GOVERNANCE AND SOCIAL LEARNING IN THE MANAGEMENT OF NON-WOOD FOREST PRODUCTS IN COMMUNITY FORESTS IN CAMEROON

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Abstract: Research examined how partnerships of state and civil society could function to manage commercially valuable non-wood forest products in Community Forests in Cameroon. Results indicate an effective governance arrangement should include the Ministry of Environment and Forests and the Community Forest management committee, and also increase the involvement of women. An adaptive collaborative management approach could bring together stakeholders to learn collectively how to manage resources sustainably. Partnerships with non-governmental organizations and research organizations would enhance the process leading to an improved governance system. Future Scenarios, was found to be an effective tool for facilitation of social learning with stakeholders.

Key words – Africa, Cameroon, non-wood forest products, governance, community-based natural resource management, social learning
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1 INTRODUCTION

Globally, the last 20 years has seen enormous political changes, coupled with economic and institutional changes, which have served to redefine the role of the state in all sectors. Although the nation state has endured, it has made way for government, civil society and private business actors, to establish new patterns of socio-political interaction in governance at local, regional and national levels (Lovans et al., 2004; Peters and Pierre, 1998). In the environmental area, governance provides a conceptual framework within which public and private behaviour is regulated in support of sound ecological stewardship (Mugabe and Tumushabe, 1999). Currently, much discussion revolves around the employment of different configurations of the state-market-civil society in governing the environment (Kettl, 2002; Lipschutz and Mayer, 1996).

One prominent theme in environmental governance models has placed emphasis on civil society actors with the prominence of a community-based natural resource management approach (Fortmann et al., 2001; Virtanen, 2005). In this approach, those who were traditionally marginalized in the management process are now recognized to have stakes and rights in natural resource decision-making (Borrini-Feyerabend, 1997). A strategy of adaptive collaborative management (ACM) is often proposed to deal with the complexities of these social-ecological systems through the processes of stakeholder interaction, communication and learning among stakeholders, and joint or collective action which results in adjustment to management (Sayer and Campbell, 2004; Schelhas et al., 2001).

A key component of this ACM process is social learning, which fosters innovation and adaptation. In managed resource systems, social learning is experimentally based learning that takes place among scientists, users, planners and managers as they interact continuously leading to ongoing adaptation (Maarleveld and Dangbégnon, 1999). Social learning transforms both social and human capital
so that the natural resource management process is adjusted and improved (Pretty and Buck, 2002). Therefore, approaching complex natural resource management issues in such a framework has great potential for fostering improved collaboration and, hence, improved management outcomes.

Complex natural resource management issues may be no where more prominent than in the recent trend towards decentralization in management of forest resources to local actors (D'Silva, 1997; Edmunds and Wollenberg, 2003). Cameroon has been following a process of decentralization in the forestry sector since 1994 with the passing of the Forest Act. One part of this legislation concerns the transfer of management responsibilities and powers to village communities for the creation of Community Forests. A Community Forest is defined as a forest in the non-permanent domain that is subjected to a management agreement between a village community and the administration in charge of forests. It is equipped with a simple plan for its management, conservation and exploitation for the interests of the communities with the technical support of the forestry administration (Oyono, 2004b; Vabi et al., 2000). Initially, most Community Forests in Cameroon were primarily focused on harvesting timber. However, the drafting of the new Manual of the Procedures for the Acquisition and Norms for the Management of Community Forests in late 2002 has placed more emphasis on the exploitation of non-wood forest products (NWFPs). It also opens the possibility for new management arrangements for such resources within the current structure of Community Forests (Community Forest Unit, 2002).

The more prominent integration of collective management of NWFPs in Community Forests represents a change from the prevailing customary system of management. Although technically controlled by the government, normally these products are managed by a complex system of informal rules and norms at the household, corporate lineage and village levels (Diaw, 1997, 1998). Furthermore, the commercialization of NWFPs in Cameroon has increased dramatically in the last
20 years, leading to concerns about over harvesting (Ndoye et al., 1999). Surveys of 54 villages in the humid forest zone revealed that in 1985, 370 households (57.1%) collected NWFPs, while in 1997, 574 households (88.6%) collected NWFPs (Ndoye, pers. comm.). Markets revolve around traders or market intermediaries known as buyam/sellams, who both buy and sell NWFPs for profit. Women dominate the harvesting and marketing of NWFPs, the trade in which for many disadvantaged women represents a survival strategy (Ndoye et al., 1997/98; Ruiz Pérez et al., 2002). A new governance arrangement presents a challenge as to how the interests of all the stakeholders can be balanced, to yield sustainable outcomes both socially and ecologically.

This research investigates the partnerships that could enable a good governance system for NWFPs in Community Forests in Cameroon. To that end the current role of prominent stakeholders in government and civil society in supporting the management of NWFPs in Community Forests is examined. Specifically, how does the Ministry of Environment and Forests (MINEF) interact with Community Forests, particularly in relation to the future management of NWFPs? Do non-governmental organizations play a prominent role in supporting the management of forest resources within Community Forests? The use of Future Scenarios, a participatory action research tool, provided an avenue for key stakeholders to envision the future of collective management of NWFPs in Community Forests. Their perspectives were compared and the role of this tool in the social learning process is discussed. To further explore the role that facilitation of social learning could play in a future ACM system, we present the elements of a proposed knowledge system (Röling and Jiggins, 1998) for ACM of NWFPs in Community Forests. The conclusions discuss the governance system for NWFPs and how an ACM approach could be implemented for Community Forests in Cameroon.
2 METHODOLOGY

2.1 Research Area

Research focused on the collection and management of NWFPs in nine, primarily agriculturally based Bantu communities in the humid forest zone of southern Cameroon (Figure 1). The villages were located in areas representing a difference in volume of trade in the three study species *Gnetum* spp., *Irvingia* spp. and *Ricinodendron heudelotii*. Six villages, located in the Eastern province, in the Division of Haut-Nyong and the Sub-division of Lomie, had a low volume of trade in the study species, *Gnetum* and bush mango (*Irvingia* spp.), hereafter referred to as the ‘low’ area. A high volume of trade in *Gnetum* and njansang (*Ricinodendron heudelotii*) was found in the three villages in Central province in the Division of Lekie and the Sub-division of Sa’a, hereafter referred to as the ‘high’ area. The volume of trade in different areas for the study species was determined in consultation with the Center for International Forestry Research (CIFOR) researchers in Cameroon and confirmed on site with local people in the research areas.

Insert Figure 1 here.

2.2 Data Collection Methods

Data collection followed a mixed methodological approach with some data being collected using a quantitative survey and others collected using qualitative techniques such as semi-structured interviews or focus group meetings (Patton, 1990). Stakeholders at the community level involved in the collection of the selected NWFPs for this study were determined using a ‘Who Counts Matrix’ (Colfer and CIFOR Methods Testing Team, 1999). These assessments of stakeholders for NWFPs were then validated through discussions with government officials and community members, and by comparison with other data collected.

Following on these initial meetings, Bantu collectors of NWFPs, particularly the study species, were identified by snowball sampling (Patton, 1990; Tashakkori
and anonymous, individual surveys were administered. Since the collectors of the study species were almost exclusively women, men also were surveyed in order to broaden the community sample. In total, surveys covered between approximately 20 and 75 percent of all the households in a given village. Members of the Community Forest management committee, who are predominantly men, were also surveyed. In total, 155 surveys were administered with 56.1 percent of respondents coming from the low area and 43.9 percent from the high commercialization area. Women represent 71 percent of respondents and men 29 percent with both groups representing an age range from 16 to 77 years.

In order to understand the role that different actors play in interacting with Community Forests, semi-structured interviews were carried out with a variety of actors deemed to have a role in supporting the management of NWFPs in Community Forests. Government actors in the national Community Forestry office of the Ministry of the Environment and Forests (MINEF) were interviewed as well as in the regional offices for MINEF in the research communities. A staff member in the sub-department for NWFPs within MINEF also was interviewed. Civil society actors involved in working with Community Forests at the national level and at the local level in the research communities also were interviewed and their documents reviewed. In addition, the research organizations providing a supporting role for MINEF and communities in the area of NWFPs or Community Forests were interviewed. Traders in the private sector are not directly involved in supporting the management of NWFPs in Community Forests, although many people, who are members of Community Forests and collect NWFPs, occasionally function as buyam/sellams.

As the last step in the research, Future Scenario workshops were conducted with the main stakeholders in the management of NWFPs in Community Forests, namely the Community Forest management committees, the regional offices of MINEF and village women. Future Scenarios, a development or participatory action
research tool for adaptive forest management, helps participants learn to think in new ways about the future and to make decisions appropriate to uncertain conditions (Wollenberg et al., 2000a). Participants were asked to envision how NWFPs might be managed in Community Forests in the future and to reflect on their capacities and obstacles to achieving that vision. Reflection on the actors that could facilitate the learning process towards sustainable management was an essential part.

Due to the power differential among the three main stakeholders that might affect participation, it was determined that the Future Scenario workshops should be held separately. Therefore, workshops were held with women in each of the villages that were part of a Community Forest and separate workshops were held for each Community Forest management committee. The tool was then slightly adapted for interviews with the staff of regional offices of MINEF in both high and low areas. At the beginning of each workshop or interview with the MINEF officials the senior author gave a brief, general summary of the results that she had found from her research in that area.

Data collection took place during the months of June to August 2002, May to September 2003 and February and March 2004. Analysis and interpretation of qualitative data was done following procedures outlined by Patton (1990) and Strauss and Corbin (1998). All statistical data analyses were done using SPSS 12.0 for Windows.

3 RESULTS AND DISCUSSION

3.1 NWFPs in the Research Communities.

Results indicate that in all villages, women and their children, particularly girls, were the primary collectors and daily managers of the three study species, and NWFPs in general. Primarily, the study species were an important traditional food source for families, and also were being marketed in increased quantities. Although income from the sale of NWFPs was not the main livelihood activity, it did satisfy
daily household needs for lamp oil and soap as well as larger, more intermittent needs such as schooling and clothing (Brown et al., In press). Sunderland et al. (2004) note the predominance of this ‘coping strategy’ in Africa where income from NWFPs provides cash at times of economic need, such as the payment of school fees or when seasonal income is low. Vabi and Tchamou (1999), also note the important role that multiple sources of income play in the overall livelihood strategy of forest dependent people in the humid forest zone, from the sale of cocoa, agricultural produce and NWFPs. Results also indicate that women who were not as well off were more likely to invest substantial time and effort in collecting Gnetum. This was particularly evident in areas where there were many opportunities to sell the product, but at a very low price. Market studies of NWFPs in Cameroon showed that for disadvantaged groups, such as divorced women and widows, the NWFP trade was a survival strategy (Ruiz Pérez et al., 2002).

3.2 MINEF’s Interaction with Community Forests

The Ministry of the Environment and Forests (MINEF) interacts with Community Forests at two different levels, the national level and the regional level. At the national level, with the passing of the Forest Act in 1994, a special office was created and funded by the British government with a mandate to apply all aspects of the new law. According to staff members of the Community Forest office, their role is to oversee all aspects of the Community Forests in Cameroon including approving the forests, monitoring management and sensitizing the population about all aspects of the law. Within this overarching role as overseer, are included the more social aspects of education, conflict management and overseeing distribution of benefits in communities. While not entering into the daily monitoring of what is going on in each Community Forest, the Community Forest office staff do have the right and power to follow up and supervise the management of a forest, and to suspend it if there are problems in the way a forest is being used. However, Community Forests
have been suspended more often for internal conflict than for other aspects of management.

Although MINEF does have an overseer role for Community Forests, the practical implementation of its responsibility is often limited. When asked what specific work MINEF had done with Community Forests in the last year, a staff member of the Community Forest office answered in this way. “That question is a little embarrassing because I told you that MINEF must do everything; that MINEF helps communities throughout the process but since MINEF does not have the means, and some within MINEF do not have the desire. A few people don’t have the desire. Those who do have the desire do not have the means. Others who have the desire but not the means still work through the NGOs. You see therefore, MINEF tries the best it can to accompany the communities in the process.”

The British government had enabled the implementation of the Community Forest law by funding the Community Forest office within MINEF, but at the time of the research this funding had ended. This limited the ability of staff to go into the field and follow up on Community Forests. Furthermore, some within MINEF were not willing, or were not well trained in how to work with Community Forests, therefore limiting their work in villages.

At the regional level, the MINEF office is normally in charge of all aspects of MINEF’s work in one Sub-division and oversees the implementation of the law for all the forest resources. However, in both high and low areas their primary focus was on ensuring that timber harvesting complied with the law. The regional offices are also MINEF’s most direct connection with the Community Forests in the area. In the early stages, a community that wishes to obtain a Community Forest works with the regional office to help sensitize the local population to the nature of and process to obtain a Community Forest. In the low area this sensitization role of MINEF is carried out in collaboration with local non-governmental organizations (NGOs).
After the government minister signs the contract to reserve the forest area, the community is still responsible for conducting an inventory of the forest resources and doing a simple management plan for the forest that contains an inventory of all the forest resources, including NWFPs, as well as an annual exploitation plan for timber. This is normally carried out with the help of an NGO, but the regional MINEF office oversees the work. Once a Community Forest is legalized at the national level of MINEF, then the regional office plays a role in monitoring exploitation of the forest resources. Since the Community Forests were primarily focused on timber, evaluating the number of trees cut formed the extent of their monitoring program.

In summary, MINEF links directly with the Community Forests through predominantly two channels. The national Community Forestry office is limited in its capacity to visit villages and interact with people. Therefore, they rely on links made with either the regional office of MINEF or NGOs. Of these two channels the MINEF office most often plays a supervisory and monitoring role in the legalization process and the subsequent forest activities. NGOs helped with providing communities with education and training in different areas related to acquisition and management of Community Forests.

3.3 MINEF’s Role in Managing NWFPs in Community Forests

The increasing commercial value of NWFPs led to the reorganization of MINEF in 1998, creating a Department for the Promotion and Transformation of Forest Products with a sub-department to take charge of the Promotion and Transformation of NWFPs (Ndam and Tonye Marcelin, 2004; Ngwasiri et al., 2002). This sub-department is mandated to design and execute all government policy on marketing of NWFPs, promote and regulate permits for export, as well as centralize statistics on transformation and export. A staff member of the sub-department described the role of the office within MINEF as not only one of
promotion of NWFPs, but also one of research and education. Although there is considerable potential of NWFPs in Cameroon, there is also a lack of knowledge about these resources. However, since the office is just new they are only in the beginning stages of accomplishing some of their goals.

While very interested in promoting the commercialization of NWFPs in Community Forests, there did not appear to be communication between the NWFP office and the Community Forest office. In principle, although they felt that they could work with the Community Forest office, they had the impression that those in the Community Forests were only concerned with timber exploitation. However, staff of the NWFP office felt that it would be easier for local people to exploit NWFPs in Community Forests as it did not require capital input and organization. “If (Community Forests) are really to help the population, then it is really NWFPs that will do it, because that is what they can collect easily themselves and sell.” The sub-department hoped that via education, those within Community Forests would be informed as to the value of the NWFPs in their forests and helped to organize to market them.

Since it is the policy of MINEF to integrate the extraction of all resources in Community Forests, there have been recent discussions within the department, as to how to more fully integrate economic exploitation of both forest animals and non-wood products into the strategy for Community Forests. The revision of the manual for obtaining Community Forests, while not changing the importance of exploiting NWFPs, encourages it more as a viable strategy. A person in the Community Forest office said, “I agree that the committees are more focused on exploiting timber. But I think that they are also beginning to understand that NWFPs can be beneficial and that NWFPs can be very beneficial for many communities, especially the communities of the southwest and northwest are focused on NWFPs. Only a few communities understand already but we are going to do sensitization.” Educational campaigns have been held but lack of funding has now hampered this work. The
Community Forest office is also aware of the limitation of their knowledge of NWFPs and how they can be sustainably harvested, and so looks to the sub-department of NWFPs to provide that knowledge.

The regional offices of MINEF felt that they would, in the future, monitor NWFP extraction since all forest resources in Community Forests are to be exploited for the benefit of the community involved. Presently, they were not actively sensitizing the population about NWFPs in Community Forests, but felt that it was a role they would play together with local NGOs. Local NGOs would educate people on the products in their forest, their regeneration, their market value and how to collectively organize to get the best price. They also recognized that more information was needed about sustainable harvesting methods. However, it should be noted that MINEF had the authority to monitor wholesalers who have permits to buy and sell NWFPs, as well as inventory NWFPs in areas outside of Community Forests.

In summary, MINEF executes legislation as set by the government related to the management of natural resources. Although MINEF is responsible for implementing global policy setting for harvest, marketing and management of NWFPs inside and outside of Community Forests, in the study area there are few MINEF personnel who work directly with local people on a regular basis on these activities. This may be due to the fact that local people have tended to focus initially on timber exploitation due to its high value in a Community Forest. MINEF’s lack of focus on NWFPs at the regional level may also be due in part to a lack of training for this type of work. The department at all levels also appears to be limited by a lack of funding. Therefore, the government partners with civil society organizations to help them execute part of their mandate.
3.4 Civil Society Actors Interaction with Community Forests

Cameroon society has many grass roots organizations, both formal and informal, as well as many intermediate organizations commonly termed non-governmental organizations or NGOs. Those that interact with Community Forests may be locally created or national NGOs which receive funding via domestic or international avenues. Another type of NGO that interacts at the grassroots of Cameroon society is the research organization. International organizations in the study area were the International Center for Research in Agroforestry (ICRAF) and the Center for International Forestry Research (CIFOR). A national research centre that receives some international funding is the Limbe Botanical and Zoological Gardens (Limbe).

The fact that the Community Forest office is limited in the activities it can assume due to funding and personnel problems, means that they link with civil society organizations to help them in accomplishing their mission. The head of the Community Forest office described an NGO’s role in this way. “The role of the NGOs is in some way what MINEF is not able to do or what they don’t have the possibilities or means to do. They complete the action of MINEF on the ground. That’s it. That is the role of the NGOs. They bring technical competency to local people. ……Therefore, the NGOs fill a gap left by MINEF.”

3.4.1 Capacity Building Program

The Capacity Building Program (CBP) was created in March 2002, as a pilot project, with funding from both the British and Dutch governments. This stemmed from the Cameroon government realizing that local people needed the financial, technical, organizational and institutional support from Cameroon civil society in order to achieve sustainable community management of the forestry resource. In their brochure the CBP states their motto as the “Involvement of civil society organizations in sustainable forest management for poverty alleviation in
Cameroon.” MINEF is part of the Administrative Council which defines and oversees the orientation of the CBP and a representative of MINEF is also on the selection committee which handles project applications.

The CBP does not work with local communities themselves, but with intermediate organizations, such as local NGOs or service organizations, that are implicated in the sustainable management of forests. However, the projects that are funded by CBP have to be developed in collaboration with a community. The CBP funds projects for capacity building of civil society organizations in technical and professional capacities such as financial management, organizational development, institutional development or technical knowledge related to Community Forests. The head of the CBP described their work of capacity building “as a work of coming along side” which involved not just funding projects, but building the capacity of all actors through workshops, office visits and field visits, and promotion of institutional linkages. The CBP also includes local MINEF personnel in the training workshops for NGOs, not only so they can be full collaborators in the community work, but also to provide them with a learning opportunity. The CBP was also in the process of linking with CIFOR to investigate the root causes for the conflict in the first Community Forests formed in East province. With this information they would then be able to provide information to NGOs as to how to better work with communities, so as to help mitigate conflict.

3.4.2 Local NGOs’ Work with Community Forests and NWFPs

The low area, due to its forest assets, was one of the first parts of the country to have Community Forests approved by the state. This fact, together with the interest of international NGOs in biodiversity conservation in the area, has meant that local NGOs, which work with communities and their forest resources, are more numerous than in other parts of the country. Sixteen local NGOs were joined together in a network which had as its goal to conserve tropical biodiversity and
protect the environment, while supporting the process of sustainable development with the local population. They received funding from a variety of sources, mainly international donors, and some had funding from and participated in workshops for projects with the CBP.

Interview results indicated that of the four NGOs in the low area, who had some contact with the Community Forests in the research villages, three mainly helped Community Forests with the application process and the elaboration of a simple management plan. They also had as a goal to continue to do follow up after the forest was attributed, but some had not yet reached that stage with communities. They hoped in the future to help them better manage the forest as well as provide information on marketing of timber and NWFPs. One NGO had been involved in helping to manage conflict which emerged in one Community Forest once the extraction phase began. Since some Community Forests in the area were close to reaching the required five year evaluation point as stipulated in the forestry law, the NGOs felt they would help them to evaluate the work that had been done and plan for the future. In the high area the NGO was helping the Community Forest with the elaboration of their initial simple management plan.

One NGO, in the low area, was not directly involved in the work with the Community Forests since their primary goal was working with women, who are for the most part excluded from the management of Community Forests. However, they did work on promotion of marketing strategies for NWFPs with women in the area, and were in the process of promoting an improved technology for processing one NWFP. Another NGO had in the past focused on the domestication of five important NWFP species and was currently in the process of becoming involved in a NWFP domestication project with ICRAF. All the NGOs interviewed in the low area felt that while NWFPs had not been the focus of Community Forests in the first five years, they would take on more importance in the future due to the revision of the manual for attributing the forests.
3.4.3 Support Work of Research Organizations

Limbe Botanical and Zoological Gardens (Limbe) in southwest Cameroon, has done extensive research on the domestication of Gnetum with one of their horticulturalists obtaining cultivars from various parts of Cameroon, including one of the research villages. As an initial step, Limbe has tried to disseminate their information on domestication in villages close to the Gardens, through farmer groups set up to grow Gnetum in agroforestry systems. There is much interest in learning to grow Gnetum in this area of Cameroon where the species is considered to be commercially extinct. For the most part the village work has had limited success due to the high start up costs for the nursery and the fact that Limbe has limited resources for follow up. While it is technically part of Limbe’s mandate to help with NWFPs in Community Forests they had not yet done so due to lack of funding.

The International Center for Research in Agroforestry (ICRAF) has done much research on the domestication of NWFPs in Cameroon in general, and has recently become involved in research on agroforestry tree domestication in protected area landscapes. As part of the management plan for Community Forests, agriculture and agroforestry are permitted and enrichment planting is required, although the resources and capacity for enrichment planting are lacking in most areas. Seeing the need, ICRAF is seeking to facilitate a strategy that can work for local communities and so has joined with a local NGO in the low area to do research on the domestication of five NWFP species, as well as the sustainable management of NWFPs in three Community Forests.

The Center for International Forestry Research (CIFOR) has done extensive research on the market function for NWFPs in Cameroon which they share with local people via small workshops. In terms of research in Community Forests, CIFOR has been heavily involved in studying the implementation of the new forestry law in the low area. Through their participatory action research program
CIFOR staff have often played a key role as a neutral facilitator in managing conflict in Community Forests. Through their involvement in research they have contributed to the social learning process in Community Forests.

In summary, local NGOs are involved throughout the process of developing Community Forests with local people. They sensitize villagers to the idea of Community Forests and when a village wants to acquire a Community Forest, they help them prepare the dossier to submit to MINEF. They provide technical knowledge about the legal process and in developing the simple management plan, while building the capacity of communities in areas where they are lacking. They continue to follow the process and when the Community Forest is approved they may help them with management and marketing of their products. However, according to MINEF most NGOs seem to be no longer involved after the attribution process is completed.

NGO involvement was seen as being key to carrying out the work of the sub-department of NWFPs. The Food and Agriculture Organization of the United Nations (FAO) was integral to the research on NWFPs and their uses, as well as in developing methods for sustainable harvesting. Research organizations such as ICRAF and Limbe are important partners in domestication trials of NWFPs. The staff of the sub-department of NWFPs viewed local NGOs as being the link with local communities in their educational efforts to disseminate information to communities about the products, the market chain and how to organize the marketing.

At the present time, however, NGOs played a limited role in helping communities in the area of NWFPs. According to the survey, in total, 103 (66.9%) survey respondents said that they had received no information or teaching on NWFP management or marketing. When the two research areas were compared, the Chi squared test showed that significantly more people in the high area (91.2%; p=0.000) responded that they had not received any support on the subject of
NWFPs. However, in the low area, if NWFP information was provided it was a result of interaction with an NGO. When asked what type of organization had come to the village to provide information on NWFPs, the majority of respondents said that most often it was a local NGO (64.4%), (Table 1). While approximately half of respondents in the villages in the low area felt that they had received some information on NWFPs, the nature of the intervention appeared to be limited in scope. In many cases it appeared to be just a mention that NWFPs were an important part of their forest resources that could be harvested. Ongoing support from NGOs or research organizations in the area of NWFPs seemed to be lacking.

**Insert Table 1 here.**

3.5 *Future Scenarios Workshops among Stakeholders*

Comparison of the results of the workshops showed a common future vision of collective management of NWFPs in Community Forests. In the low area, people viewed it as collective setting of rules and harvesting and selling as a group for the benefit of the whole community. However, in the high area it was seen as a collective sale of the products for individual profit, but not necessarily collective rule setting. This difference is likely a reflection of the fact that most of the forest in the Community Forest in the high area is already held within the traditional tenure system and access to some NWFPs has been privatized. Therefore, it would be quite difficult for people to agree to have others make rules about their traditional resource base. In the low area the Community Forest land is largely unclaimed and people still treat NWFPs as a common pool resource. In both cases, however, small scale commercialization of the study species is currently conducted by village women who market it themselves or sell to a *buyam/sellam*.

Both the women and the Community Forest management committees saw the difficulty in helping people to work together and develop a community understanding around managing forest resources. They both felt that people are individualistic and tend to only look out for their own family. Therefore,
sensitization over a long period of time was suggested by both groups as a strategy to follow to develop a climate of agreement among Community Forest members. MINEF staff in the high area suggested a similar strategy of sensitization to avoid conflict in the future.

While all felt that the whole community should participate in management decisions about NWFPs, the women emphasized that they should play an increased role on the management committee. By their inclusion, women felt that their interests as harvesters and sellers would be represented. Two Community Forest management committees suggested having a sub-committee of women concerned with NWFPs within the Community Forest management committee. MINEF staff felt that the management committee was the key decision maker when it came to decisions about the Community Forests. They did not specifically mention an increased role for women in management. All groups felt that input from external actors, such as NGOs and research institutions would help fill gaps in knowledge about managing and marketing NWFPs, as well as how to avoid conflict in working together. MINEF viewed their own role not as a facilitator, but more as an overseer in making sure rules were followed.

Participation by stakeholders in the Future Scenarios workshops provided an opportunity for learning through discussion and exchange of ideas for future management of NWFPs in Community Forests. By bringing people together it catalyzed and disseminated ideas in a way that would not have been achieved through individual interviews or focus groups. By using questions to focus people’s thoughts, it enabled a process of social learning through challenging people to come up with a concrete approach to managing NWFPs in the future. Ravnborg and Westermann (2002) emphasise that such joint learning opportunities are a valuable and often essential element in efforts to improve natural resource management. The fact that ideas were first generated in small groups and then were synthesized with the help of a facilitator in the large group, meant that many people felt free to share
their thoughts. It also provided an atmosphere where people could express their frustrations, doubts and fears about the way things are working and could work in the future in Community Forests. This was particularly important for women who have been marginalized from the Community Forest process. Such a parallel scenario building process was cited as being of utmost importance in situations where serious power differentials exist within communities and between communities and external stakeholders (Wollenberg et al., 2000b).

Holding specific workshops for village women validated their important role in the NWFP harvest and trade, and reinforced the idea of their potential involvement in the future management of Community Forests. Similarly, engaging stakeholders in separate meetings as a first step in a process of consensus building in community-based fisheries management, was found to be an effective strategy for empowering those stakeholders who may have been marginalized from the process otherwise (Sultana and Thompson, 2004). Sharing the research results summary at the beginning also helped the participants to acknowledge the capacities of women regarding management of NWFPs. It was significant that the Community Forest management committee and MINEF gave this recognition, although it may have represented only a token assent to the importance of women’s involvement. The women, however, appeared to be emboldened in their attitude concerning their right to be involved in the future of NWFPs in Community Forests, which may mean that they will refuse to be ignored in the future process.

3.6 Enabling Social Learning for Management of NWFPs in Community Forests

While the Future Scenarios tool represented a first step in learning to think in new ways about how to manage NWFPs in Community Forests, this approach needs to be institutionalized in management. A next step would be to bring all the stakeholders together so that they could share their ideas, with care being taken so that marginalized stakeholders would be able to express their views. In
implementing such an adaptive collaborative management (ACM) approach the ecological knowledge system model (EKS), developed to analyze conditions conducive to the transition to ecologically sound agriculture, provides insight (Röling and Jiggins, 1998). The EKS also has been proven to be useful in analyzing the key dimensions of systems for innovation in complex natural resource management situations (Buck, 2000, 2002; Chandrasekharan Behr, 2004). The dimensions of the knowledge system model of innovation include: 1) stakeholders involved, 2) ecologically sound practice, 3) learning to support practice, 4) facilitation to support learning, 5) institutional support system and 6) conducive policy context (Röling and Jiggins, 1998; Röling and Wagemakers, 1998).

The emphasis in such a system is on the facilitation of learning that needs to take place in order for the system to change and adapt in response to outside influences. The elements of a potential ecological knowledge system for adaptive collaborative management of NWFPs in Community Forests are presented in Table 2. It should be noted that for the most part the elements of EKS do not currently exist for managing NWFPs in Community Forests in Cameroon. However, with the revision of the Community Forest manual the policy context becomes conducive to a greater integration of NWFPs in Community Forests and the development of new institutional arrangements for their management. As has been noted, some NGOs and research organizations already provide some institutional support in work on NWFPs.

**Insert Table 2 here.**

When applying such a social learning perspective it is important to ensure the involvement of all stakeholders, not just MINEF and the Community Forest management committee. Earlier research results showed the importance of including women as stakeholders in management of NWFPs in Community Forests (Brown, 2005). Besides being primary collectors and sellers of NWFPs, they have knowledge of the products, as well as capacity in other areas. Their high level of
social capital also can facilitate collective action and social learning. The Baka should also be included since they are very dependent on NWFPs for their livelihoods besides having tremendous stores of knowledge of these products. However, since they have been for the most part marginalized in Community Forests (Oyono, 2004a) their inclusion will require special emphasis. Through facilitation, their contributions can be legitimized by developing appropriate platforms to enable their involvement.

Facilitation is key in bringing together all the stakeholders at the community level as well as in creating linkages with outside entities, such as research organizations. Results from Future Scenarios workshops indicated that people felt that links with NGOs and researchers would address the gaps in their knowledge of managing NWFPs in Community Forests. The creation of such an institutional support framework would enable learning to take place toward the desired practices of sustainable harvesting practices, domestication of some NWFP species as well as improved marketing techniques. Facilitation would also be key in conflict management which has already been a problem in Community Forests in Cameroon.

4 CONCLUSION

The advent of Community Forests in Cameroon follows the recent global trend in environmental governance. There has been a creation of new partnerships between the national government as represented by the Ministry of the Environment and Forests (MINEF) and Community Forest groups. MINEF, however, has not completely given over control of the Community Forests to local communities, as the forest remains the property of the state. Communities are, however, given the management responsibilities for and benefits from the Community Forests for 25 years. The central government, via MINEF, also continues to play a role in providing technical support for management committees and in monitoring the
harvesting of forest resources. MINEF also retains the right to suspend a Community Forest agreement with a particular community at any time.

The role of the state in Community Forest governance in Cameroon is not unique. It is consistent with the central role played by the state in other decentralization schemes in the forestry sector in other countries (Edmunds and Wollenberg, 2001; Kellert et al., 2000) It is argued that central governments still are needed in such schemes to provide an important non-local perspective, with a different incentive structure, containing a broader vision for benefits arising at the regional, national and global scales (Larson, 2002; Platteau and Gaspart, 2003). Furthermore, in a system of co-governance the state can play a role in supervising decentralization measures to ensure accountability (Ackerman, 2004). In Cameroon insurance of accountability is key given the tremendous commercial value of forest resources.

Grafton (2000) suggests, that while it is a desirable model for the state to act as a coordinator of the actions of resource users in governing the commons, it should recognize its limits and manage within its capabilities. In Cameroon, while the governance model for Community Forests is legally a new partnership between the state and local communities, it also involves other actors in civil society, namely non-governmental organizations (NGOs). The creation of the Capacity Building Program (CBP) was a formalization of NGO involvement and recognition of the government’s limitations in carrying out all the aspects of the Community Forest law. Local NGOs in most cases are the primary link between the forestry administration and the local communities. The importance of civil society organizations, such as NGOs, in enabling governance of natural resources has been well documented. Berger (2003) points out the important role that NGOs played in facilitating the transition to new institutional arrangements in natural resource management for pastoralists in Kenya. In Nepal, NGOs were instrumental in
facilitating a process of learning for managing commercially valuable non-timber forest products in Community Forests (Ojha and Bhattarai, 2003).

Facilitation of learning in an adaptive collaborative approach has potential to help improve policy design and implementation in forest decentralization (Edmunds and Wollenberg, 2001). In order for an ACM approach to work in Cameroon, however, it would require MINEF to institutionalize it in managing forest resources. The government would also have to mandate the real involvement of all stakeholders beyond a token presence. Using the ecological knowledge system as a model we see that facilitation of such a learning process is key.

The CBP through its involvement with local NGOs is likely best placed to play an important role in facilitating social learning for management of NWFPs in Community Forests. Local NGOs would need training in how to facilitate learning rather than imposing a precrafted system of their own. Staff of the CBP expressed concern that many of the local NGOs were more focused on using the international donor system to provide for their families, than they were in working effectively in villages. The CBP itself, however, would be in a position to bring together all the stakeholders and create linkages with research organizations to facilitate learning on all aspects of NWFP management.

These linkages would facilitate another avenue for learning in management through participatory action research (PAR). Such an approach was instrumental in bringing together community members, scientists and government officials so that co-learning could occur in co-management of coastal resources in Mexico (Chuenpagdee et al., 2004). The institution of a PAR approach in an ACM framework was shown to be essential in learning to manage non-timber forest products in Nepal (Ojha and Bhattarai, 2003). Asanga (2001) also underlines the importance of a PAR approach in facilitating learning in Community Forests in northwest Cameroon. Such an approach has also already been taken by the Center for International Forestry Research (CIFOR) in their research on Community Forests.
in Cameroon. Therefore, a continuation of this approach in conjunction with the CBP may be most beneficial in facilitating adaptive collaborative management of NWFPs in Community Forests in Cameroon.
NOTES

1 The 1994 law classifies forests in Cameroon into two main categories: the permanent forest estate or classified forest which can only be used for forestry or as wildlife habitat and the non-permanent forest estate consisting of forested land which can be converted to non-forest uses (Djeumo, 2001).

2 NWFPs, according to the Food and Agriculture Organization of the United nations, consist of goods of biological origin other than wood, derived from forests, other wooded land and trees outside forests (Belcher, 2003).

3 Of the study communities found in the low volume of trade area, several had camps of Baka Pygmies associated with the villages. However, for the purposes of this research the focus was on the management of NWFPs by the Bantu, as they are more integrated with the local cash economy and involved in the management of the Community Forests. However, the Baka’s role in the future management of NWFPs in Community Forests was considered. Of the nine villages involved in the research only one, Nkol-bogo I, did not have or was not in the process to obtain a legalized Community Forest.

4 Details of the research results outlined in the summary are available from the senior author upon request.
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Figure 1. Location of study communities in southern Cameroon
Table 1. Respondents reporting of types of external actors who have provided information on NWFPs in the low and high commercialization areas (see text for explanation)

<table>
<thead>
<tr>
<th>External Actor</th>
<th>Low</th>
<th></th>
<th>High</th>
<th></th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Local NGO</td>
<td>29</td>
<td>64.4</td>
<td>0</td>
<td>0.0</td>
<td>29</td>
<td>55.8</td>
</tr>
<tr>
<td>Researcher</td>
<td>6</td>
<td>13.3</td>
<td>0</td>
<td>0.0</td>
<td>6</td>
<td>11.5</td>
</tr>
<tr>
<td>MINEF</td>
<td>4</td>
<td>8.9</td>
<td>3</td>
<td>42.9</td>
<td>7</td>
<td>13.5</td>
</tr>
<tr>
<td>NGO + Researcher</td>
<td>6</td>
<td>13.3</td>
<td>0</td>
<td>0.0</td>
<td>6</td>
<td>11.5</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>0.0</td>
<td>4</td>
<td>57.1</td>
<td>4</td>
<td>7.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>45</td>
<td>100.0</td>
<td>7</td>
<td>100.0</td>
<td>52</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: The ‘Other’ category includes an agricultural extension agent, a person from a neighbouring village knowledgeable about Community Forests and a government official from the Sub-division office.
Table 2. Elements of a potential ecological knowledge system for adaptive collaborative management of NWFPs in Community Forests

<table>
<thead>
<tr>
<th>Elements of social learning system</th>
<th>NWFP Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Stakeholders involved</td>
<td>Women, Community Forest management committee, <em>Baka</em>, MINEF, men</td>
</tr>
</tbody>
</table>
| The desirable practices           | Sustainable harvesting levels and methods for all products  
                                 | Domestication of some products in high area  
                                 | Improved processing and collective marketing skills to achieve fair price |
| The learning required for the practices | Joint learning through direct experience and by adaptation to changing circumstances  
                                              | Analyze, monitor and evaluate the system  
                                              | Ability to experiment |
| The facilitation required for that learning to occur | Facilitation needs to ensure that suitable platforms are created in order to allow input from all key stakeholders, particularly marginalized groups.  
                                                  | Facilitate dialogue among key stakeholders as well as learning through workshops, experimentation sites or in Community Forests  
                                                  | Facilitation needs to be ongoing to manage conflict  
                                                  | Facilitation should organize and document learning around sustainable management issues |
| The institutional support framework required | Create platforms of NGOs, research institutions and MINEF for information and technology support in the ACM process  
                                                  | Facilitators |
| The conducive policy context required | Increased importance placed on NWFPs in Community Forests  
                                                  | Infrastructure support for sustainable harvesting and adequate monitoring at all levels  
                                                  | Increased emphasis placed on integration of marginalized groups into management and benefit sharing |