Women and joint forest management in rural communities in the South West Region of Cameroon

ABSTRACT

Forests which provide a range of services necessary for human survival has witnessed continuous degradation and deforestation leading to negative impacts on the livelihoods of rural communities. To reduce deforestation and improve rural livelihoods, Cameroon adopted a participatory approach to forest management encompassed in its 1994 forestry law. The paper examines gender relations in forest activities and implications on participation in forest management programmes in two forest communities in Cameroon. A participatory approach was used to collect data- observation, focus group discussions and key informant interviews. Results revealed the different roles, needs, interests of men and women in forests and its resources. Farming and harvesting of Non-Timber Forest Products (NTFPs) were recorded as major livelihood activities in the research communities. Several factors such as time, different roles and customs influenced the participation and representation of women and men in forest management activities. Understanding social relation in the communities related to gender would enhance the participation of women in forest management and necessitate change in traditional attitudes on gender roles thereby increasing the bargaining power of women.

Keywords: Gender, participation, forest management, rural communities.

INTRODUCTION

The livelihoods of 90% of about 1.2 billion of the world’s poorest people are dependent on forest and its resources. The forest also supports the environment for agriculture and food supplies to nearly half of the population of developing countries (World Bank, 2004). Africa is endowed with large and rich a tropical forest which serves as a habitat to more than 13 million distinct species (Hammond, 1996) and these forests provide a wide range of services necessary for human survival especially in rural communities. The livelihoods of the rural poor especially women are dependent on ecosystem goods and services for sustenance (Grimes et al., 1994; Cavendish, 2000). Forest plays a vital role as safety nets for forest dependent communities providing Non-Timber Forest Products (NTFPs) for consumption, sales, and medicinal purposes. It also acts as a source of protein (fauna) and provides timber for construction.

Cameroon forests, estimated to provide about 8 million rural poor with traditional medicine, materials for construction, food, domestic energy and income (Topa et al., 2009) is under threats of deforestation and degradation. FAO (2010) estimated that about 13 million hectares of forests were lost yearly between 2000 and 2010 by natural courses and conversion to other purposes such as plantations. Cameroon forest estimated to occupy an area of about 225,000 km² witnessed massive degradation from unsustainable practices such as poor farming techniques (slash and burn), poorly managed logging, overgrazing, bush fires, over harvesting of forest products (wood, NTFP and fauna) and desertification (Nounamoand Yemefack, 2001). This contributed immensely to deforestation and forest degradation affecting the livelihoods of the people.
Recent literature indicated that deforestation caused about 18.1% loss of forest cover in the year 1990 to 2010 (FAO, 2011) and illegal logging was identified as a major driver of deforestation in Cameroon (Alemagi and Kozak, 2010; Cerutti et al., 2009).

In a bid to conserve the forest, several management approaches were adopted over the years by Cameroon among which are centralized forms of management practices in the 1970s to community based approaches in the 1980s. The recent approach of management opts for co-management considering the community as a main stakeholder in the management process. The weakness of this approach is that the community is seen as a homogenous entity. The community is made up of different actors such as men, women and youths etc with different roles, needs and interests and as such the different segments of the community should be considered.

Literature revealed that despite attempts of engaging the community in the forest management process, the effective participation of women is still low and their engagement in management programmes has not been effective (Agrawal, 2001; Jumbe and Angelson, 2007). Women have experienced and continued to be in a disadvantaged position often excluded from decision-making at the household, community and national levels (Agrawal, 2001). There still exist male bias on issues like insecure access to land and forest resources, property rights (Knox and Meinzen-Dick, 2001) and limited access to credits and technology (Doss, 2001) among others. Although growing literature illustrates women's knowledge and dependence on forest resources (Howard, 2003), policies instituted by governments to address gender inequity have not resulted to gains for women in many communities. Moreover, the actual implementation of the few available policies is still a challenge.

Attempts in Cameroon to engage the community in forest management has been complex relating to issues such as power relations, traditions and customs, cumbersome bureaucratic procedures, governance and transparency (Sikod, 2007). A decentralized system of management with increased participation of other stakeholders such as local communities (Ostrom, 1990; Gupte, 2004) means a shift in management giving the local people (men and women inclusive) the opportunity to be actively involved in the management process of forests and its resources (Djeumo, 2001; Oyono et al., 2006; Oyono, 2009). According to Brown (1999) and Ingles et al. (1999), joint resource management is seen as integral to “good governance” and brings decision-making closer to citizens. Success in management entails certain procedures such as negotiation, benefit sharing, privileges and decision making power with all stakeholders being engaged and recognized by government and other users. This paper therefore seeks to better understand gender relations in forest use and management and its implication for participation of men and women in forest management activities.

**MATERIALS AND METHODS**

**Study area**

The study was conducted in the South West Region of Cameroon. Field work was done in Ikondo-Kondo I, Fabe, Bechati and Lower Fossi-Mondi communities in the Korup National Park and Bechati forest areas respectively. The Korup National Park is located between latitude 4°54’ to 5°28’ north and from 8°42’ to 9°16’ east. It is situated in Mundemba Sub-division in the South West Region of Cameroon with communities (within and out of the park) characterized by three ethnic groups such as Korup, Bakoko and Batanga. The Bechati forest area is located between latitude 5°37’ to 5°42’ and longitude 9°53’ to 9°58’ in the South West Region of Cameroon. The area has a population of about 35,000 and located adjacent to the BFA are over nineteen villages (Nkembi et al., 2008). The inhabitants of the research areas are solely dependent on the forest resources for their livelihoods.

**Data collection**

Data was collected using quantitative and qualitative tools such as in-depth inter-views, household surveys, focus group discussions and casual observations. Other methods used were participant observation, key informant interviews and informal discussions. A purposive non-probability sampling method was used as the study focused on specific characteristics of the population of interest to the research.

Household questionnaires were developed to generate information on socio-economic and demographic characteristics, community involvement in forest management activities, forest use, income generation from forest resources and decision on forest resources and household assets. Key informant interviews and focus group discussions were conducted in each community to obtain information on issues related to agricultural activities, land use patterns, income distribution in households and access to forest resources. Data collected from qualitative methods such as group discussions, open-ended questions in interviews and participant observation were analyzed qualitatively and later transcribed, translated and categorized into major themes which were then analyzed using content analysis approach (Berg, 2009). Data was processed through descriptive statistical tools such as frequencies, charts, tables and percentages.

**RESULTS AND DISCUSSION**

This section presents the results of the study and a discussion on the socio-economic characteristics of the research communities, gender relations between men and
women and youths and their roles in forest activities and the engagement of women and men in community forest management programmes.

**Socio-economic characteristics of the households**

The socio-economic characteristics of the households are important as they are directly or indirectly related to their participation in forest management activities. Characteristics such as sex, age, education, dependence, marital status and occupation were considered. In the study, 56% of all respondents interviewed were males while 44% were females. Both men and women were engaged in forest management activities and their socio-economic characteristics differ given their differential values, interest and needs. More than 50% of the respondents in both research areas were married with 65% practicing monogamy and 35% polygamy.

Small proportions of the population were singles (26%), widow (10%) and divorced (6%). In the research areas, 63% of the population has some form of formal education (primary, secondary and university education) and 37% within formal education. Although overall percentage in educational attainment is more than 50% showing that majority of respondents attended some form of education and the level of educational attainment is low as majority were recorded as attended the primary level.

At all levels of the educational ladder (primary, secondary and university), men registered higher than women except for the informal education (Figure 1). The rate of illiteracy in the research communities was higher in women as compared to men (Figure 1). This was attributed to the traditional practices in the research communities where the female child is considered as not being a permanent member of the family as she gets married into another family at a given age. According to some respondents, educating a girl means investing for another family as benefits from her education goes to another after marriage. Moreover, due to limited resources, many parents prefer to educate the male child rather than the female in order to preserve the family lineage. Illiteracy or low education could affect the participation of especially women with a higher rate of illiteracy (Figure 1) in forest management activities.

**Gender differential roles in forest-related activities**

**Overview of forest activities for men and women**

Results from the study showed that rural men and women have significant but distinct functions in forest use and management. They have differential interests, needs and play different roles in forest-related activities which influence their roles in society. Differences are seen in the tasks performed by men and women, usage of forest resources and decision-making and control over the resources. Major activities carried in the forest include farming, hunting, logging, fishing and extraction of NTFPs (Table 1). Men and women recorded agriculture as the major
occupation with major crops cultivated for consumption and for sale. Crops cultivated in the research communities included food (plantains, cassava, potatoes, beans and groundnuts etc and cash crops (cocoa). Conversations with farmers and personal observation of their farmlands showed that the communities are largely involved in food crop production with crops such as potatoes, cassava, beans, plantains, cocoyams and vegetables mainly used in household and surplus sold in local markets. Majority of women tend to cultivate crops on small farm holdings and for household consumption compared to men who opted for perennial crops such as cocoa and palm oil production in large scale mainly for commercialization. Shifting cultivation and slash and burn methods are the common farming methods identified in the communities. The production system of food crops and cash crops is largely the same, although, food crop farming is more of mixed and intercropping and cash crop production sparsely intercrop usually with perennial crops like bananas and plantains. Women use mixed cropping as a coping strategy as several different crops are planted on a single piece of land so as to meet household demands.

Table 1 shows the different tasks performed by men and women in the forest and the degree of engagement. Results suggest that men are mainly involved in activities that are physically demanding such as logging and hunting while women were more engaged in harvesting of NTFPs, medicinal plants and fuelwood collection. Similar to the report of Wright et al. (2010), activities such as hunting and logging were predominantly for males.

Table 2: Common animals hunted in the research communities.

<table>
<thead>
<tr>
<th>Common name</th>
<th>Scientific name</th>
<th>Local use</th>
<th>Valorization means</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deer (Bay duiker)</td>
<td>Cephalophus dorsalis</td>
<td>Income source</td>
<td>Smoking</td>
</tr>
<tr>
<td>Cutting grass</td>
<td>Thrynomyys swinderianus</td>
<td>Income source/Consumption</td>
<td>Smoking</td>
</tr>
<tr>
<td>Mona Monkey</td>
<td>Cercopticus mona</td>
<td>Income source/Consumption</td>
<td>Smoking</td>
</tr>
<tr>
<td>Bush pig</td>
<td>Potamochoerus porcus</td>
<td>Income source</td>
<td>Smoking</td>
</tr>
<tr>
<td>Tree Pangolin</td>
<td>Manis triscopus</td>
<td>Income source /Consumption</td>
<td>Smoking</td>
</tr>
<tr>
<td>Frotambo</td>
<td>Cephalophus monticolor</td>
<td>Income source /Consumption</td>
<td>Smoking</td>
</tr>
<tr>
<td>Rat mole</td>
<td>Cicetomy semini</td>
<td>Consumption</td>
<td>None</td>
</tr>
<tr>
<td>Alligator</td>
<td>Osteolaemus tetraspis</td>
<td>Consumption</td>
<td>None</td>
</tr>
<tr>
<td>Drill</td>
<td>Mandrillus manni</td>
<td>Income source /Consumption</td>
<td>Smoking</td>
</tr>
<tr>
<td>Bufallo</td>
<td>Syncerus caffer</td>
<td>Income source</td>
<td>Smoking</td>
</tr>
<tr>
<td>Chimpanzee</td>
<td>Pan troglodytes</td>
<td>Traditional celebration</td>
<td>smoking</td>
</tr>
</tbody>
</table>

Extraction of non-timber forest products (NTFPs)

This refers to the extraction of products from the forest other than animals and involves the harvesting of leaves, herbs, seed, medicinal plants and bark of trees usually for household consumption, sale, health and for home construction. The most harvested NTFPs (Table 3) indicated by all the communities were used for consumption and for sale.

Results from the study indicated both men and women are engaged in the extraction of NTFPs in research communities and the quantity harvested was dependent on the strength of the harvester and the location of the

Harvesting of fauna and NTFPs from the forest by men and women

Generally, in the research communities, the high demand for “bush meat” led to excessive and illegal harvesting of wildlife and even threatened species (Table 2) such as deer, duiker, monkey, buffalo and chimpanzee etc. Hunting in these communities is predominantly the activity of men and they are engaged in hunting in groups and usually spend several days in the forest accompanied by dogs. Tradition prevents women from hunting especially large and wild animals. Women tend to set traps usually in their farmland attracting smaller animals such as rat moles mainly for household consumption (Table 2). Women were recorded to be actively involved in bush meat trade as middlemen collecting the hunt from hunters and selling to restaurant owners in nearby cities. Women preserve the hunt through smoking using fire before transporting to nearby cities for sale.

Although animals in these communities are generally used as meat, certain parts of specific animals are used for different purposes such as trational celebration, medicinal purposes and totems. Unlike the study of Rose et al. (2003) which show that traditional beliefs prevented the decline of wildlife in certain areas, decreasing availability of wildlife and modernization have eroded many traditional belief systems (Barnett, 2000) and the harvest of bush meat is on the increase. In the study area, the belief that humans transform into gorillas and chimpanzees which deterred the local people from hunting is fading away especially with the younger generation.
products. Men generally could move further into the interior of the forest to harvest the products compared to women due to over-exploitation of the forest area situated close to the communities. Men harvest mainly for sale while women is mainly for household consumption. Forest resources are used for several purposes for example, Njansanga (*Ricinodendron heudelotii*) and Bitter Bush Mango (*Irvingia wombolo*) is used as a soup thickener; bush pepper (*Piper guinesis*) as an aromatic spice with a hot taste and bitter kola (*Garcina kola*) as a stimulant and for medicinal purposes. In all, women were found to engage more in the extraction of NTFPs while majority of men embarked on hunting of wildlife.

Two main ways were identified in the communities to preserve the products extracted from the forest. These include smoking and sun drying and were identified to be carried out mostly in women and children. According to respondents, the exploitation effect of *Gnetum africana* is not being felt and there is no reduction in the quantities being harvested from the forest. Although they attested of the fact that they now move long distances into the forest unlike in the past to harvest *G. africana*, it is still sufficient in the forest. Other forest products reduced in quantity include bitter bush mango (*I. wombolo*), bush pepper (*P. guinesis*), sweet bush mango (*I. gabonensis*) and Bitter kola (*G. kola*).

### Participation of men and women in forest management

In all research communities, participation in forest management activities is optional. Men and women participate in various activities related to the forest with extension workers from local and international governmental organizations (NGOs). Forest management themes identified in the communities included forest protection, skilled training, decision-making and benefit sharing of forest resources, resource utilization (NTFPs) and income generating activities (IGAs).

Results showed that majority of men participated in forest protection (54%), skilled training (38%), benefit sharing (63%) and income generating activities (52%) compared to women (Figure 2). Women are seen to have a high level participation than men in resource utilization (53%), while men were relatively involved in skilled training and benefit sharing; women rarely participated in

<table>
<thead>
<tr>
<th>Common name</th>
<th>Scientific name</th>
<th>Local use</th>
<th>Valorization means</th>
<th>Exploitation effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>EEru</td>
<td><em>Gnetum africana</em></td>
<td>Vegetable</td>
<td>None</td>
<td>Increase quantity</td>
</tr>
<tr>
<td>Bitter Bush Mango</td>
<td><em>Irvingia wombolo</em></td>
<td>Soup thickener</td>
<td>Smoking/sun dry</td>
<td>Reduce quantity</td>
</tr>
<tr>
<td>Bush pepper</td>
<td><em>Piper guinesis</em></td>
<td>Spice</td>
<td>smoking</td>
<td>Reduce quantity</td>
</tr>
<tr>
<td>Njansanga</td>
<td><em>Ricinodendron heudelotii</em></td>
<td>Soup thickener</td>
<td>Smoking/sun dry</td>
<td>Increase quantity</td>
</tr>
<tr>
<td>Sweet Bush Mango</td>
<td><em>Irvingia gabonensis</em></td>
<td>Soup thickener</td>
<td>Smoking/sun dry</td>
<td>Reduce quantity</td>
</tr>
<tr>
<td>Bitter cola</td>
<td><em>Garcina kola</em></td>
<td>Stimulant/medicinal</td>
<td>Sun dry</td>
<td>Reduce quantity</td>
</tr>
</tbody>
</table>

* Rarely; ** regularly and ***mostly.
Participation of men and women in management meetings.

Many indigenes, both men and women, increasingly participated in training for effective forest management. Sensitization from donor organizations and the government of Cameroon led to awareness on the importance of protecting and managing the rich forest and acknowledging the positive impact protection has on the forest. Participating in meetings on alternative income generating activities resulted in indigenes engaging in other activities which are not forest related such as beekeeping and livestock rearing.

**Gender and decision making in management committees**

Decision-making in forest management in these communities is of key importance as the decisions made influence their livelihoods. There exist three levels of participation in decision-making such as nominal, active and interactive (Agarwal, 2001). The number of respondents for the nominal level of participation are those who participated in at least two of the meetings for the past year and those considered as active are the respondents that were able to give a suggestion or voice their opinions during the meetings. At the interactive level of participation are those respondents that actually influenced a decision either through voting or their opinions being accepted by the general assembly.

Results showed that more men were involved in all aspects of decision-making than women with the percentages of 72 and 28% respectively, while fewer women would express their opinions (10%) in relation to men with 23%; even fewer women felt they actually influenced decisions (2.1%). On the other hand, 17% of male members did influence decisions in their meetings. Figure 3 shows there is a general trend in the reduction in the level of participation of both men and women in decision-making in management activities in the research communities, while a greater section of the research population is represented in meetings and they hardly participate at the decision-making level. Fewer women participate where their opinions are heard and considered in the management process. However, according to informants, the situation is changing. Unlike in the past when women were prohibited from attending public meetings let alone participating in discussions, today, they can attend most meetings and some are even taking part in decision-making.

Increasing the value of women’s activities in the forest like agriculture and harvesting of NTFPs is not only in terms of increase in income but also influences changes in gender roles and relations in the household and community. In the study, the ability of women to take up the responsibility of their husbands as result of migration and deaths has given them greater decision-making power. Trading as well as seeking employment in nearby markets and plantations respectively has resulted to higher incomes to women thereby leading to greater autonomy and freedom.

Women have the ability to travel to other villages and towns, control income and are able to build relationships outside the home. Many studies which link women's empowerment to property rights were carried out. According to a survey of female garment factory workers in Bangladesh in 1990, two-thirds of working women had some control over their earnings and in 2003, married women claimed to have greater decision-making power in the household (Raworth, 2004). In a similar study carried out in Senegal, women through trading, working in the market and cultivating their own fields earned independent income for personal needs such as clothing and gifts (Perry, 2005). Women landowners in Peruvian Islands have a significant role in farm management and equally make decisions about intra-household labour and income allocation. Positive correlations between women's land ownership, participation in farm and household related decisions and strong bargaining positions within household were recorded in Ecuador and Southern Brazil (Hamilton, 2009). This is in line with Agrawal's argument that an individual's economic situation, command over property and control over institutions and participation in collective action contributes to their bargaining power within and
out of the household (Agarwal, 1997).

**Conclusions**

Men and women in the research communities are engaged in forest activities for various purposes and in different roles. Increased demand from external markets and continuous harvest of the forest resources may result to the extinction of some threatened species of plants and animals. Training the communities on alternative sources for income generation and sensitization on the importance of wildlife protection is vital for the sustainability of the rich forest resources.

Participation continuum and involvement of men and women in the community at various levels of decision-making in the management process is necessary for effective management. Effective participation involves a shift from a lower to a higher level where the various actors and their contributions are considered in the management. However, participation is not a panacea to successful and sustainable forest management as there are other limitations (pre-existing socio/economic inequalities and traditions) as to what participation can achieve even at its highest level (interactive) in terms of equity and efficiency. Hence, a holistic approach should be considered in forest management as while considering the engagement actors in the communities and other stakeholders, issues on policy, tradition and customs should be considered.

**REFERENCES**


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