala, 2011). Also, the economic gains derived from the exploitation of council forests are still very low in Cameroon: only about 11 % of the rural council budget (Tchala *et al.,* 2013), even in predominantly forest areas. This poor performance is made worse because the initiators of the policy had very high expectations of the financial benefits from council forests. In fact, it was initially thought that most of the rural councils' budgets, especially in municipalities with very low economic activities other than forest exploitation, could be attained through the council forest scheme. Although it is estimated that council forests have generated some permanent jobs, the impact in terms of revenue invested in socio-economic infrastructure is still low (Tchala *et al.*, 2013). Also, the participation of the population in decision making, development, management and exploitation of council forests has not been encouraging (Assembe-Mvondo and Oyono, 2004; Poissonnet & Lescuyer, 2005; Collas de Chatelperron, 2006; Assembe-Mvondo and Sangkwa, 2009), and this lack of participation has alienated some communities, because they perceive council forests as an "elitist scheme" beyond the reaches of ordinary rural communities.

Moreover, even though council forests are thought to help lay the foundation for good local governance by improving accountability of electors, practical field experience has shown that the activities of some mayors and municipal councilors does not reflect this (Cerutti *et al.*, 2010; Bigombé, 2000). This experience has gradually created negative perceptions by local communities, which are expressed in the persistent conflict between the population, mayors and municipal councilors for the control, distribution and investment of resources.

Photo 10.6: Clearing of a charcoal grindstone – Kamaulu Village, DRC

However, in comparison to community forestry, the annual revenues from council forests have been encouraging, although limited in scope and geographical area. For example in Cameroon, Dimako Council Forest (East Region) is often cited as a success story for the local management of forest resources. Between 2004 and 2010, this Council generated about CFA 1 000 000 000 ($ 2 000 000), for an average net annual revenue of about CFA 54 500 000 ($ 109 000). The net annual revenue of the Dimako Council Forest, which represents about 80 % of the council's budget, was used as follows: 50 % on investments, 30 % on functioning, 10 % on regeneration of the forest, and 10 % for the local population (Cuny, 2011). While the two last activities were difficult to evaluate, some of the funds were directed towards education, electrification and health initiatives (Cuny, 2011). Also in 2010, the Djoum Council Forest (South Region of Cameroon) generated about CFA 233 000 000 ($ 465 000). These funds were predominately used to construct the Djoum market, as stipulated in the Council Development Plan.

Lessons learned and recommendations: While council forest policies are recognized in the legislation of countries like Cameroon, Chad, Burundi, Congo, Rwanda and the CAR, only Cameroon is actually implementing these policies, with eight operational council forests. This lack of robust implementation results from the fact that, contrary to expectations, some councils in Cameroon have not seen the benefits of council

forests because of the expensive and cumbersome process required to acquire and manage them. This has discouraged other councils from engaging in the process.

Cameroonian authorities need to simplify the process and effectively use their administrative authority to help councils manage the process of creating and managing council forests. Even though investing in a council forest may be a more lucrative strategy in the end, because the process takes so long, some councils prefer to generate revenue through the exploitation of timber with private companies on private forest concessions, which are managed by the line forestry ministries. Similarly, mayors, who have short-term political goals in mind, are reluctant to invest in council forests, because it often takes longer than one term in office to see the benefits, and it is possible that their political opponents could benefit from the long-term gains if they do not win reelection. It is therefore necessary for the line ministries to develop some short-term incentives for mayors to invest in council forests, because if well managed, they could help trigger local development and improve natural resource governance. Also, since Cameroon is a pioneer country in establishing council forests, other countries like Burundi, Rwanda, Chad, Congo and the CAR (who have instituted council forests in their legislations but not yet implemented them) are closely observing the Cameroonian experience. At the regional level, it is important for COMIFAC to analyze results, and if warranted, develop a plan to help these countries re-engage or engage in the process.

Photo 10.7: Village dialog within the framework of Makala Project – Bas-Congo, DRC

2.4.3 Community hunting zones

Tangible field experiences have revealed that social customs regulating the access to resources in community hunting zones follow much the same principles as agricultural and other land use practices. This is because kinship and friendship ties are important factors in determining the access to, and exploitation of natural resources both on farmlands as well as in hunting and gathering concessions. However, when keenly scrutinized, the rules are different depending on the country, the ethnic group or religious affiliation, and the availability of resources. For example, rules are often relaxed (especially for strangers) when there is more than enough geographical space and resources for everybody. However, when geographical space and resources are limited, the rules become stricter (Angu, 2010b). This flexibility helps to protect cultural space and resources, facilitates internal collaboration, reduces conflict, and promotes dialogue to ensure equal sharing of cost and benefits between community members. Additionally, communities may enact various social control mechanisms to avoid what Hardin (1968) called "the tragedy of the commons", which is typified by the unlimited and free access to, use of and the eventual depletion of resources. Therefore "governance in the management of these common resources or public goods" (Ostrom, 2010) is for the good of all. This is exactly the underlying objective of the management of community hunting zones in Central African Republic.

Prior to the establishment of community hunting areas by the government, most peoples had customary hunting areas. In many cases, historical management of these territories has changed over time in response to colonial influences, introduction of state laws, centralization of authority with the state, and the reduction of

authority of customary chiefs (Walters, 2012). In the case of the Bateke people of Gabon, although their traditional way of managing hunting territories has largely stopped, there are still vestiges of their system and a sense of ownership in the wildlife; this had led to some communities attempting informally to control illegal hunting in their areas (Walters, 2012). In formally defined community hunting zones, although rules governing the access to hunting territories are sometimes well defined and collectively agreed upon, it is often difficult to identify general rules for the management of wildlife resources at the local level. Harvesting modalities, especially techniques, periods, and types of species, can be extremely variable and, in some cases, not fully implemented by local chiefs, community leaders or segments of the population.

In Cameroon, because of these difficulties, the governments of the region and other conservation and development actors like WWF and GIZ supported the Committees for the Valorization of Wildlife Resources (COVAREF) to facilitate the effective management of community hunting zones in the South-East. They are administered at the community level. We observed that some redistribution mechanisms were put in place through this program to help all social structures, age groups and strata benefit from hunting. For example, MINFOF encouraged and stimulated local populations to sustainably manage wildlife through numerous models: participatory zoning, developing incentives to create village organizations charged with the management of wildlife (COVAREF, etc.). They did this by disbursing dividends to village communities accrued from safari hunting. At present almost 10 *Zones d'intérêt cynégétique* (ZIC) and 15 *Zones d'Intérêt Cynégétique à Gestion Communautaire* (ZICGC) have been created in south-eastern Cameroon (the Cameroonian Government has created 47 ZIC and 24 ZICGC all over the national territory). The ZICGCs were handed over to COVAREF who, in addition to receiving benefits from the ZICGCs, also receive a 10 % concession/leasing tax and 10 % killing or hunting tax in ZIC. The figure 10.3 shows the evolution of financial proceeds paid to six active or existing COVAREF in the region between 2000 and 2010.

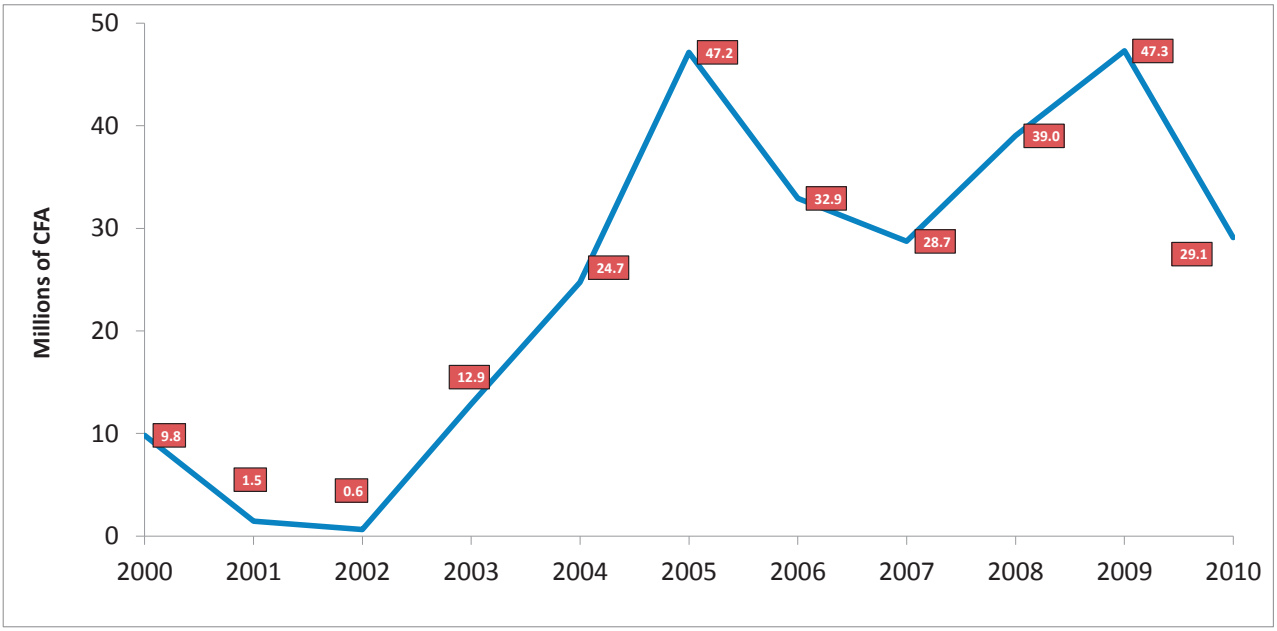

Figure 10.3: Evolution of funds (in million CFA) of 6 Committees for the Valorization of Wildlife Resources (COVAREF) in south-east Cameroon from 2000 to 2010.

Source: WWF, non published

Funds derived from the activities of COVAREF were used to implement key community investments. For example, over this period, communities benefited from more than 200 micro-community projects valued at close to $ 632 000 in the health, education, and water domains (Defo and Tchamba, 2012). According to Eyebe *et al.* (2011), most of the funds were tailored to the development of social infrastructure like classrooms or healthcare centers. Between 2000 and 2004, activities of 16 ZICGCs (exploitation "*en affermage*") in south-eastern Cameroon generated about CFA 43 000 000 ($ 86 000).

Photo 10.8: Signs of erosion and obstruction of valley floor from the construction of a forest road, Gabon

In the CAR, the PGTCV project managed wildlife within the framework of village territories ("*terroirs villageois*") and with funding from the French Fund for World Environment (FFEM) through the Conservation and Sustainable Use of the Central Africa Forest Program (ECOFAC). PGTCV has supported rural communities to sustainably manage wildlife through management and harvesting of unprotected mammalian wildlife (e.g blue duiker) that were mainly sold in urban areas or for domestic use. Because their biological and ecological characteristics favor rapid reproduction, in some villages in Central African Republic, villagers found it profitable to hunt such species. However, as previously discussed, village chieftainships often control the access to and exploitation of these wildlife resources.

For about 15 years now, the *zones cynégétiques villageoises* (ZCV) from the CAR have ensured the redistribution of hunting taxes to populations and villages whose territories are located within the boundaries of the safari hunting zones. These funds are used to construct social amenities like roads, bridges and resting camps, as well as for the maintenance of current infrastructure, which helps to create local employment. In short, the ZCV have helped maintain the safari hunting industry in the north-central region of the CAR despite numerous political upheavals. This has also helped reduce poaching at the local level and resulted in the protection of large mammals like buffaloes and Derby eland.

However, although this is a positive step, these resources are inadequate when compared to the generalized and widespread poverty in rural areas in south-eastern Cameroon and the CAR. The designation of community hunting zones is not a panacea, because it is plagued with numerous biological and human problems. For example, it is very difficult for communities to manage hunting zones which are smaller than the size of their village because some animals like elephants will always migrate out of the village hunting zones. It is equally difficult to manage migratory species on one particular village territory, because these species require habitats that span across several village territories and concessions which are not controlled by the villagers. Additionally, large mammals like elephants are difficult for villagers to manage. Accordingly, these species require collaborative management between several entities. However, even where there is collaboration, villagers are often not in favor of conserving elephants close to their farms because they can destroy agricultural crops. Although the economic, health and conservation impacts of the human-elephant conflict are known, the social impact depends on the capacity of communities to support the presence of these flagship species and to accept some degree of conflict (Woodroffe *et al.*, 2005). On numerous occasions, the Central African Forest Commission (COMIFAC) has concluded that it is necessary to develop strategic and operational approaches to reduce these conflicts, especially because field experiences have shown that human communities still remain hostile to the outcome of this conflict (FAO, 2012b).

The above analysis has generated the following lessons learned and recommendations. Although communities and other development and conservation partners are not yet satisfied with the socio-economic results attained, the decentralization of the management of wildlife resources

in south-eastern Cameroon and the CAR has contributed to local development (e.g. employment, tourism infrastructures, etc.) However, the process has revealed several impediments, like the lack of a viable and consistent legal and regulatory framework to promote good environmental governance at all levels and the insufficient capacity of local communities to effectively manage this activity. If these shortcomings are addressed, we believe that good and effective management of community hunting zones is possible. It is also necessary for communities to elaborate rules to determine access rights to all sites, especially to vulnerable sites (e.g. endangered habitats, protected species, etc.), because without consistent rules powerful members of the community might be able to exploit those resources illegally and illegitimately. Management of resources could be done with the help of village Committees who would be able to monitor them with the help of a local monitoring mechanism, and this would require the development and transfer of an adaptable local monitoring system which will in turn strengthen the political dialogue both at the micro and macro levels. Also, before any community-hunting zone is established, a zoning system based on indigenous land use practices should be adopted, because this would strengthen local authority, build capacity of local and indigenous actors and create more incentives to better manage their territory. However, land use planning is a tricky process, and it should be participatory and formalized with a management plan. Finally, it is important for conservation and development actors to help villagers elaborate and implement long and short-term local socio-economic development and conservation plans, which define criteria for employment and outline strategies to address widespread immigration by outsiders.

In working with communities which historically hunted in an area, understanding the cultural foundations of their previous or current hunting management will be key to successfully engaging with the community. Ethnographic studies on current and past hunting in the area and establishing long-term relationships with communities will help build an understanding of how communities manage and perceive wildlife and will be important for developing any community based wildlife management programs. Capitalizing on existing wildlife management techniques or monitoring efforts would probably be welcome by communities.

Photo 10.9: An area devoted to traditional religious rites in a rural setting

Also, it is necessary to push for research on wildlife in community and safari hunting zones which are not well known (especially their biological and socio-economic traits). As discussed earlier, well managed community-hunting zones could be instrumental in the sustainable management of key wildlife species and also support local development. The government should continue to create economic, social and cultural incentives to enable villagers to fully participate in the management of wildlife and avoid conflict with conservation bodies. This innovative approach will help to ensure that national wildlife management policies, legislation and funding go towards the conservation of wildlife within community hunting zones and not just towards protected species, as is the case today.

Photo 10.10: Transporting of goods and people on a traditional raft – Lindi River, DRC

2.4.4 Agro-industrial development and local populations: new oil palm plantations and tools for transparent management

Investments in oil palm plantations have substantially increased since 2000 in Central African countries, either in new plantations or by rehabilitating and extending existing plantations. Agro-industries like the Cameroon Development Cooperation (CDC) and the *Société Camerounaise des Palmeraies (*SOCAPALM) in Cameroon, the *Société d'Investissement pour l'Agriculture Tropicale* (SIAT) in Gabon, and Brabanta in the DRC have undertaken reforms to expand and improve the management of their plantations in order to increase yields. Concomitantly, new agro-industrial plantations are being established (e.g. SG Sustainable Oils Cameroon PLC (SGSOC) with Herakles Farms in Cameroon, Olam in Gabon, Atama in Congo and PHC in the DRC), and feasibility studies are underway for new plantations (SIVA and GMG in Cameroon, ENI-Congo and Fri-El-Green in Congo). About 870 000 ha of industrial plantations are currently being exploited in the region, and more than 260 000 ha are being considered for the creation of new plantations or the extension of old ones (Feintrenie, 2013). For example, it is projected that Olam, an Indo-Singaporean company, in Gabon will have an oil palm plantation of 100 000 ha which would be divided in 2 sites (Mouila and Kango) while in the Republic of Congo, Atama, a Malaysian company, leased a surface area of 470 000 ha in 2010, on which 180 000 ha will be planted with oil palms. These agro-industries have both positive and negative impacts on the livelihoods of rural dwellers.

Most of these companies are attempting to align their activities with the appropriate legal and political procedures. For example, Atama has respected the legal procedures necessary to acquire and manage agro-industrial concessions in Congo, including following a 2-year process required before the government can grant an authorization to occupy state land for a 25-year renewable period (Feintrenie, 2013). This process included conducting an Environmental and Social Impact Assessments (ESIA) and gaining (FPIC) from the local communities, after what an Environmental and Social Management Plan (ESMP) was submitted to the public authorities. Similarly, before acquiring the authorization to lease government lands for oil palm plantations, Olam-Gabon underwent the following Roundtable on Sustainable Palm Oil (RSPO) model:

1. The government accepted, in principle, to lease a concession to Olam;

2. Olam consulted with potentially affected communities and determined the effect the plantation projects would have and then signed a FPIC in each village;

3. Olam excluded zones where FPIC were refused by the population;

4. Olam carried out an ESIA;

5. High Conservation Value (HCV) zones, where environmental impacts of the project would be negative, were left out of the concession.

As a result of this process, plantations were reduced from 20 000 ha to 7 300 ha in Kango, 38 000 ha to 15 000 ha in Bitam, and 51 000 ha to 7 000 ha in Mouila from what the government initially allocated to the enterprise (Feintrenie, 2013). The goal of this process is to make sure the socio-economic and cultural rights of the rural population are protected and the environmental impact of the plantations limited to a minimum. Olam-Gabon should benefit in the future from new proposals of land allocation by the State, in order to get to the 100 000 ha of oil palm plantation.

Olam-Gabon which has been present in Gabon since 1999, has opted to partner directly with the Gabonese Government to avoid any legal or administrative hurdles. Olam-Gabon oil palm plantations are under a public-private joint-venture, where Olam International holds about 70 % of the capital and the Gabonese State holds about 30 %, whereas rubber plantations are shared between 80 % to Olam international and 20 % to the Gabonese State. The State's contribution is mainly in the form of allocating forest concessions (the exploitation of timber accounts for about 40 % of Olam's activities in Gabon), land concessions for rubber and oil palm plantations (300 000 ha of emphyteutic lease, which is long lease), and tax exoneration (TVA, import-export taxes, etc.). Olam is expected to construct a fertilizer manufacturing facility (ammonia based) under a joint-venture with the Tata Chemicals Groups (25 %), the Gabonese Government (12 %) and Olam-International (60 %). This will create employment, facilitate the transfer of technology, and foster local development. With its sizable investment, notably in agro-industry and the exploitation of timber, as of 2016 Olam will become the second largest private employer in Gabon, with more than 19 000 employees estimated in 2020 and a capital investment of $ 2.5 billion estimated between 2011 and 2022. This sizable investment explains why Olam is an important partner for the Gabonese State in their national strategy for an "emerging Gabon", in which they will intervene in two of the three components the "Green Gabon" and "Industrial Gabon" (Feintrenie, 2013).

Photo 10.11 : Eucalyptus fuelwood collection – Pointe Noire, Congo

Similarly, Atama's Development Plan projects that it will finish planting oil palm and complete the occupation of the concession in 40 years, with the creation of between 3 000 to 5 000 ha/year. The contract includes numerous social and local development clauses. For example, the company will establish life-camps in each zone of 36 000 ha (5 zones), with the goal that life-camps will evolve into villages for company employees, with schools, health centers, stores, religious buildings (at least a church and a mosque), and other amenities. The company plans to employ about 27 000 people once fully grown. As a consequence the density of population will increase in the area, from less than 2 inhabitants/km^2 in 2012 to about 18 inhabitants/km^2 in 2060 (Feintrenie, 2013). This population growth will induce an increased pressure on forest-land to produce food crops, and an increase pressure on wildlife for bush meat. These impacts on the environment have been estimated in the ESIA, however the implementation of an Environmental and Social Management Plan (ESMP) is needed to ensure actions are taken to limit these impacts (e.g. planning of food and meat supply to the village markets). Olam-Gabon's plantations will have the same local impact of increased population and increased pressure on forest lands and wildlife.

A good planning of such large scale projects, following clear procedures, will limit negative outcomes and enhance positive results for local livelihoods and national economies. FPIC, if conducted scrupulously with full information

provided to the affected population and actual negotiations on the engagements of the enterprise, might be a guarantee against land grab, and might enhance good partnership and economic benefits for all the stakeholders. Transparency of deals and negotiations are keys to success. Where FPIC and ESIA are not conducted in a transparent way, or not done at all, social conflicts might rise in answer to a feeling of unfair contracts, or land grabbing, or a complete refusal of the project by the local people (Feintrenie, 2013). This is the case in South-West Cameroon, where the American enterprise SG-SOC has a project of oil palm plantation, the Herakles Farms. The enterprise signed a convention in 2009 with the Minister of Economy Planning and Regional Development to develop an oil palm plantation on about 70 000 ha. But this convention has not been accompanied by a transparent discussion with the other public institutions involved (for example the Ministries of Forest and Agriculture), or with the villages impacted by the project. The lack of transparency raised a lot of complaints from local villagers, national and international NGOs and resulted in a complaint to the RSPO and Herakles withdrawal from the organisation. It is still unclear at the beginning of 2013, what is the operational plan of SG-SOC, how much land will be planted in oil palm, what will be the compensations and benefits for the local population, and what is the State's position regarding the project?

Photo 10.12: Artisanal logging – Maniema, DRC

2.4.5 Protected Areas

In Central Africa, protected areas (PAs) provide an important land use option which has the potential to both deliver conservation results and support sustainable development and poverty alleviation (Angu, 2012).

However, each of the IUCN PA categories has specific management objectives and goals which in turn have implications for local communities. Rural communities are often at odds with PA managers because they lack understanding of how these PAs could contribute to local development and rural conservation objectives. Evidence from some national parks (e.g. Dja, Volcanoes) demonstrates that consistent and open dialogue with rural society in PA management has helped reduce conflicts with other actors, boosted conservation dynamics and increased local development (IUCN, 2004). Also, some research has facilitated the integration of local knowledge into the PA management efforts.

However, while PAs have contributed greatly to the conservation of important species, there are some operational difficulties that make it difficult to involve rural communities. Some communities view protected areas as zones expropriated from them by the government or other actors like conservation NGOs without compensation. Successful PA management depends on the manager, context, place, time and people, and putting rural communities' needs first is important (Mauvais, 2010). Because of the multiple and conflicting interests in PAs, a management approach that takes the various interests groups is needed. For example, we have seen in the early 2000s that the Consultation Forum of Actors involved in conservation and development in and around the Conkouati Douli, the Dja,

the Kahuzi-Biega and Volcano National Parks respectively in Congo, Cameroon, the DRC and Rwanda created great impact among rural communities, PA managers and extractive industries, because partners, especially local government authorities, gradually moved from the command and control strategy to consultation. Before this, some local populations hardly knew (or saw) the national park conservators who, at times, lived in distant cities instead of the national parks. Unfortunately, these forums came to an abrupt end because of a lack of funds. Also, experiences in Lobeke, Nki and Boumba Bek National Parks in South-East Cameroon have shown that utilizing the landscape approach to PA management can help take into account various interest groups, including rural communities. As part of the landscape approach, community-based natural resource management (CBNRM) zones have been created adjacent to PAs to facilitate local participation in livelihood activities and conservation. These livelihoods activities help to gain support of the local population in the conservation of these PAs. Normally, the peripheries of these PAs are characterized by two community land use zones : community forests and community hunting zones. Conservation activities in the national parks are influenced by activities in these zones. In other words, the management structure of these zones directly and indirectly affects local development and conservation through the amelioration of sustainable livelihoods. In Gabon, *Comités Communautaires de Gestion Locale* are being created in the buffer zones around the national parks, in part to encourage dialogue with the local people about resource management in the buffer zone ; choices about which communities to involve and at what distance to the park will be critical for the successful and meaningful engagement. It should be noted that this is consistent with the landscape approach, which posits that PAs cannot be managed as isolated entities because they exist within a broader context of larger functioning ecological systems which integrate the CBNRM zones and the Extractive Resource zones (Angu, 2012).

In order to facilitate buy-in from rural communities in the sustainable management of PAs, we should consider the following recommendations and lessons learned :

First, local populations will only be comfortable with PA management if PA managers fully integrate local socio-cultural and economic priorities into the on-going biophysical conservation strategy, because very few communities will participate in community conservation efforts that do not promote local development and their general wellbeing. It is therefore important to make sure that these areas are managed in a participatory and transparent way from the beginning of the process.

Second, field experiences have shown that since PAs do not exist in isolation, a multiple land use approach should be encouraged, especially an approach that recognizes the dual role of rural communities in participating in the sustainable management of PAs to deliver conservation results and creating and managing zones adjacent to those PAs. This would help to legitimize the communities' actions, create buy-in and foster local development. However, if these communities do not have the markets to sell their services to visitors (e.g. ecotourism) or their products (community zones), these efforts may be fruitless. Without this, and despite all the efforts of PA managers, it will be very difficult for communities to understand the real value of conserving biodiversity especially because the value is not only monetary or economic but also intangible (Kamanda *et al.*, 2003).

Third, because some communities think that some stakeholders purposefully want to control and exploit them (e.g. village elites who live in towns and some decentralized government officials), they will likely welcome any short or long term training in the management of PAs and community zones adjacent to PAs. They believe that it is only through this that they will be the master of their own destinies within the framework of collaborative management where all actors are respected and empowered to make meaningful decisions regarding the management of the PA.

Finally, because most communities do not fully exploit the resources in the community forests or hunting zones adjacent to the PAs, they are often discouraged by the lack of results from exploitation. However, if PA managers could develop innovative strategies to utilize the full potential of the various components of rural communities vis-à-vis available natural resources (e.g. gender and the exploitation of non-timber forest products or education of youth to facilitate ecotourism and fishery) perhaps this would facilitate the involvement of rural population and the generation of additional income.

Photo 10.13 : Fabricating roofing from palm leaves – Congo

3. Conclusions and perspectives

Photo 10.14 : A traditional stove

In most of these cases, we have noticed that forestry, agro-industry and other development interventions have had negative consequences on the land use patterns of the poor and less privileged villagers and their livelihoods. The land use pattern of non-natives (e.g. the Pygmy groups and migrants) often depends on their ability to negotiate access to the land and forest resources with the customary chief and the head of families or clans. These groups of villagers are also excluded from the benefits of forestry interventions, because the ability of a villager to engage in and derive benefits from development interventions often depends on the power resources of the villager. Therefore, the inequality in material resources among the villagers tends to increase the livelihoods of the wealthy and educated villagers while the poor and less privileged villagers continue to live in poverty.

Also, the results demonstrated that most of the land use patterns in our area of interest are determined by ethnicity and the power resource of the villager. The high degree of social differentiation and ethnic inequality reproduce inequalities in power, status and wealth (Fraser, 1997), and these differences influence how villagers engage in and perceive interventions to improve their livelihoods (Gaventa, 2002 ; Cornwall, 2002) and ensure conservation. Many conditions have propagated these inequalities. First, property rights to land and forest resources are determined by ethnic identity and ancestral claims ; those without ancestral claims do not have direct access to land and forests and are excluded from any benefits generated from the investment in the land and forest resources (forestry intervention). Second, many villages have a high degree of social differentiation where high social status controls

Photo 10.15 : Fishing camp on the Lukenie River

all the material resources from the interventions, and this has negative consequence on the livelihoods of the poor and less privileged villagers (Pygmies and women).

Also, the inequality in power and resources in some communities has resulted in ineffective collective action and narrows the livelihoods opportunities gained from these interventions for the poor and less privileged villagers. This is in contrast with the design principles for common pool resource management (Ostrom, 1990) that advocate for a more robust and democratic structure for managing common resources. This inequality in power and resources have generated "free rider" behavior (Olson, 1965 ; Eggertson, 1990), as the committee members tend to ignore the common interests of the village and focus on their private interests in these interventions. This inequality in power and resources is partly due to lack of trust (Bourdieu, 1977 ; Putnam, 1993), and the notion of ethnic identity which is very common in these villages.

This notion has fragmented the villages into family or ideological lines, making it difficult to produce true collective effort. It is therefore imperative that policy makers take a "people-centered approach" to their conservation and development endeavors because communities are increasingly demanding improved livelihoods to facilitate their involvement in conservation projects. In other words, a conservation and development approach that favors local development as perceived by local actors and not development as perceived by outsiders or strangers is needed. It is now obsolete for conservationists to think that successful conservation means excluding humans from "pristine" ecosystems void of any human contact. After all, it is increasingly becoming clear that the causes of deforestation and forest degradation are found outside of the forest. For example, local populations encroach in PAs either because they lack sustainable livelihood options in their villages or lack employment in the management of PAs or other extractive resource zones (Angu, 2012).

In short, local communities make decisions on land use for the following practical reasons :

- Local communities heavily depend on natural resources for their livelihoods. For example, wildlife is their source of protein, they need to cultivate land to maximize or complement food production, they need formal employment (forest and mining concessions) to support their families (schools, healthcare, etc.) ;
- Local community members can become conservation participants if they perceive sustainable management of natural resources as a pathway to local development and not exclusionary ;
- Governance structures should be reinforced, because key governance reforms are either not implemented or are falsely interpreted

by some central government authorities for egoistic reasons.

Also, substantial governance reforms should be initiated to cope with emerging themes like extractive industries, climate change and REDD+. It is clear that no conservation projects or even land use methods would be successful if indigenous and local communities are not only involved in the system, but that their conservation efforts are actually leading to improved living standards. Without this, there will be little or no buy-in from local and indigenous communities. For example, we have seen cases where communities either support poaching (or suddenly became poachers) or illegal logging if they are disgruntled with the system. Policy and legislative frameworks are the bedrock or any socio-cultural and political system because they help control and maintain the structure, facilitate cohesion among actors, reduce conflicts, and above all, promote the effective management of natural resources (Angu, 2010). This is why it is important to reform our natural resource policy, judicial and legislative frameworks because field experience has shown that, albeit some laudable efforts, they are increasingly archaic, having been designed under different conditions two or three decades ago. Even those that were revisited in the early 2000s (the DRC, etc.) are experiencing some practical difficulties coping with emerging themes like climate change, REDD+, payment for ecosystem services (PES), mining, etc. Yet if incorporating these newly emerging themes cannot reconcile conservation and sustainable development, especially at the local level, most local communities will continue to perceive conservation projects as fare-fetched ideas conceived, developed and implemented to benefit outsiders. After all, this is why it is generally said that Central Africa is so rich in natural resources but so poor in terms of local and national development (CEFDHAC, 2007). We strongly believe that this paradox will be solved by effectively implementing land use policies and systems that comprehensively address the interests and needs of all resource users, but especially the needs of rural communities. This is a must, if the globally important natural resources of Central Africa will meet the needs of future generations.