

Community-based forest management and changing gender roles in a patriarchal society in Cameroon: The case of Korup and Bechati forest areas.

A thesis approved by the Faculty of Environmental Sciences and Process Engineering at the Brandenburg University of Technology in Cottbus in partial fulfillment of the requirement for the award of the academic degree of Doctor of Philosophy (PhD) in Environmental Sciences.

by

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Day of Oral Examination: 13.06.2014

DECLARATION

I, Lilian Nkengla, hereby declare that this work is written independent of any unauthorized help. All secondary information used have been duly acknowledged and this work has not been submitted anywhere for any academic award.

Lilian Nkengla

DEDICATION

This thesis is dedicated to my beloved husband, Mr. Asi Eugene Ndum who steadfastly supported me at every stage of the research.

To my son, Asi-Ndum Caleb Penn, for giving the time and strength each day.

To my mother Martha Ngwi Nkengla and Justice Nkengla Joseph for their moral and material support which led to the realization of this work.

ACKNOWLEDGEMENTS

First of all, I would like to thank the Chair of General Ecology in the Brandenburg University of Technology, Cottbus-Senftenberg under the supervision of Prof. Gerhard Wiegleb for accepting me as a PhD candidate.

My sincere gratitude goes to my supervisors, Prof. Gerhard Wiegleb and Prof. Christoph Görg who showed great interest and provided excellent guidance through my research and report writing period. I greatly value their advice and the several thought-provoking discussions which led me on the right path. I am also thankful for their dedication and support which enabled me to secure funding for my research. I am also grateful to Dr. Jennifer Hauck for her professional support and inspiration that made me to have confidence and enthusiasm to complete this thesis.

This study was partly funded by “The advancement of women professionals programme” in BTU Cottbus-Senftenberg. I sincerely appreciate their contributions.

I would also like to thank the conservation projects- GTZ Buea and ERuDeF, working in the research areas for readily incorporating my project into their working plan. Special thanks to Mr. Iyassa, Field Assistant to GTZ and Mr. Louis Nkembe, Director of ERuDeF for their relentless efforts in providing me with all the necessary information. My sincere thanks to all the research assistants who accompanied me to the villages, assisting in every way.

Special appreciation goes to all the respondents for devoting their time for the research team and also providing information that has been used in this thesis. I am also appreciative to Dr. Charles Eyong, Dr. Tsi Evaristus, Dr. Awa Taku, Dr. Ajonina Samuel, Dr. Bertha Abdu and Dr. Egute who helped and inspired me to accomplish the task. Special thanks to my colleagues Mercy Diangha, Regina Edawa and Ong for their contributions to the work.

My profound gratitude to my beloved husband, Dr. Asi Eugene for the care, patience and encouraging words offered during especially difficult moments. Many thanks also go to my parents, parents-in-laws, brothers, sisters, sisters-in law, all relatives and friends for their moral, spiritual and financial support during my study.

Above all, this would not have been possible without strength from the Almighty God. I thank HIM for granting me strength and hope to carry on to the end.

GLORY BE TO GOD!

Abstract

Forest resources provide a means of livelihoods in rural communities in most developing countries. Growing threats of disappearance of these resources as a result of human and natural activities led Cameroon in 1994 to institute new forest policy reforms which amongst others aimed to formalize and strengthen the involvement of local communities in forest management. Although much has been written on the importance and methods of participation of the local people in sustainable forest management, little has been done to assess the involvement of especially women in forest management activities. This study aims to contribute to an understanding of the roles of indigenous men and women in forest management activities, how they are shaped by management regimes and the influence on their livelihoods.

Results are based on empirical findings from two case studies-the Korup National Park Area (KNPA) and Bechati Forest Area (BFA). The analysis focuses on the different roles of men and women in forest activities, exploring how policies have influenced their participation. It further uses the concepts provided by gender analysis and SLF to check the potentials for improved participation of men and women in forest management and sustainable rural livelihoods.

Results show that men and women in the research communities are solely dependent on forest resources for their livelihoods. They perform different roles with different interests and needs regarding the forest and its resources. Men and women have different responsibilities in protecting and maintaining homestead, common and forest lands. The results show that men are interested in cash crop production and usually own large plots and a greater proportion of women are involved in food crop production mostly for subsistence.

The analysis of the management practices in both research areas show that formal and traditional ways of managing the forest are practiced. The traditional method is supplementary to the formal as the inability of traditional council to solve some forest problems are forwarded to the court of law where sanctions are taken. Considering that they are few guards to patrol the forest or visit the communities regularly would mean increase illegal activities in the forest. With some recognition, cooperation and mutual understanding between the local people, government and conservation staff, the management of the forest would be improved. The analysis further reveals clashing traditional, governmental and participatory management strategies leading to tensions, conflicts and lack of trust among actors.

Results on gender analysis in research communities portray power relations in forest issues. Rights and access to natural resources like land, trees and animals is gendered. Land tenure rights BFA are hereditary and entitled to the male successor of the family. In KNPA, it is based on demarcation and occupation. However, though land acquisition is open to both men and women in the KNPA, women were found to acquire less land due to numerous responsibilities and lack of strength. The amount of land acquired determines the degree of authority a family or an individual possesses. The analysis also shows that there is some form of change in gender roles although women are not highly represented and even fewer women take part in decision-making processes.

Gender issues are integrated in most policy commitments in Cameroon but if steps are not taken to translate them into practice, the increase participation of women in forest management will remain limited. True change can be achieved if decision-makers ensure an inclusive implementation of gender issues at all levels of project planning. A change in traditional attitudes on the roles of men and women should be adopted and a rethinking on policies (e.g. land tenure and property rights) is necessary to pave the way for greater female participation.

Keywords: Gender, forest management, rural communities, livelihoods, Cameroon

Zusammenfassung

Wälder stellen, in vielen ländlichen Gemeinden in Entwicklungsländern, Ressourcen für die Lebensgrundlage der lokalen Bevölkerung zur Verfügung. Aufgrund von natürlichen und vom Menschen beeinflussten Veränderungen sind diese Ressourcen gefährdet. Um den Problemen abnehmender Waldressourcen zu begegnen wurde die Waldpolitik in Kamerun 1994 reformiert. Ziel der Reformen war die Formalisierung und Stärkung der Beteiligung der lokalen Bevölkerung im Waldmanagement. Obwohl es zahlreiche Veröffentlichungen zu Wichtigkeit und Methoden der Partizipation lokaler Bevölkerung im nachhaltigem Waldmanagement in Kamerun gibt, wird vor allem die Einbindung von Frauen in entsprechende Managementaktivitäten selten betrachtet.

Die vorliegende Arbeit leistet einen Beitrag zum Rollenverständnis von einheimischen Männern und Frauen im Waldmanagement, vor allen Dingen hinsichtlich der Gestaltung vom Managementstrategien und dem Einfluss auf die Lebensgrundlage.

Die Ergebnisse basieren auf empirischen Ergebnissen aus zwei Fallstudien in der Korup National Park Area (KNPA) und der Bechati Forest Area (BFA). Die Analysen fokussieren auf verschiedene Rollen von Männern und Frauen im Waldmanagement und untersuchen den Einfluss verschiedener Politiken auf Beteiligungsprozesse. Des Weiteren werden Konzepte der Genderforschung und des Sustainable Livelihoods Frameworks genutzt um Verbesserungspotentiale für die Beteiligung von Männern und Frauen aufzudecken.

Die Ergebnisse zeigen, dass Männer und Frauen in den Fallstudiengebieten ihren Lebensunterhalt ausschließlich von Ressourcen bestreiten, die von den Wäldern zur Verfügung gestellt werden. Dabei gibt es eine Rollenverteilung mit unterschiedlichen Interessen und Bedürfnissen im Bezug auf Wälder und Ressourcen. So haben Männer und Frauen unterschiedliche Verantwortlichkeiten hinsichtlich Schutz und Erhalt von Höfen, Allmenden und Wäldern. Die Ergebnisse zeigen, dass die Interessen der Männer im Bereich der Produktion von Cash-Crops liegen und sie dafür oft auch große Flächen besitzen. Frauen hingegen sind überwiegend in den Anbau von Nahrungsmitteln für die Selbstversorgung involviert.

Die Analysen der Managementpraktiken in beiden Fallstudiengebieten zeigen, dass verschiedene formelle und traditionelle Waldmanagementstrategien praktiziert werden. Die traditionellen Strategien gelten als komplementär zu den Formellen. So werden Probleme im Bezug auf Wald, die nicht durch traditionelle Gemeinderäte gelöst werden können an Gerichte weitergeleitet. Hier können Sanktionen beschlossen werden. Die Analysen zeigen

aber auch, dass traditionelle, formelle und partizipative Managementstrategien nicht immer zusammenpassen. Daraus entstehen Spannungen, Konflikte und ein Mangel an Vertrauen. Größere Beachtung, Kooperation und gegenseitiges Verständnis zwischen der lokalen Bevölkerung, Regierung und Naturschützern würde zu einer Verbesserung im Waldmanagement führen.

Genderanalysen in den Gemeinden der Fallstudiengebiete zeigen die Machtverhältnisse im Bezug auf Wald sowie unterschiedliche Rechte und Zugänge zu natürlichen Ressourcen wie Land, Bäume und Tiere. In BFA wird der Landbesitz an den männlichen Nachkommen vererbt. In KNPA basiert der Landbesitz auf Demarkation und Beruf. Während also in KNPA Landerwerb für beide Geschlechter möglich ist, wird von Frauen weniger Land erworben. Gründe dafür sind die viele Verpflichtungen und ein Mangel an körperlicher Kraft. Die Größe des Flächenbesitzes bestimmt den Grad der Autorität innerhalb und außerhalb der Familie. Die Analysen zeigen, dass ein Wandel in den Geschlechtsrollen stattfindet. Trotzdem Frauen nicht gut repräsentiert sind und noch weniger an Entscheidungsprozessen beteiligt.

Geschlechterfragen werden mittlerweile in den meisten politischen Zusagen in Kamerun berücksichtigt. Werden jedoch keine Schritte zur Umsetzung unternommen, wird die Beteiligung von Frauen im Waldmanagement weiterhin begrenzt bleiben. Tatsächlicher Wandel könnte erreicht werden, wenn Entscheidungsträger eine inklusive Umsetzung von Genderaspekten auf allen Projektebenen sicherstellen. Ein Wandel in den traditionellen Verhaltensweisen im Bezug auf Rollen von Männern und Frauen sollte umgesetzt werden. Außerdem ist ein Umdenken hinsichtlich Politiken (z.B. Landbesitz und Eigentumsrecht) notwendig um den Weg für eine Verbesserung in der Partizipation von Frauen zu ebnen.

Stichworte: Geschlecht, Forstwirtschaft, Ländliche Gemeinschaften, Lebensunterhalt, Kamerun

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Abbreviations and Acronyms

ADB	African Development Bank
ATO	African Timber Organization
BFA	Bechati Forest Area
CIA	Central Intelligence Agency
CIDA	Canadian International Development Agency
CFC	Control of Chlorofluorocarbons
CIFOR	Center for International Forestry Research
CRG	Cross River Gorilla
DFID	British Development Agency
FAO	Food and Agricultural Organization
FEICOM	Fonds Spécial d'Équipement et d'Intervention Intercommunale
FS	Forest Service
GDP	Gross Domestic Product
GDRC	Global Development Research Center
GED	Gender, Environment and Development
GEM	Gender Evaluation Methodology
GIZ	German Development Cooperation
GTZ	German Technical Cooperation
HDI	Human Development Index
HIPC	Highly Indebted Poor Countries
HH	Household
ICDPs	Integrated Conservation Development Projects
IFAD	International Fund for Agricultural Development
IFUW	International Federation of University Women
IGA	Income Generating Activity
IGNARM	Network on Indigenous Peoples, Gender and Natural Resource Management
ILO	International Labour Organization

ITTO	International Tropical Timber Organization
IUCN	International Union for Conservation of Nature
KNPA	Korup National Park Area
KNP	Korup National Park
KRCS	Korup Rainforest Conservation Society
MCPFE	Ministerial Conference on the protection of forests in Europe
MDG	Millennium Development Goals
MEA	Millennium Ecosystem Assessment
MINEF	Ministry of Environment and Forests
MINEFI	Ministry of Economics and Finance
MINSACOF	Ministry of Social and Women's Affairs
MP	Management Plan
NCUDA	Ngolo Cultural Development Organization
NECO	Ndian Economic and Cultural Association
NTFP	Non-Timber Forest Product
NGO	Non-Governmental Organization
OUA	Organization of African Unity
OECD	Organization for Economic Cooperation and Development
ProPSFE	Programme Sectoriel Forêts- Environnement
SADC	Southern African Development Community
SAP	Structural Adjustment Programme
SIBAF	Société Industrielle des Bois Africains
SIFID	Société Forestière et Industrielle de la Doumé
SFM	Sustainable Forest Management
SLF	Sustainable Livelihoods Framework
SWC	Status of Women Canada
SWELA	South West Elites Association

UN	United Nations
UNCED	United Nations Conference on Environment and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environmental Programme
UNESCO	United Nations Economic and Social Cooperation
UNIFEM	United Nations Development Fund for Women
WCS	World Conservation Society
WHO	World Health Organization
WWF	World Wide Fund for Nature

Chapter One

1 Introduction

Forests are essential for human existence on earth. They do not only act as habitats but also contribute to the livelihoods of the people. According to the World Bank (2004), forests contribute to the livelihoods of 90% of about 1.2 billion of the world's poorest people and also support the environment for agriculture and food supplies to nearly half of the population of developing countries. Africa is endowed with large and rich tropical forests which serve as a habitat to more than 13 million distinct species (Hammond, 1996). The livelihoods of the rural poor especially women are dependent on ecosystem goods and services for sustenance (Grimes et al., 1994, Cavendish, 2000, Mahapata and Tewari, 2005). Goods and services which include wood, water, Non-Timber Forest Products (NTFPs) and services such as habitat functions, cultural functions (shade, sacred shrines, meeting points) and aesthetic functions (recreation, leisure) are used by the rural communities in their daily lives.

Global forest resources assessment of FAO (2005a) estimates that forests which cover about 30% of total global land area is experiencing deforestation at an alarming rate. The intensification of forest use and poor management systems has led to the ultimate disappearance of forests (FAO, 2005a). Cameroon forest estimated to occupy an area of about 225,000 square kilometers has witnessed massive degradation from unsustainable practices such as poor farming techniques (slash and burn), overgrazing, bush fires, over harvesting of forest products (wood, NTFP, fauna) and desertification which have contributed immensely to forest degradation (Cleaver, 1992; Nounamo & Yemefack, 2000; Gorman, 2006). The presence of logging companies like Cambois, (Société Camerounaise des Bois), SIFID (Société Forestière et Industrielle de la Doumé), SIBAF (Société Industrielle des Bois Africains) etc. has only intensified forest destruction (Forest Monitor, 2001; Toyne et al., 2002).

Increased forest degradation has not only threatened the goods and services upon which the biodiversity depends but has also led to growing poverty in many rural communities (MA, 2003; Gorman S., 2006; Malick Diarrassouba et al., 2009). Forest degradation has led to reduction in forest resources and vegetation thus affecting the livelihoods of the communities living in and around the forests (Fonteh, 2011).

In order to combat forest degradation, Cameroon in 1994 adopted the 1994 forestry legislation which called for a more decentralized form of management and greater involvement of local

communities (Ostrom, 1990; Bromley, 1992; Gupte, 2004) for sustainable forest management. As stipulated in Law 74/23 and the 1996 constitution, the Cameroon government created decentralized entities like commune governed by elected mayor and councilors who work closely with the local communities in managing local resources (Gorman S., 2006). In 2007, about 3.5 million hectares (60%) of productive forests are used as prescript in the 49 approved management plans as part of the forest management process (Cerruti et al., 2008).

Despite the continuous and conscious efforts made by the government, it has not yet succeeded in implementing effective sustainability safeguards (Cerutti et al., 2008) and more so, active participation of especially the poor and marginalized (usually women) in forest management activities is still to be realized (Djeumo, 2001).

1.1 Problem statement

Participatory approaches in forestry aim at devolving decision-making rights and benefits of forest resources to the rural people, usually goes with responsibilities of forest management (Vishakha et al., 2003). This devolution of power is based on the prediction for greater efficiency in local resource management (INS, 2008). In Cameroon however, attempts to ensure sustainable management by involving stakeholders for human well-being has been complex due to issues arising such as participation (unequal access and control of productive resources), traditions and customs, cumbersome bureaucratic procedures, governance and transparency etc (Sikod, 2007; Kouami et al., 2008; INS, 2008).

According to Agrawal and Ostrom (2001), participation in the implementation of forest activities does not necessarily ensure effective participation in decision-making as effective participation requires that the people's views are effectively recognized and taken in to consideration in the decision-making process. Most writers have acknowledged the participation of women in forest management activities but have indicated that their involvement in decision-making has so far been nominal. Women are either absent in the forest management committees or their role in decision-making is not influential enough (Buchy and Subba, 2003; Ghimire, 2001). Studies in Cameroon reveal low women participation in decision-making and bias strategy formulations at different organizational levels that have limited their abilities (Djeumo, 2001).

Apart from the diversity of decision making levels, the socio-cultural fabric in developing countries and Cameroon in particular have portrayed glaring gender disparities in areas such

as land tenure, relegating women to secondary roles thereby preventing them from participating fully in activities that can help leverage households from poverty and inequality (World Bank, 2001; Endeley and Sikod, 2006; Fonjong, 2002). Although more than half of adult women in Cameroon are involved in the labour force, especially agriculture (World Bank, 2010), over 60% are still considered as unpaid family workers (UN DESA, 2007). These disadvantages on them as a result of their gender orientation further affect resource accessibility and allocation at the micro and macro levels of livelihoods (Sikod, 2006).

Ardayfio-Schandorf et al. (2007), point out that forestry has been a multidimensional field, with the historical legacy of male-dominated forest management. Despite the continuous and conscious effort towards the participation of all users, the active participation of the poor and marginalized (usually women) in forest management activities is quite low (Agarwal, 2001). According to Nkengla (2007), especially the poor and uneducated women are vulnerable as they are seen as “passive” observers rather than active participants in forest management issues. Thus, to mainstream gender in forest management, it is necessary to consider not only the low representation of women but also their power relations in decision-making on management issues (Moss, 2011).

Several authors have suggested that inclusion of women in forest management is necessary for efficiency and improved livelihoods (Williams, 1992; Agarwal, 2001; Burly, 2001; Sininoli et al., 2002). According to Sen (2000), involving women in environmental projects require special efforts to extend their participation beyond the traditional roles accorded them. The relationship between sexes determines decisions and activities that in turn have effect on both management and utilization of the environment for sustainable development. As Sen puts it,

"Advancing gender equality, through reversing the various social and economic handicaps that make women voiceless and powerless, may also be one of the best ways of saving the environment, and countering the dangers of overcrowding and other adversities associated with population pressure. The voice of women is critically important for the world's future—not just for women's future" (Sen, 2000: 16-18).

Although Cameroon has made substantial efforts towards promoting gender equality and women empowerment in various spheres in the country, women still faced enormous setbacks (Baye et al., 2010).

According to the UN Millennium Development Goal Report (2006), the inability of the government of Cameroon in the attainment of the educational objectives as shown by MDG3 on the promotion of gender equality and empowerment (Department of International Development (DFID), 2007) shows how slow the process has been. Cameroonian women comprise over 51 percent of the total population and yet between 2002-2006, they represented only 10% in parliament and ministerial positions and are even lower in decentralized administrations (FAO, 2007). Today, about 13.9% of women are represented in parliament (MDG Monitor Cameroon, 2010). Although some positive results have been registered, MDG3 remain dire in Cameroon especially in the area of sustainable forest management (DFID, 2007).

The recognition of gender equality and women's empowerment in forest management are fundamental for poverty alleviation, economic growth and sustainability. Women especially in the rural communities play a major role in fighting poverty and fostering development for their well-being (Boserup, 1990; Feldstein and Jiggins, 1994; Fonjong 2001). According to Sikod (2007), about 93.5% of the rural population (mostly women) depends on agriculture for their livelihoods. Hence, forest degradation would have enormous impact on their livelihoods. In order to address the problems of livelihoods and sustainable forest management therefore, issues such as equal participation in forest management activities, access to and control over land and forest resources need to be clearly included in management strategies and poverty reduction schemes (Zuidberg, 1994; Mosse, 1994 and Fonchingong, 1999) so as to foster participation and livelihoods.

1.2 Research objectives

With literature on the problem of forest management in Africa and the study areas widely observed, the research seeks to contribute to an understanding of the roles of indigenous men and women in forest management activities, how they are shaped by management regimes and their influence on their livelihoods. In order to achieve this, the following research objectives were used:

- Understand women's dependence on forest for their livelihoods and the effects forest degradation have.

- Analyze the roles both men and women play in the management of forest resources.
- Assess the representation of women in the management process.
- Examine the factors that constrain or hinder greater participation.
- Analyze possibilities of improved participation for a more sustainable forest management.

1.3 Research questions

For equity and justice in forest management to be achieved without compromising the situation of women, the question requires an in-depth knowledge on the different needs and interests of men and women. Hence, issues to discuss include the intersection between gender and other social relations such as age, ethnicity, class (ENERGIA, 2005); different stakeholders with conflicting needs and interest; diversity in cultures of the people; gender relations and differences in perceptions and use of forest and its resources (Joiris, 1997; Nguiffo, 2001; Ndameu, 2001) and the economic situation of the area (e.g. Structural Adjustment programmes (SAP) and debt relief under heavily indebted poor countries (HIPC) giving logging companies licenses for logging). Based on the afore mentioned issues and in order to achieve the set objectives, the following questions were formulated:

- How do women and their associates depend on forests for their livelihoods?
- How does forest degradation affect their livelihoods?
- What role do men and women currently play in management?
- What are possibilities of improved participation of women in forestry management and how can their inclusion lead to more sustainability?

1.4 Structure of the study

The introductory chapter of the study gives an overview of the importance of forests to human beings and the effects degradation has on them especially women leading to the statement of the research problem. It further explains the research objectives, research questions and hypotheses used in the study.

Chapter two summarizes the main theories and concepts contained in the analysis of social relations in gender, forest management and livelihoods. This chapter further brings out a conceptual framework on how the theories and concepts are used in the study in order to answer the research questions.

Chapter three gives a description of the study areas. It begins with an overview of the country Cameroon. Moving further to the study sites, the chapter contains information on location, physical and socio-economic characteristics of the research communities.

Chapter four brings out the research methodology and design. Featured in this chapter are sources of data, sampling procedure, data collection and sorting and analysis.

Chapter five to nine give the result and discussion of the research work. Chapter five begins with results on the demographic and socio-economic activities of the respondents from the research communities of KNPA and BFA in the South West Region of Cameroon.

Chapter six examines the perception of the local population towards forest degradation and management policies and their impact on livelihoods. It further identifies the forest management systems existing in the communities and a way forward.

Chapter seven describes livelihood activities of the local people of the KNPA and BFA bringing out their assets, strategies for sustainable livelihoods and how to cope with stress and shocks. It further brings out the main livelihood activities practiced in these communities and their impact on the wellbeing of the indigenes. This chapter is concerned with question one and two of the study which deal with the local people's dependence on forest resources, the effects forest degradation have on their livelihoods and issues of livelihoods sustainability.

Chapter eight reveals the changing gender roles in both research communities on issues such as extraction of forest resources, power relations, income generating activities etc. This section addresses research questions three and four on the representation of women in forest management and factors that influence their participation.

Chapter nine presents conclusions, policy implications and recommendations for the future research.

Chapter Two: Key Research Concepts

Concepts and theories on gender and environment reviewed form are the basis for the development of the conceptual framework for this study. Issues considered include sustainable forest management, feminist theories, sustainable livelihoods and gender analysis frameworks which would help understand gender relations, impact on forest management and the connection between the local people and forest in providing local livelihoods.

2.1 Gender Theory

Gender is the socially constructed roles assigned to both men and women by the society. Unlike sex which is biologically determined, gender is socially determined as each society emphasizes on particular roles that each sex should play (Hesse-Biber, S. and Carger, 2000). According to FAO (2002), people are born male or female but learn to be girls and boys who grow into men and women. The learned behavior makes up gender identity and determines gender roles. Hence, roles of both boys and girls are also taken into consideration in this research. This is because the needs and roles of boys or girls might not necessarily be the same as that of men or women. According to Handrahan 1999, "Gender theory recognizes equal potential, while allowing for differences between the genders. Gender theory includes man, woman and child and not only woman as conceived in the feminist theory". Handrahan, 1999 pinpoints that gender theory deals not only with the inclusion of women but goes beyond as he sums it up in these three aspects: "...women's and men's lives, their interaction and the products of male/female, feminine/masculine converge".

Gender theory emphasizes on the roles of males and females, their impact and implication to one another. It includes the ways in which biological differences, be they real or perceived have been valued, used and relied upon to classify men and women in the society and to assign roles and expectations to them. This theory will identify the relationships between both sexes in the research communities within the social, economical, cultural and political spheres.

Gender relations which are a result of gender roles is a system of personal and social relations of domination and power through which both sexes are socially created and maintained, they gain access to power and material resources or are allocated status within society (IFAD, 2000). They are characterized by unequal power. The inequality stems from designation of

specific entitlements and responsibilities to men and women by the society. For example, in Cameroon especially in rural areas, women are expected to take up duties like caring for the children and domestic chores, men are regarded as breadwinners and do take up outgoing jobs with the ability to move around freely with greater liberty.

Gender, as a social construct involving interaction among and between people in a given society, makes one to say, gender is not static but dynamic across cultures, communities, and generations and between members of the same sex over time. Thus, in order to effectively and efficiently manage the forest and its resources, it would be important to analyze the relationship between men and women in the way they use and manage the forest.

2.1.1 Gender analysis

In order to identify and understand the existing relationship between men and women of the research communities, the gender analysis framework was used. According to the World Bank group (2007), “The concept of gender analysis arose from the need to mainstream women’s interests while at the same time acknowledging that women’s needs were better understood when viewed in relation to men’s needs and roles and to their social, cultural, political and economic context. It considers women’s roles in production, reproduction and management of the community and changes in one may produce beneficial or detrimental effects in others” (World Bank, 2007: 207). Gender roles according to UNIFEM (1995), are classified as reproductive roles (related to production and socialization of human beings within the family setting, family care as nurturing of children and care for elders); productive roles (income generating activities, paid work, subsistence agriculture etc); community roles (church, women’s groups, traditional obligations etc.) and decision-making or political roles (leadership and membership roles of men and women in larger organizations). These roles tend to influence the perceptions and activities of men and women on the environment.

Gender analysis framework refers to the various approaches or methods used to understand the relationship between men and women in a society. It portrays different ways in which men experience life through socio-economic, cultural and political dynamics (informal and formal), access and control over resources, including voice and representation (DFID, 2009).

Gender analysis is a starting point for any programme or project that aims to be gender sensitive. It stems from the fact that gender is about power and power relations in a society usually between men and women as well as among women and how and by whom notions of

masculinity and femininity are defined (Seager and Hartmann, 2005). The issue of power is seen in terms of information access and decision-making as groups deprived of these advantages are considered disempowered or less powerful.

Men and women in rural communities are regarded as having greater activities in the forest but however they exhibit different roles. Gender focuses on the cultural characteristics which influence the behaviours of both sexes in the society leading to different roles. Literature reveals that the rural populations in Sub-Saharan Africa are largely involved in the commercialization of Non-Timber Forest products (NTFP) (Terry et al., 1993; Hecht et al., 1988; Falconer, 1990; Che, 2008 and Eyong, 2010). While women are noted for small scale commercialization of forest products like fruits, nuts, vegetables at the local level, men are involved in large-scale commercialization usually to neighbouring villages and urban areas. Women are also involved in home gardening usually for household consumption and rearing of small ruminants. This small scale commercialization is seen as the only alternative source of income for women while men are involved in other activities like hunting and cattle rearing.

In order to understand the gendered use and management of forest, equity and welfare in the research areas, a critical examination of gender roles is imperative. Studies carried by Agarwal (2001) in India and Nepal, revealed that women were sparsely represented in Community Forest Groups, leading to inactive participation in decision-making on forest use in their communities. As a result of low representation, their voices were not heard as decisions (forest closure) were taken without their consent, in their absence and often times, their opinions did not count. Lack of equity in decision-making risk the well-being of women and consequently the family and society at large.

Gender analysis is a widely used by governments and experts to incorporate gender issues in policy making and management. Organizations, institutions and individuals (GEM, 2000; CIDA, 2000; Hannan, 2002; UNDP, 2003; IFUW, 2004-2007; IGNARM, 2005; Seager & Hartmann, 2005 and GDRC, 2007), have developed gender analysis guides to facilitate gender analysis in projects and minimizes inaccurate assumptions in gender research.

According to GDRC (2007), a gender analysis should recognize that:

- Women's and men's lives differ resulting to differences in needs, experiences and priorities;
- Women's lives are not all the same; the interests that women have in common may be determined as much by their social position or their ethnic identity as by the fact that they are women;
- The life experiences, needs, interests, issues and priorities vary for different groups of women usually according to age, disability, employment, ethnicity, income etc);
- Equitable outcomes for men and women as well as different groups of women may require different strategies;
- Analyses should aim at achieving equity rather than equality.”

Gender analysis promotes equity between men and women which is achieved through a gender analysis framework. It is a stepwise tool used in gender analysis to raise questions, analyze information and develop strategies to increase women and men's participation in and benefits from forest management.

To better understand the role of gender in the rural communities of the KNPA and BFA, the Harvard Analytical Framework was used. Through the framework, information on the relationships of men and women and the inequalities in these relationships is highlighted. It looks at the power relations within the household. Harvard analytical framework consists of useful tools for collecting data at the micro level (community and household level). It is made of four components which can be adapted to many situations like agricultural activities.

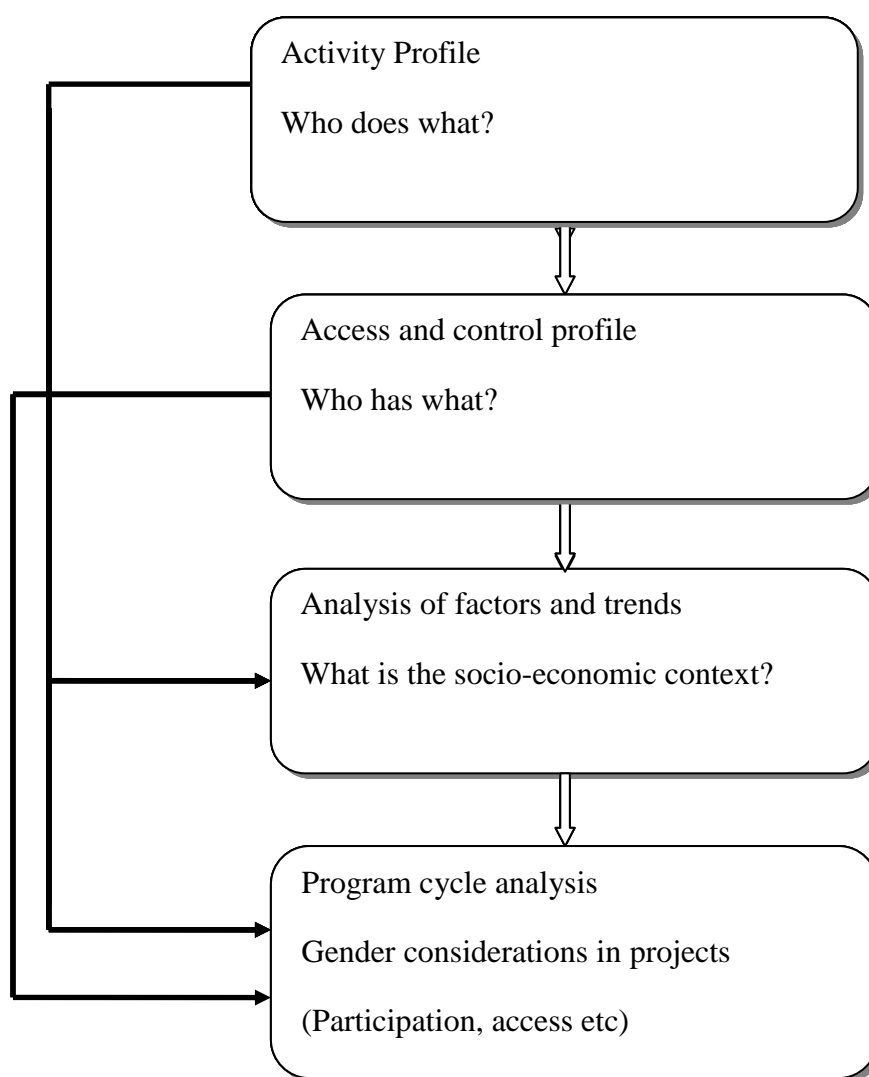


Fig. 1. Gender checklist-Agriculture

(Adapted from ADB, 2002, “Gender checklist-Agriculture”).

The Activity Profile deals with what men and women (adults, youths) do, where and when these activities take place. It identifies all agricultural and household tasks by addressing the questions to men and women. For this study, the activity profile for agricultural and household activities will be listed according to gender division of labours in each community.

For instance in agriculture, agricultural activities such as land clearance, preparation, weeding and so on for each crop, or each type of field will be identified.

- In this phase, gender and age are considered. That is to identify whether adult women, adult men, the elderly or children undertake what activity.
- Activity locus. Where the activity is performed e.g is the work done at home, in the family field, market, forest, community etc. This would help reveal peoples mobility.
- Time allocation. Calculate the percentage of time allocated for each activity and also specify if the activity is carried out daily, seasonally or yearly. This information gives an insight into female and male roles and thus allows an assessment of their activities.

Access and Control Profile helps to identify the resources used to carry out the tasks in the activity profile. It pinpoints on who has access to and control of resources, services and decision making; and this is usually on productive resources (land, equipment, labour, capital and credit, education etc.). The tool identifies the differences between men and women in access to a resource and control over decisions in relation to resource allocation and use. This profile which is one of the main interests of this study would increase chances of access to resources and could change the balance of power between males and females pertaining to control over resources. It also examines the extent to which women have been prohibited or impeded from equitable participation in forest management projects and hence may change existing gender relations.

Influencing factors are factors that influence the differences in gender division of labour, access and control (tool 1 and 2). These include all factors that shape gender relations, determine differences in opportunities and constraints for both men and women. In this study, factors to be studied include community norms and social hierarchies such as family/community norms, cultural practices and religious beliefs, education, general economic conditions such household income distribution. By identifying these factors, the researcher would be able to consider which factors affect men's or women's activities or resources which could in turn can affect their livelihoods.

This framework is important in this research because it identifies the differences in the activities of men and women in the research communities. Questions such as who does what? Who has what? Who decides? How? Who gains? Who loses? etc are asked to both men and women. This is because, in order to effectively assess involvement of women in agricultural

and household activities, it would be important to identify the different roles between men and women.

2.1.2 Gender mainstreaming

According to the Report of the Economic and Social Council, 1997 in the Gender Mainstreaming System of the United Nations, “Gender mainstreaming perspective is a process of assessing the implications for women and men of any planned action including legislation, policies or programmes in all areas and at all levels. It is a strategy for making women’s as well as men’s concerns and experiences an integral part of the design, implementation, monitoring and evaluation of policies and programmes in the political, economic and societal spheres for equal benefits between women and men”.

According to the IFUW Programme Action 2004-2007, they pinpointed on the fact that equality and women’s empowerment are achievable only when all rights are taken as a whole, hence a need for gender mainstreaming. This can be seen in the report of the United Nations Fourth Conference on women in Beijing in 1995 where governments and other actors called for active and visible policy gender mainstreaming in all programmes before decisions are taken. This is so that before decisions are made, an analysis is made on the effects on men and women respectively.

Empowerment is a term popularly used today especially in the field of forest management. It includes key elements such as information access, ability to determine choices and self esteem. It has both an individual and a group dimension. According to the United Nations Report on Guidelines to Women’s Empowerment, there are five components. They are as follows:

- Women’s sense of self-worth
- Women’s right to have and determine choices
- Women’s right to have access to opportunities and resources
- Women’s right to have the power to control their own lives, both within and outside the home
- Women’s ability to influence the direction of social change, to create a more just social and economic order at the national and international level.

Empowerment is an important part of the research as it “acknowledges inequalities of power and conflicts of interests within communities and between communities and other actors like government agencies (Murray, 2001). Some feminists have stipulated power as leading to inequality. Hence, an in-depth examination of issues such as empowerment will be looked at in this research so as to be able to portray the various groups represented in the communities as well as their actions and influence on sustainable forest management.

2.1.3 Gender, participation and environment

During the 4th World Conference on Women in Beijing in 1995, “environment” was identified as one of the 12 critical areas of women. The Beijing Declaration and Platform for Action according to section K on women and the environment asserted that “women have an essential role to play in the development of sustainable and ecologically sound consumption and production patterns and approached to natural resource management” (paragraph 246). The “United Nations Millennium Declaration” was ratified by some world leaders at the Millennium Summit in New York, in 2000 whose aim is “to promote gender equality and the empowerment of women as effective ways to combat poverty, hunger and disease and to stimulate development that is truly sustainable”. This was then reflected in the Millennium Development Goals (MDGs) as MDG 1 is concerned with poverty, MDG 3 with the promotion of gender equality and women empowerment and MDG 7 ensuring environmental sustainability. This shows the link or interconnectivity between gender, environment and sustainability.

There is a growing concern on the participation of women in forest management. In development programs, participation is considered as the inclusion of the voiceless and marginal members of the community. Through this their voices are heard by making their preferences known, they take part in the enforcement of these preferences which brings a sense of being part of the process. In all, participation is a way of shifting the axis of power to enable new actors gain greater influence in development outcomes. The participation discourse is beyond mere beneficiary participation to citizenship, agency, and governance (Cornwall, 2004; Gaventa, 2004 and Nussbaum, 2001). In this framework therefore, it is necessary to examine if issues of equity and inclusion are being realized by women, who are traditionally marginalized and overlooked in the seemingly participatory process (Guijit et al., 1998; Mayoux, 1995).

Participation in forest management enables the marginal or under privileged members of the community to voice their preferences, to make decisions and take active part in management issues. While the forest plays a major role in providing better livelihoods of the rural people, women act as a connection between forest wealth and livelihood strategies of rural households. Hence, for community-based resource management to succeed, active participation of women is necessary (Agrawal et al., 2005).

There is a growing literature on the relationship between men and women and the environment. Social relation and actions influence the natural ecology and thereby impact it in various ways. The different ways in which men and women participate in development has highlighted the interconnection between gender, environment and sustainability (Nieves, 1998). According to Nieves, women have emerged not only as a force and not only in support of proper environmental management but also demands for better quality of life and greater social equity. The struggle for survival in the developing world portrays or intensifies the link and sets a background for an alternative formulation to eco-feminism called “feminist environmentalism” (Agrawal, 1992). She also showed that, the link between women and the environment is “structured by a given gender and class, caste, race organization of production, reproduction and distribution (Agrawal, 1998). There is a need for a total transformation of the actual division of labour and access to and control over resources.

Although women especially the poor from rural households are worst affected by environmental degradation in different ways, they on the other hand have not been recognize as agents in environmental protection and movements. Gender and environmental issues are seen glaringly in policy making in the management of resources especially in the area of decision-making and stakeholder involvement. While women are seen as victims of environmental degradation, they are also to be considered as actors in the management process. Hence, for sustainable forest management to be achieved, the recognition and inclusion of women in forest management activities is imperative.

Women are a major social group in a community and hence their activities or relationship in with a given environment cannot be ignored. Women’s activities are seen as socially visible. Women however according to many writers are not a single homogenous group and neither are they static. Thus the necessity to address the relationship of different groups of women in that community is important. Factors such as class, caste ethnicity, age, country etc are determinants as within a village; women of different classes or castes may play different roles and thus view management in different ways (Hermens et al., 1998; Braidotti et al., 1994)

Power relations between both sexes are necessary for sustainable management to occur. The Gender, Environment and Development (GED) approach is more focused on the social construction of gender bringing out the specific roles, responsibilities and expectations to men and women. Access to and control over natural resources indicates the gender position in forest management. Neefjes (2000), pinpoints on some factors that determine the relationship between gender and environment: gender position in households, communities and other institutions; gender and property rights, gender division of labour and responsibilities; ecological characteristics determining the processes of gender and environmental change and the influence of political economy on gender relationships and gender-environment relations.

2.2 Forms of Feminism

Feminism is based in many forms and feminist ideologies have developed over the years. The early feminist movement also called the First wave feminists came into light before the 1960s with the goal of abolishing legal inequalities existing against women (Khalid and Gokhale, 2006). 1960s marked the birth of the Second wave feminist movement which advocated for equality between men and women thereby calling for a halt in discrimination and oppression of women and minority groups (Khalidi and Gokhale, 2006). This group however, has been criticized for considering women as a universal group while looking up to the western upper class women as a model. The end of the second wave feminist movement in the 1990s led to the Third wave feminist movement whose aim was to include different groups of women across countries.

2.2.1 Eco-feminism

Eco-feminism is a concept that emerged in the 1970s portraying the connection between the exploitation and degradation of natural resources and the subordination and oppression of women (Mellor, 1997). It is a social movement that regards the oppression of women and nature as interconnected. Eco-feminism is a process whereby local groups or communities organize themselves in varying degrees in order to put into practice their knowledge and skills in natural resource management while satisfying livelihood needs (Pretty and Guijt, 1992). According to Agarwal (1997), there exist four precepts of eco-feminism that is, while men dominate in culture, women are related to the environment and both women and the environment are subjugated by men. Thus, women and environment share a common inferior position.

Ecofeminism seeks to combine feminism and ecological working towards egalitarian nonhierarchical structures. This movement became popular during the era of green movement (Drengson, 2001).

Some authors (Momsen, 1995; Visvanathan et al., 1997; Sturgeon, 1997; Mies et al., 1993; Mellor, 1997) argue that certain ecologically damaging issues have a more harmful effect on women than men. This is due to the numerous roles performed by women especially in household provisions and management.

Eco-feminism paved the way for a strong basis in egalitarian development and thus environmental issues are of paramount concern today. This includes the debate both in gender oppression and ecological domination which informs people on various levels, ethically, politically, socially and practically. This movement has portrayed alternative issues in development and highlighted the need for the inclusion of gender in development.

2.2.2 Feminists environmentalists

Liberal feminism also known as “egalitarian or mainstream feminism is based on the proposition that people are created equal and should not be denied equality of opportunity because of gender (Lindsey, 2011). Liberal feminism lays emphasis on women’s role in “public life” especially in the labour sector. Women can work together within a pluralistic system and mobilize their constituents to effect positive and productive social change. Success will be achieved if mobilization is effective and pressure is efficiently wielded (Deckard, 1983). To liberal feminists, women empowerment by incorporating women in meaningful and equitable roles that society does not have to be completely restructured. Hence, they seek to mainstream women who accept the overall present social system given that it is non-sexist.

Social feminism is centred on the question of gender constitution and oppression. Also known as “Marxist feminism”, it links the inferior position of women to class-based capitalism and its alignment with the patriarchal family in capitalist systems (Lindsey, 2011). It focuses on institutions and social practices of capitalism (affects women) and relations on gender and class for social change. Social feminists argue that sexism and capitalism are mutually supportive. The unpaid labour of women in the home and their paid labour in reserve labour force simultaneously serve patriarchy capitalism (Lindsey, 2011). Although social feminism is closely linked to Marxist theory, there exist some key differences. Marxist theory is focus on property and economic conditions while socialist feminism is on sexuality and gender.

Although many forms of feminism exist, eco-feminism and liberal feminism are fundamental for this study as they highlight the link between women, local institutions, social practices and the environment. They provide background information for proper assessment and evaluation of women's issues in forest management.

2.3 Sustainable forest management

SFM is a watchword of many development organizations which seek to promote and maintain forest vitality. This concept though adopted by many international organizations and countries, has no outright or specific definition. Sustainable Forest management came into existence at the UNCED conference on environment and development organized at Rio de Janeiro in 1992. According to Principle 2b (UNCED, 1992), "... sustainable forest management aims at managing the forest resources and lands sustainably so as to meet the needs of the present and the future generation". The "forest principles" of the conference was adopted by the UN General Assembly in 2007 and made public the idea of managing forest in a sustainable manner. As a result, many countries have opted for policies with greater stakeholder involvement. According to the UN General Assembly; "Sustainable forest management is a dynamic and evolving concept which aims to maintain and enhance the economic, social and environmental value of all types of forests, for the benefit of present and future generations" (UN 2008, Resolution 62/98). It is characterized by seven elements, including:

- Extent of forest resources
- Forest biological diversity
- Forest health and vitality
- Productive functions of forest resources
- Protective functions of forest resources
- Socio-economic functions of forests
- Legal, policy and institutional framework

In the same light, the Ministerial Conference on the protection of forests in Europe (MCPFE) defines SFM as "the stewardship and use of forest and forest lands in a way, and at a rate that maintains their biodiversity, productivity, regeneration capacity, vitality and their potential to fulfill, now and in the future, relevant ecological, economic and social functions, at local, and global levels, and that does not cause damage to other ecosystems" which has been adopted by FAO as well as other organizations and other institutions.

Sustainable forest management is considered not as an end in itself. In other words, it is not static but an on-going process in the management of forest resources. It is a complex concept which is used differently in different communities given the differences in social settings, policies and changes within communities. For SFM to be successful, most institutions or countries have to take into consideration the administrative, economic, political and social activities of the indigenous people. As stated by FAO (2005), “SFM seeks to it that goods and services derived from the forest are able to meet the needs of the present while at the same time securing their continued availability and contribution in a long term. Forest management and conservation encompasses many aspects which range from technical to legal, administrative to environmental and socio-economic. It is concerned with the degree of human intervention, ranging from actions aimed at safeguarding and maintaining the forest ecosystems and its functions to favouring specific socially or economically valuable species or groups of species for improved production of goods and services”.

Forest is considered as the wealth of the earth and for it to be properly managed for the good of all, sustainable forest management is imperative. The forest constitutes about 40% of the world’s economy especially in the agricultural and forestry sector and about 70% of the rural poor live within and around the forest (World Bank, 2004). About 60 million indigenous people almost wholly are dependent on forest and its products, 350 million on forest for large scale or high degree subsistence and income and about 1.2 billion on agro-forestry farming (World Bank, 2004; Secretariat of the Convention of Biological Diversity, 2009). Forests play a key role in the economy of many countries (MEA, 2005; World Bank, 2003). Forests provide food, oxygen, shelter, recreation and commercial products to inhabitants, hence the basis for long-term forest health and stability. The concept seeks to bring a balance between the people’s high demand for forest products and benefits and the preservation of forest health and diversity. With this therefore, its sustenance is important both for the present and the future generations.

In the past, many governments and institutions have practiced a form of management where large areas or portions of the forest were gazetted for protection and conservation. They built on interventionist notion that effective conservation is through heavy influence by the state (Agrawal and Gibson, 1999:631). The idea of protected areas and parks initially neglected the involvement of local people in the management process. Protected areas were strictly set aside for protection and considered as “no-go areas” (Dudley, 2008). This approach resulted to forceful evacuation of local communities living within the gazetted area but according to

Colchester (1997), this has proven to be ineffective. This has been exhibited in the research area (KNPA) with the relocation of Ikondo-Kondo, one of the six villages found within the protected area (Eyong and Gerke, 2007). Out of the six villages found in the Korup National Park planned for relocation by WWF as a management strategy, only Ikondo-Kondo was relocated in 2003.

The use of forest resources in the area is forbidden and different areas are allocated to the locals for agricultural and other activities. This has led to poverty and inadequate of forest resources resulting to conflicts between the locals, management institutions and governments. It has also increase the level of illegal practices in the forest. According to Mongabay (2005), this management method of closing up the forest from its people does not improve the standards of living or economic opportunities of the local people especially the rural poor. A new approach which will seek not only to carter for the habitat but also for the inhabitants in a long term is necessary.

In Africa in particular, illegal use of forest is widespread and this is because allocation of alternative forest areas to the communities are usually insufficient and poor, hence cannot meet their needs. Results obtained during preliminary research indicate that the exclusion of local people from particular areas of the forest has altered their social structures. Also, this management practice undermines the traditional system of management as customary ownership and control of the forest is ignored. The differences in objectives between stakeholders have resulted to inequalities and conflicts between ethnic groups, local people, conservation institutions and the government. Hence for success to be achieved, an integrated approach is needed.

2.3.1 Criteria and indicators for SFM

SFM is considered worldwide by many countries and institutions as a method in the management of forest. Indicators and criteria therefore are tools used by these communities or countries to assess their progress towards SFM. They are used to conceptualize, evaluate and implement forest management principles (Ravi et al., 1999). While criteria is defined as essential elements and a set of conditions by which sustainable forest management can be assessed, indicators are tools use periodically to reveal the direction of change with respect to each criterion (ITTO, 2005:9).

Over the years, several organizations such as Helsinki process, Montreal process, CIFOR, ITTO, MCPFE etc.), have developed criteria and indicators for better management of forests.

In order to implement these, consideration is taken on the conditions of forests, forest types and management approaches. The criteria and indicators can always be modified or reviewed in relation to the ongoing changes in the forest.

Criterion 7 of the International Tropical Organization (ITTO) deals with the indigenous people, hence the most appropriate criteria for this study. It deals with the economic, cultural and social aspects of the society vis-à-vis the forest.

Box 1. Criteria 7 and indicators developed by ITTO (2005:13).

<p><i>Criterion 7: Economic, social and cultural aspects</i></p> <p><i>Indicator: Socioeconomic aspects</i></p> <p>7.4 <i>Existence and implementation of mechanisms for the equitable sharing of the costs and benefits of forest management.</i></p> <p>7.5 <i>Existence and implementation of conflict resolution mechanisms for resolving disputes between forest stakeholders.</i></p> <p>7.6 <i>Number of people depending on forest for their livelihoods.</i></p> <p>7.7 <i>Training, capacity building and man power development programs for forest workers.</i></p> <p>7.8 <i>Existence and implementation of procedures to ensure the health and safety of forest workers.</i></p> <p>7.9 <i>Area of forests upon which people are dependent for subsistence uses and traditional and customary lifestyles.</i></p> <p><i>Indicator: Cultural aspects</i></p> <p>7.11 <i>Number of important archeological, cultural and spiritual sites identified and protected.</i></p> <p><i>Indicator: community and indigenous peoples rights and participation</i></p> <p>7.12 <i>Extent to which tenure and user rights of communities and indigenous peoples over publicly owned forests are recognized and practiced.</i></p> <p>7.13 <i>Extent to which indigenous knowledge is used in forest management planning and implementation.</i></p> <p>7.14 <i>Extent of involvement of indigenous peoples, local communities and other forest dwellers in forest management capacity building, consultation processes, decision-making and implementation.</i></p>

Source: ITTO, 2005

2.3.2 Participation

Participation which has long been considered in development thinking is today imperative in forest planning projects especially in developing countries. The term participation however has diverse meanings to different people and has led to different views as to its definition, those expected to be involved, what it is expected to achieve and how it is to be achieved (Agarwal, 2001). Although various definitions of participation exist, one commonality to all is

the role of community in decision-making. Participation hints on the participation continuum and involvement of the community at various levels. It is also termed collective action or collective governance which emphasizes on power relations and equity in development literature (Kelly, 2001).

A holistic approach to defining participation by Ndekha et al., (2003) and Chamala, (1995), see participation as “ a social process whereby specific groups with shared needs and living in a defined geographic area actively pursue identification of their needs, take decisions and establish mechanisms to meet these needs”(Ndekha et al., 2003)

For the purpose of this research which seeks to examine the roles of men and women in management of forest resources, the definition of Agarwal, 2001 has been adopted. It gives an insight into a diverse range of participation as it states:

“ At its narrowest, participation is defined in terms of nominal membership and at its broadest in terms of a dynamic interactive process in which all stakeholders, even the most disadvantaged, have a voice and influence in decision-making”. (Agarwal, 2001).

In order to achieve effective participation, Agarwal developed a range of levels of participation drawing on the works or typologies of White (1996) and Pretty (1995). She pinpoints that effective participation involves a shift from a lower to a higher level which is defined not on how a group is initiated but on the people’s activeness. However, participation is not a panacea as many assume that there are limitations as to what can be achieve even at its highest level (interactive) in terms of equity and efficiency given the pre-existing socio-economic inequalities and power relations in communities.

Table 1. Typology of participation

Level of participation	Characteristic features
Nominal participation	Belonging or being a member of a group
Passive participation	Being informed of decisions or attending meetings and listening on decision-making without speaking up.
Active Participation	Expressing opinions, whether or not solicited, or taking initiatives of other sorts
Interactive (empowering) participation	Having a voice and influence in the group’s decision

Source: Adapted from Agarwal, 2001

2.4 The Sustainable Livelihood Concept

This study would use sustainable livelihood framework (SLF) for the assessment of the impact of forest activities on local livelihoods. Sustainable livelihood framework developed by the British Development Agency DFID (DFID, 1999), brings out a new approach in policy and practice. It is used as a tool to assess the efficiency of efforts in poverty reduction and identification of priorities for action based on the people's interests and concerns. DFID being one of the first to develop the sustainable livelihood framework, showed the intricate link between poverty, nature and livelihood of the people. For better implementation, DFID has developed guidance sheets on sustainable livelihood (DFID, 2001:3).

“The series of Guidance Sheets on sustainable livelihoods comes out of an ongoing consultation on how to achieve goals and policy directions laid down in the UK government's white paper on international development. The paper commits DFID to supporting: policies and actions which promote sustainable livelihoods; better education, health and opportunities for poor people; protection and better management of natural and physical environment thereby helping to create a supportive social, physical and institutional environment for poverty elimination” (DFID, 2001:3).

The framework helps in the understanding and analyzing of the livelihoods of the poor. Hence, one is able to understand the strengths, the weaknesses and the relationships existing in their lives. It views people as operating in the context of vulnerability and this vulnerability context frames the external environment in which people exist. People become vulnerable as their livelihood and the availability of other assets are affected by factors which they have limited or no control over e.g seasonal patterns, economic shocks, population trends etc. According to Chambers' (1989:1), vulnerability can be defined as

“The exposure to contingencies and stress, and the difficulty coping with them. Vulnerability has two sides; an external side of risk, shocks and stress to which an individual or household is subject; and an internal side which is defenseless, meaning lack of means to cope without damaging loss”.

Sustainability livelihood approach is people centred in relation to their activities and interactions. This approach views people's assets, how assets are used to come up with livelihood strategies that would lead to desirable outcomes. It reveals the ability of people to withstand vulnerability and shocks and also helps make clear policies both at the micro and macro level. The DFID framework is characterized with five different assets:

Box 2. Sustainable livelihoods assets developed by DFID

Human Capital: Skills, knowledge, ability to labour and good health that together enable people to pursue different livelihood strategies and achieve their livelihood objectives. At a household level human capital is a factor of the amount and quality of labour available; this varies according to household size, skill levels, leadership potential, health status, etc.

Natural Capital: Natural resource stocks from which resource flows and services useful for livelihoods are derived e.g land, forests, marine/wild resources, water, air quality, etc.

Financial Capital: Financial resources that people use to achieve their livelihood objectives-availability of cash or equivalent which enables people to adopt different livelihood strategies.

Physical Capital: Comprises of the basic infrastructure and producer goods needed to support livelihoods. Infrastructure consists of changes to the physical environment that help people to meet their basic needs and to be more productive. Producer goods are the tools and equipment that people use to function more productively. Affordable transport, secure shelter and buildings, adequate water supply and sanitation, clean affordable energy and access to information are some of the components of infrastructure usually essential for sustainable livelihoods.

Social Capital: Social resources upon which people draw in pursuit of their livelihood objective- developed through networks and connectedness, membership of more formalized groups, relationships of trust, reciprocity and exchanges that facilitate cooperation, reduce transaction costs and may provide the basis for informal safety nets amongst the poor.

Source: DFID, 2001

Information (Box 2) shows a direct link between assets and the lifestyle of the people. Assets include human, social, natural, physical and natural capital. For an efficient and effective assessment of their livelihoods to be accomplished, the researcher would analyze these assets especially the human, natural and social assets so as to gain an insight on access, control and empowerment of the local population in the management process through the policies.

The sustainable livelihood approach has been regarded with high esteem over the years by international institutions and governments. Many researchers (Ellis, 2000; IFAD, 2000; Turton, 2000 and Ashley, 2000) have used this approach in their studies. While IFAD sees this approach as “a holistic method able to capture the different aspects of rural livelihoods ranging from the strategies used by the poor to overcome poverty, their strengths and achievements to their aspirations and capabilities to help themselves to achieve their dreams”, Ellis considers it as offering a complete picture of the complexities of making a living in the rural areas. Ashley (2000:18), terms it a lens through which data can be synthesized and Turton (2000:12) sees SLF as an analytical tool which facilitates the process of exploring activities affecting rural livelihoods.

Although SLF is widely recognized and used, it has some limitations and as such, given the research under study, the researcher has used several methods. For example, SLF does not deal with issues such as empowerment among others (Ashley, 2000:7) which is one of the paramount components of the work. Like other researchers (IFAD, 2000, 2003; Ellis, 2000), the researcher would also use methods such as participant observation, focus group discussions, semi-structured interviews, and resource mapping to give an appraisal of household and management activities in the research areas.

The theoretical approach for this research is taken from feminist scholarship on gender relations and participation in forest management with social indicators as sustainable livelihoods and improved forest management. While gender identifies the various roles of men and women in access to and control over resources highlighting on power relations, division of labour and participation in decision-making, SLF will assess the resources found in these communities to determine whether their livelihoods are sustainable or not.

2.5 Conceptual framework

The conceptual framework (Fig. 2) explains the relationship between state policies, participation of men and women in forest management and the impact on their livelihoods. This framework was developed to obtain information on the inter-relationships between men and women (gender relations) in resource use, access and control in forest management.

The conceptual framework captures four main components of the research communities and how they are related to one another. The government/institutions adopt policies on forest management which are then implemented in the local communities (local authorities, local

association and men, women and youths) by national and international organizations through development projects.

These actors are pulled together by different interests and needs towards a common resource, forest. Although all the components relate directly with each other especially with the local communities, the government works mainly with NGOs to implement state policies in local communities. For effective and efficient management of forest and its natural resources, involvement of all stakeholders at all levels of the management process is necessary. A participatory approach is therefore fundamental for access to and control over resources and decision-making for all stakeholders. This would lead to greater participation, women empowerment, food security and consequently improved forests.

The sustainable livelihoods framework was used to establish the link between gender, forest resources and livelihoods. This was used to achieve one of the objectives of the study on the dependence of local people on forest resources for livelihoods. While analysis on the livelihoods of research communities would be based on SLF, the criteria for sustainable forest management and the vulnerability context of SLF was used to judge the sustainability of their livelihood activities.

The objectives on the assessment of representation of women in forest management committees and factors that affect greater participation were achieved using participatory tools and feminist theories. Also, the author used the works of Fortmann & Bruce (1988) and Fortmann (1987) which gave an insight on the gendered nature in management of forest and its resources such as access and control rights.

In order to understand the role of men and women in the management of forest resources and its influence on livelihoods, an investigation was made on who was permitted to do what, where, when and how using the gender analytical framework. Insights from the works of Rocheleau and Edmunds (1997), Price (2001, 2003), Goebel (2003) and Turner (2003), enabled the author to bring out factors which influence management practices such as social and political institutions, power relations and belief systems.

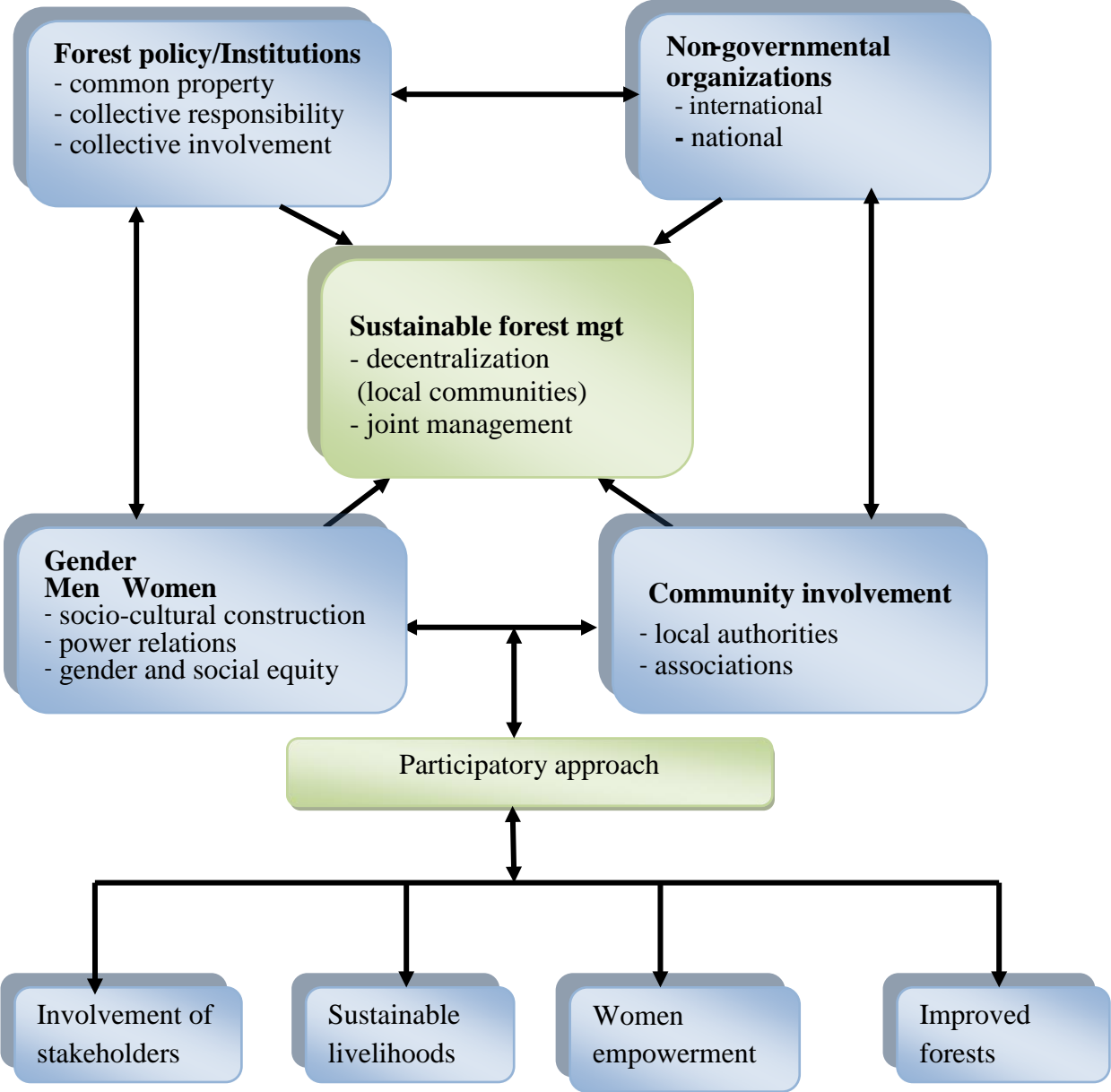


Fig. 2. Conceptual framework reconciling gender, forest management and livelihoods

Chapter Three: Research Design and Methods

In order to realize the goals of this research, an in-depth assessment will be conducted through qualitative social science research focusing on the investigation of intra-household social and economic data. Qualitative and quantitative research methods used cut across several of the objectives. One method could be used on more than one objective. Below is a description of the various methods use in the research.

3.1 Research strategy: a multiple case study

Case study research was considered for this research because it gives room for systematic investigation without compromising the understanding of a rich context phenomenon (Yin 2003; Baxter and Jack, 2008). This approach has been widely used in exploring forest management and has proven its ability to capture the numerous complexities involved in forestry (Banjade and Ojha, 2005; Muhammad et al., 2009). Thus, this is the most suitable strategy for this study because in order to adequately address the issue of “women’s participation”, it would be appropriate to look outside of the context factors affecting them in specific management committees.

This research will also implore the exploratory method in order to obtain data. This is because of the limited empirical research that addresses women’s participation in forest management in Cameroon (Fonjong, 2002). This approach aims to identify the key activities of women in forest. It further employs explanatory approaches to explain the social mechanisms that can affect the participation of women in forest management. The reason for using the case study approach is to ensure minimum diversity in the empirical information and to allow for comparisons (Baxter and Jack, 2008).

A mix of qualitative and quantitative approaches was used in the study so as to give a detailed spectrum of women’s participation in forest management. While qualitative information obtained relied on life experiences, perceptions and assumptions of people (Miles and Huberman, 1994), quantitative approach emphasizes on the measurement of variables and testing of hypotheses linked to general causal explanation (Neumann, 2006).

The information obtained formed the basis for analysis which gave insights and interpretations in relation to the research objectives. Data was obtained through in-depth interviews, focus group discussions, participation observation etc.

3.2 Start of fieldwork

3.2.1 Site selection

The process to select the site for research was quite difficult. It was strenuous and time consuming. This is because inadequate and scanty data exist on women and forest management in Cameroon. As a result, secondary literature was previewed as to what has been written on women and forest management in Cameroon. Information from the forest data base in Mundemba was reviewed; organizations and institutions related to forest management in Cameroon were contacted. An initial interaction with key personalities in these organizations and institutions indicated potential research areas.

The second criteria used in the selection of the research sites was based on the fact that the sites are rich in species diversity which are threatened; they are areas with some kind of forest management practice: formal and local/indigenous forest management systems and that the sites are experiencing forest degradation and loss of species which has great impact on their livelihoods. Issues such as existing contacts, willingness to participate, logistics and accessibility were taken into consideration. This allowed for the selection of the Korup National Park Area (KNPA) and the Bechati Forest Area (BFA).

Key informant interviews were conducted from the forest offices, range posts and local administrative units, national and international non-governmental organizations which allowed short-listing four communities in each of the research areas. These communities are highly dependent on the forest for livelihood, had some of forest management with women participation and some similarities in ethnic composition. The communities were visited to verify the information after which two communities were randomly chosen from each area: Fabe and Ikondo-Kondo I communities in the KNPA and Bechati and Lower Fossi-Mondi in the BFA.

3.2.2 Selection and orientation of research assistants

After developing a questionnaire, two research assistants were trained to assist in data collection. They were a male and a female student from the University of Buea, who had some knowledge in social research and are versed with the research areas. Training took a period of three days where information on the research objectives and the methods of data collection was explained. All questionnaires were discussed after which they were set for field

work. This ensured that researchers were conversant with the work to be done in the field and the exercise enhanced uniformity in data collection.

Two local facilitators (male and female) were recruited in each community who assisted the researchers in cases where the interviewee could not speak English. The inclusion of both men and women as facilitators was an advantage as the female facilitators as well as assistant researchers gave room for a friendly relationship and build trust among the women interviewed while the male facilitators on the team also led greater interest and participation from the men in the communities.

3.2.3 Developing the questionnaire

Based on background information and discussions from focus group discussions, a questionnaire was generated. In line with the objectives of the study, a questionnaire with closed and open-ended questions was developed for the research. Each question was carefully phrased in simple language since poor presentation of information could lead to inaccurate results. This was however, important to the research as in some cases, the question was to be translated from English into another language (pidgin).

The questionnaire was made up of four sections. The first section was used to obtain background and demographic information of the respondents. From this section, information could be obtained on the livelihood activities and gender construction of the research communities. Section B and C assessed and examined respondents use and control of forest resource and policies governing forest management respectively. Section D was made up of questions aimed at investigating women's level of participation in forest activities and the changing gender roles in forest activities.

3.2.4 Pre-testing the questionnaire

The preliminary survey which lasted from February to April 2009 was to ensure that the questionnaires were understandable and easily communicated to the respondents. It was to ensure that the content of the questionnaire had the same meaning to all the respondents in both research sites. The pre-test was carried out in the KNPA and BFA respectively after which some questions were deleted and others refined accordingly. The pre-test (N=30) included both men and women.

3.2.5 Overview of fieldwork

Upon arrival in each village, an introduction was made by the field assistant to the chief to whom a brief presentation of the objectives of the visit was done. It is important to note here that the introduction by the field assistant did not result to any form of bias. The role of the field assistant was to introduce the researcher team creating a rapport between the people and the team. This can be seen especially in the villages of Fabe and Ikondo-kondo I where the field assistant was a native of that division. The introduction wiped away suspicion as the local people embraced us as part of the community. Words such as “they are not those thieves who come to steal our resources” were common. A meeting with the chief led to the scheduling of a village meeting inviting members of the village traditional council and elders in the village. During meetings, discussion on issues on village administration, laws pertaining to forest management, activities with incoming organizations etc. were discussed.

In villages where the research team was not accompanied by a field assistant, letters were sent to the village chiefs and to some villages phone calls were made. This facilitated the research process. The chief and the councilors had made arrangements for our meetings as villagers were informed.

Several meetings were held with the various groups geared towards sustainable forest management and improvement of the livelihood of the people. Women were hardly part of the joint meetings. The few present could hardly speak. The reason for poor attendance was due to their numerous activities, hence less time. Customs and taboos also had a role to play as women e.g in Fabe village are not allowed to speak in the midst of men. As a result, meetings were organized separately (men/women) so as to get all information.

The researchers also visited some village groups in the study areas. Groups visited included cassava farming groups, cane rat farming, cocoa farmers group, village development committees, natural resource management committees etc. During these meetings, there were discussions on the activities vis-a-vis forests, participation in group meetings, impact of forest activities on livelihoods etc.

In both regions, the local people demanded for drinks after each meeting. Both areas are noted for research usually carry out by international organizations and the government who usually lavished the locals with money. Hence, in spite of the fact that the research team made them

to understand that the research team is made up of students and that the research is independent and have no funds, they insisted. It is like a tradition to wet their appetites after lengthy discussions. This however, did not influence the results of the research. It acts as a motivation for the people to participate in the discussions.

Both areas under study were willing to participate in the research. The local people actively participated in discussions and were very happy as they were given the opportunity. They acted as teachers as they gave explanations on issues concerning the forest and the community as whole. Local people especially in group meetings allowed asking for clarifications. The locals in both regions were skeptical on issues concerning illegal hunting and fishing methods as they feared it might be revealed to the government.

Translators were needed for the research. Since both research areas are found in rural areas, very few could speak “pidgin english”. In villages where there was a language barrier, a native of that village usually an educated youth was used as a translator. He understood the local conditions, has attended at least primary school and could speak the language.

3.3 Data collection

Both quantitative and qualitative methods were used to collect data at different phases of the research between 2009-2011. The main methods used to collect data included In-depth interviews, face-to-face surveys, focus group discussions. Other methods used were participant observation, key informant interviews, informal discussions, transect walks etc. At all stages in this study, the sampling method used can be described as purposive non-probability sampling (Neuman, 2006). It focuses on particular characteristics of the population that is of interest to the research.

3.3.1 Quantitative method

Intra-household data on access to land and assets, income distribution by male and female household members were collected helped to identify different strategies and opportunities for men and women.

The questionnaire generated was used in the household survey to obtain information on household characteristics, household use and dependence on forest resources. With this method, more quantitative, descriptive and comparative data was obtained to complement the qualitative method.

A random selection of households from the KNPA (Fabe and Ikondo-Kondo I communities) and BFR (Bechati and Lower Fossi-Mondi communities) were used for the survey. The total number of interviews including men and women was recorded as 108. Information from the survey highlighted the activities of men and women in forest use for livelihoods and their changing gender roles in forest management.

Semi-structured questionnaire was used to generate data. The interviewee was one of the spouses of the household but other members of the household were invited to contribute in answering the questions. The household members usually consisted of spouse, older children and relatives. Most of the questions were open-ended which usually generated discussions with respondents. The questionnaire was constructed in three sections; the socio-economic setting and livelihoods of the local people, use and management of forest resources, indigenous/local knowledge on use and management of forest.

From the questionnaire, general information on the characteristics of household members (age, sex, marital status, gender, number of dependence, occupation, education) was obtained. Further information was obtained on the people's activities and livelihood outcomes such as who does what, when and where do these take place; use and management of resources such as who has access to which resource(s) and the traditional knowledge as well as customs and beliefs related to management.

The exercise was done in all the selected households by the research team. The interviews were carried out in an informal setting usually in the evenings in their kitchens where the entire family eats and discusses about the day's activities and in some cases under tree shades. In cases where the interviewee did not understand "pidgin english", a translator usually from that community was used.

3.3.2 Qualitative methods

Open-ended Questions: Focus group discussions, key informant interviews

Focus group discussions were organized in all the communities. A focus group is an informal discussion among a group of selected individuals about a particular topic (Wilkinson, 2004). A group of 8-10 people participated in the discussions. Questions were open-ended to give room for participants to express their ideas and views that are outside the scope of prepared questions. Issues such as agricultural activities, land use patterns, income distribution in households and access to forest resources were discussed focusing on how, why and what in

order to provide a greater understanding of the attitudes, behaviors and perceptions of participants.

Group discussions were held separately with the villages (Fabe and Ikondo-Kondo I) of the Korup Park area and Bechati forest area (Bechati and Lower Fossi-Mondi). These groups were further separated to men only, women only, mixed and youth groups. This was done because it was realized by the author that some groups especially the women could not speak freely in the midst of men. Hence, this grouping led to freedom of expression, greater interaction on issues of subordination and culture. There were three discussion group meetings in each village with;

Fabe Village

- Joint Meeting
- Meeting with Fabe men/boys
- Meeting with Fabe women/girls

Ikondo Kondo I

- Joint Meeting
- Meeting with Ikondo-Kondo I men/boys
- Meeting with Ikondo-Kondo I women/girls

Bechati

- Joint Meeting
- Meeting with Bechati men/boys
- Meeting with Bechati women/girls

Lower Fossi-Mondi

- Joint Meeting
- Meeting with Lower Fossi-Mondi men/boys
- Meeting with Lower Fossi-Mondi women/girls.

Meetings usually took place in the late afternoons and nights in the villages as most of the villagers were farmers or harvesters and used to leave their homes early in the morning. Except the hunters who usually go for hunting in the late hours of the night. With the women in Fabe and Ikondo-Kondo I, meetings usually took place in at night after they return from their farms and prepare food for their families.

Most men in all the research communities were available in late afternoons. It was easier to organize meetings with men as they usually gather at village squares in the evenings to drink while discussing village issues.



Fig. 3 a & b. A cross section of men`s and joint meeting in Fabe

Source: Field survey, 2011

Participation in the discussion meetings was opened to everyone and an attendance list was taken during each meeting. The length of meetings was between one and two hours conducted by a facilitator and an observer. The facilitator had the responsibility to keep the group on task making sure that divergent viewpoints and ideas are heard. He would give room for less vocal or less assertive members to have a chance to participate. The observer has the responsibility to take notes during the discussions while recording (audio or video) to supplement the notes. He is also keen to non-verbal actions which indicate agreement or disagreement, interest or disinterest etc. The names of all members were written and their occupations. In meetings with both men and women, their sexes were indicated. This information was helpful in giving information on their economic activities in relation to gender.

Given the low participation of women in the meetings especially in Bechati, the research team was forced to visit them in their kitchens for discussions as they prepare meals. Their absence was as a result of their numerous activities giving less time to attend meetings. Focus group discussion is necessary for this research because it provides for in-depth discussions involving relatively a small number of people. The fact that it is focus on a specific area gives participants time to discuss the topic in details. Also the interactive nature of this method allowed participants to explore and clarify their points of views.

- **Key informant interviews.**

This was to get further information on issues discussed during group meetings and also issues through observation. Those chosen as key informants included the chief of every village, the government representative, the local representative and some resource persons recognized

during group discussions. These key informants were considered to be knowledgeable in issues like management policies, community activities in forest, participation in forest management and livelihood activities. While the chiefs in all of the villages discussed more on the geography and social issues in the community, the extension workers or government representatives were more concerned with the rules and regulations governing the forest, the local elites and resource persons from group interviews stressed on livelihood activities and forest management activities.

Key informant discussions were very important as during group meetings, some individuals dominated discussions and as such, some required information was lost. During group discussions, women speak less in the presence of men. Hence, a need for gender segregated group meetings.

Generally, all discussions (focus group or informant) were held in Pidgin English as most of the community members do not understand or speak English. In some villages, like Ikondo-Kondo I, a translator was needed. The discussions lasted for more than an hour. This is because there was constant diversion as participants switched to other topics. However, the moderator was able to keep the tract of discussions.

All discussions in both group discussions and key informant discussions were recorded. This was done to prevent information loss since many issues were discussed during the meeting. It also helped in report writing. These meetings were advantageous as more information was obtained and could be compared with that gathered from observation and interviews.

- **Participant/Field Observation**

Participant observation entails the involvement of the researcher in a variety of activities over an extended period of time. This is to enable him/her to observe the daily lives of community members and to participate in their activities. This would facilitate a better understanding of their behaviors and activities. This method is used in all the objectives of the study to gain an in-depth understanding and familiarity with the study communities. It allowed the researchers access to details on activities of especially women in areas such as farming activities, land use patterns, socio-economic status and access to forest resources.

This method is appropriate for this research because it provides researchers with ways to check for non-verbal expression of feelings, determine who interacts with whom, view how

participants interact with others and check how much time is spent on various activities (Schmuck, 1997). This method is used with other methods for triangulation or checks.

Researchers were stationed in each of the villages for about one month. During this period, there were informal interviews, direct observation and participation in the activities of the communities and involvement in discussions. In order for the researcher to avoid personal views in the process of gathering and interpreting data, a reflexive approach was used whereby the researcher questioned the motivation of the interviewee and sought clarifications in subsequent interviews and discussions. Researchers participated in activities such as harvesting and collecting of NTFPs, social meetings, funerals, cultural festivals, birth initiations etc.

The process of conducting this type of field work involves gaining entry into the community, selecting gatekeepers and key informants, participating in as many different activities as are allowed by the community members. Findings are clarified and verified through member checks, formal interviews, informal conversations and keeping organized, structured field notes.

- **Participatory Mapping**

Participatory mapping was used to gain an in-depth knowledge on the perception of local people of their resources. The researcher sought to include all members of the community in the exercise as youths, men, women and the elderly from various social strata and ethnic groups. In some communities however, not every group could be represented as some were either too busy or not willing to show up for the exercise.

During the exercise, participants used the dusty ground to draw up maps of the village indicating the main features such as streams, farmland, town halls, schools, location of households, village boundaries etc. The provision of information on each household in the village identifying the ethnic groups, household size, marital status among others help in drawing up the sampling frame for quantitative sample survey. Information generated on the location and the total number of households necessitated the random selection of some households for interview.

- **Transect walk**

Transect walk is a research methodology whereby participants locate and pinpoint various physical aspects of the village. Transects are an ideal point of departure for a research/planning process because they establish the villagers as experts. During this research, a transect walk was conducted by a facilitator and the village participants on the area of interest of the research observing, asking, listening, looking, identifying different areas, seeking problems and possible solutions.

A separate transect walk was conducted with men and women in every community so that gender based differences in their relationship with the environment is highlighted. During the walk, conditions and physical features of the village such as farming practices, crops, natural resources, land use patterns, rivers and slopes were observed and discussed. The researchers identified problems and opportunities related to what they see, note contrast and changes. Through the direct field observation and exchange of information, participants learned to identify production problems and possible solutions. The transect walk ended with participants in each of the communities summarizing the information gained during the walk to produce a map which provided a clear picture of the village. It indicated important establishments and locations where certain activities take place.

This method is important as it gives a pragmatic view of the geography and activities of the communities. It also facilitated household interviews as the interviewees after interacting with the interviewer view him/her not as a stranger but rather as part of the community.

- **Photographs and other visual images**

Recording and digital photographs were also used during data collection. Maps, pictures of relief features, group discussions and some forest products were taken which were used as illustrations in the study.

3.4 Data analysis

The information collected has been compiled, processed and analyzed in a qualitative and quantitative way. Like data collection which was done separately between men and women, analysis was done in a gender-disaggregated manner. This is to bring out the relationship between them and enable a comparison and interpretation of their activities.

- **Quantitative approaches**

Data collected was translated into numeric information which was then transferred into the computer for analysis to ensure accuracy. The semi-structured questionnaires were processed through descriptive statistical tools such as frequencies, standard deviation, charts, tables and percentages.

In the study, a four-point scale was used to determine the participation of men and women in the following forest management activities: (1) forest protection (2) capacity building (3) resource utilization (households) (4) income generating activities (IGAs) and (5) decision-making. This is to see the levels of participation and how they influence forest activities. The level of participation was rated on a four-point scale where respondents were asked to responds to each statement ranging from “no” meaning no participation to “high” level of participation. The variable as portrayed below is coded from 0 to 3. If no member of a household participates in a particular community activity, it is coded “0”. If a member of a household rarely participates in a particular forest activity, it is coded as 1. If a household member shows average participation, it is coded 2. If a HH member always participates in a particular forest activity, it is coded 3.

- **Qualitative approaches**

Group discussions, open-ended questions in interviews and participant observation were analyzed qualitatively. All these information including notes from the field and information recorded during the data collection phase were transcribed translated and analyze using content analysis approach (Berg, 2009). This involves developing ideas about the information found in various categories thereby seeking patterns base on the meaning that seem to convey.

In addition, some comments from respondents are presented in chapter five and six in original form by using quotes (“...”) and italics. This method shows the subjective nature of respondents and helps to understand cause and effect relationship. It sheds light on respondents’ behaviors on what they do and reasons attached to certain actions. Due to the time-consuming nature in transcription of text, the recordings were played by the researcher over and over to keep in mind responses throughout the study.

3.5 Triangulation of data

In order to address the weakness of case studies considered by critics as subjective to personal interpretation and being microscopic, this research has used a multiple case design e.g

involving two separate case studies with different villages, different ethnic groups which comprised of men, women, boys and girls. With the multiplicity of methods, theories, tools, space and time was used to generate data in this study, bias was avoided while increasing validity of the results.

Current research trends in Cameroon show that few studies have been carried out on women's issues especially in the environmental sector (Fonjong, 2002). Given the fact that women form a majority of the poor in Cameroon, targeting women in a study of this nature would provide knowledge on linkages in women- natural resource management-livelihoods improvement. Although the sample of this research cannot be said to be a representative to community forestry as a whole in Cameroon, it does give an insight and provide baseline information for subsequent larger surveys.

Although multiple methods were used in the study, the researcher encountered some challenges during the research. The research was carried in rural areas where the literacy rate is low. The presence of interviewers during the survey could lead to some bias e.g social desirability bias. Those being interviewed in order to give a favorable impression on an interviewer would sometimes misrepresent a response.

One of the limitations to the study was inadequate finance and poor transportation network. Access to the research communities was difficult especially during the rainy season and sometimes appointments were postponed. Also, during the pre-test, the participation of only female research assistants made the villagers especially men unwilling to give out information which could affect results. This was rectified during the in-depth research by involving both male and female researchers.

Chapter Four: Description of Research Area

The communities under study are situated in the rural areas of the Korup National Park and Lebialem-Mone forest reserve in the South West Region of Cameroon (Fig. 4). These communities are remote with the inhabitants largely dependent on the forest and resources for their livelihoods.

4.1 Brief background of Cameroon

Cameroon lies between latitude 1°40 to 13°05 N and longitude 8°30 to 16°10 E with an area of about 475,000 sq. km (Foaham B., 2001). It has a total forest area of about 199,160 sq.km (World Bank Report, 2011; CIA World Fact Book, 2011). The country is located in Central Africa and is bordered by Chad to the north east, Equatorial Guineas, Republic of Congo and Gabon to the south, Nigeria to the west and Central Africa Republic to the east (Fig. 4).

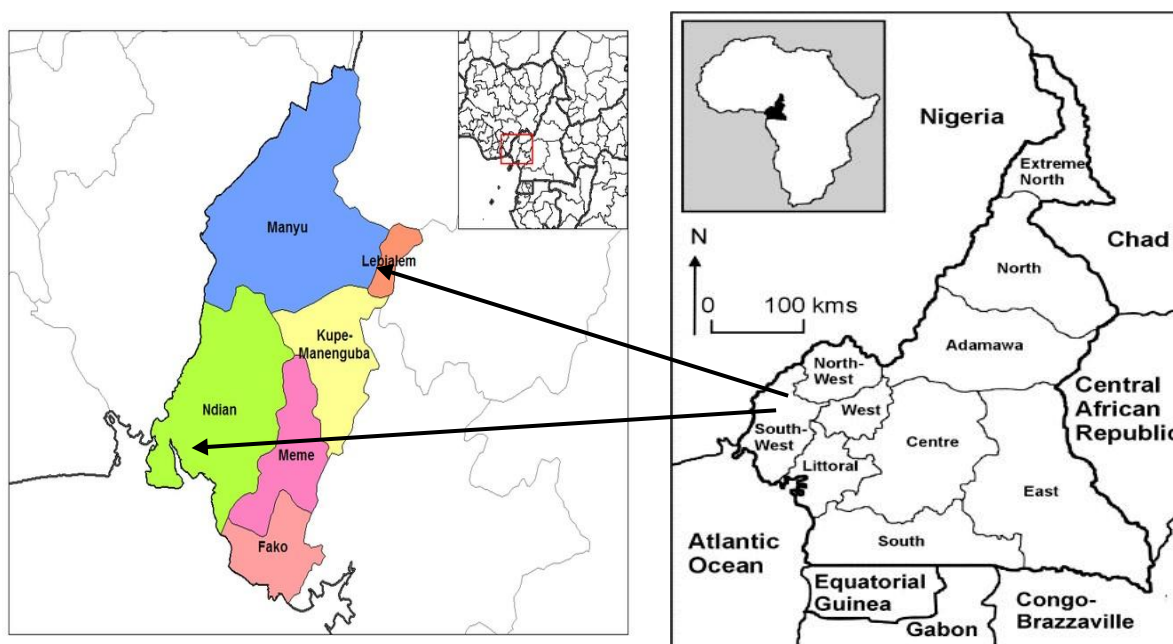


Fig. 4 Administrative map of Cameroon with international boundaries

Source: Rarelibra, 2006 & Page, 2002

Cameroon is termed “Africa in miniature” for its cultural and geological diversity. It consists of about 250 different ethnic groups (Appendix 13) and over 200 linguistic groups (Fearon J. et al., 2005). Cameroon is also noted for its rich and diverse natural features such as beaches, deserts, mountains, rainforests and savannas. The ethnic groups in Cameroon are made up of four major categories- Douala people, Ekoi, Fula and the Hausa.

Table 2. Ethnic Diversity in Cameroon

Ethnic Group	Location	Size
Western Highlanders / Grassfields (Bamoun, Bamileke etc)	North west	38%
Coastal Tropical Forest peoples (Bassa, Douala etc)	South West	12%
Southern Tropical Peoples (Ewondo, Beti, Maka, Pygmies/Bakas	South	18%
Islamic Northerners (Fulani)	Sahel/North Desert	14%
Non-Islamic Northerners (Kirdi)	North Desert/Central Highlands	18%

Source: Fearon & Laitin, 2005

Cameroon is divided into ten semi-autonomous administrative regions (Fig. 4) under the regional council. Each region is further divided into division, sub-divisions and districts. There are currently 58 divisions in Cameroon. The population of Cameroon as estimated by UN (2009) is 19, 522,000 with the young (under 15) estimated as 40.9% and the old (under 65) as 96.7%.

The educational system in Cameroon has recorded major improvements and in 2001, the country’s literacy rate was estimated as 67.9% (77% for males and 59.9% for females) (Mbaku, 2005). There however exist a major gap between the literacy rate of those in the urban cities and rural communities. Elementary education is almost free in state schools and usually cheaper than in private and religious schools. The system of education practiced is the British and French with the language of instruction mostly English and French. Cameroon has registered a low level of health care especially in the rural areas. Access to healthcare facilities is limited either by distance or poverty. Availability of health facilities are limited and poorly equipped (Collier et al., 2002). High mortality rate and endemic diseases such as dengue fever, filariasis, malaria, meningitis, sleeping sickness etc. are common.

In the economic sector, Cameroon has an average growth of 4% in Gross Domestic Product (GDP) every year with major exporting markets like France, Italy, Spain, South Korea and United Kingdom. An estimated population of 70% is involved in farming. Agriculture comprises of about 19% of GDP in 2009 (CIA World Factbook, 2011). Farming is mostly done at subsistence level using simple tools usually and production is for commercial and home use. In spite of its growth in GDP, Cameroon had unemployment of 30% in 2001 with a third of its population living below the international poverty threshold of US\$ 1.25 a day (HDI, 2009). Reliance on agricultural exports makes Cameroon vulnerable to shifts in prices (CIA World Factbook, 2011).

4.1.1 The South West Region of Cameroon

The South West Region is located in the south western part of the country. Until 2008, it was known as South West Province. It is made up of divisions and sub-divisions governed by senior divisional officers and sub-divisional officers respectively. The divisions that make up this region include; Manyu, Lebialem, Ndian, Fako and Kupe-Manenguba. The study areas KNPA and BFA are located in Ndian and Lebialem divisions respectively (Fig. 4).

4.2 The Korup National Park Area (KNPA)

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. Found around the park are four other reserves (Appendix 10). Nkwende Hills, Ntali forest reserves, Andokat mangroves and Rumpi Hills are proposed protected areas in this region (Management Plan, 2003).

4.2.1 Cultural and institutional background

Communities within the park include Bareka, Batanga, Bera, Erat, Esukutan and Ikenge. These communities are characterized by three ethnic groups (Korup, Bakoko and Batanga) with the population of about 1500 (Management Plan, 2003). Ikondo-Kondo I community formerly within the park was resettled out of the park by WWF in 2001 (Schmidt-Soltau et al., 2003).

In 1987, the Korup Project in an effort to reduce human pressure on forest resources established a support zone with an area of about 5,353 km² (MP, 2003). It consisted of about 180 villages with a population of 50,000 (Bijnsdorp, 2000). Unable to realize its objective, the

zone was further reduced to 3km from the forest known as the peripheral zone. It covers an area of 612 km² with a population of 2700 (Bijnsdorp, 2000). It consists of 23 villages among which are the communities chosen for the study.



Fig. 5. The KNPA and the peripheral zone (MP, 2003)

- **Customary land use and land rights**

The inhabitants of the villages within and around the park live, farm, gather and hunt within a given territory in the park area which they consider theirs (MP, 2003). Villages of the peripheral zone of KNPA claim customary use rights extending into the Korup Park since they believe the forest belongs to them (Vabi, 1999). Traditional boundaries are defined by clearing a path, using a river etc which are not officially recognized. Every community has the right to exploit resources in its given jurisdiction and hunters can hunt out of their jurisdiction (heavy hunting for commercial purposes) provided permission is obtained from that village (Devitt, 1988; Vabi, 1999).

According to tradition, women are not allowed to own land but can only use the land after obtaining permission from their husbands or relations (Vabi, 1999). This gender inequality in land ownership has impacted the woman folk as she largely depends on farming to sustain the family. Limited access to land would result to the inability of the local people to improve on livelihoods (Malleon, 2000).

- **Cultural and linguistic groups**

There are several ethnic groups that characterized the Korup Park Area. These groups which consist of the Oroko, Korup, Ejagham, Balong, Bassosso, Upper Bayang and Mbo have very strong historical, linguistic and cultural similarities (Vabi, 1999). The culture and language of the korup people is similar to that of the Ejagham group in the north and the Ibiobio in the west. Korup also have similar social structures and village institutions with the Oroko people.

The Oroko ethnic group occupies the largest area of the park and comprises of six tribes; Batanga, Balue, Bima, Bakoko, Ngolo and Balondo-Badiko. The Bakoko tribe, the only one found in the north is made up of park villages like Esukutan, Ikenge and Bera. All the other tribes of Oroko are found in the middle of the park area. Villages of the Bima tribe include Ngenye, Mufako and Bare-Batanga and villages of the Ngolo tribe include Baro, Bajo and Ekogate. The Korup ethnic group is located in the southern part of the park and consists of the villages of Ekon 11(Erat) and Ikondo-Kondo I. The Ejagham ethnic group is larger than the Korup ethnic group and the population is concentrated further north in Manyu Division. The villages which make up this ethnic group are Obang, Njemaya and Ngunaya. The other ethnic groups (Mbo, Bassosso, Upper Bayang and Balong are found in the north-eastern part of the park (Vabi, 1999).

- **Local institutions**

The Korup area is characterized with community-based and traditional institutions which govern the affairs of the community. Various local organizations and social institutions exist as decision-making bodies to control the use of natural resources in their perceived customary territories. Some of this institutions include the local council headed by the village chief or traditional chief, development associations, juju society, cultural groups (e.g Ngolo Cultural Development Organization-NCUDA), ethnic group associations (e.g Ndian Economic and Cultural Association-NECO) and regional institutions (e.g South West Elites Association SWELA) etc.

All villages are headed by a chief appointed by the government. Decisions in the village are usually made by the chief in consultation with the traditional council. However, the juju society is considered as the most important social institution and governing body in all the villages of the KNP and the peripheral zone (Devitt, 1988; Butcher 1997; Vabi, 1999; Malleson, 2000). The effective functioning of most of these associations is hampered by tribal sentiments and suspicion. However, the elites act as vocal representatives of local

communities at the regional level. They play the role of intermediaries between the government, communities and other organizations (Malleeson, 2000).

4.2.2 Socio-economic conditions and income generating activities

- **Human population**

Population of the support zone estimated to be 50,000 people (MP, 2003). Mundemba has the highest concentration of population in the Korup region (probably as a result of the PAMOL Ndiian Estate). It is more developed and has been seen as the potential threat to the southern park sector (MP, 2003). Most villages in the Korup area are less concentrated (less than 200 people) due to inaccessibility and poor markets. As such, rural exodus is high (Devitt, 1988) in search of jobs usually to Mundemba, Kumba and Tiko to work in plantations. Also, some migrate towards Kumba-Mamfe corridor to establish farms (Malleeson, 2000). However, recently, there has been a decline in opportunities in the urban areas which has forced some to return to their villages where they now rely on hunting, farming and trapping for a living.

- **Farming**

The people of the Korup area practice shifting cultivation method. This is a method where large portions of land are cultivated for a period of 2-4 years followed by fallow periods of between 5-20 years (MP, 2003). These couple with the poor soils have resulted to increased forest clearance encroaching into the forest e.g. in villages like Erat, Ekon1 and Ekoneman Ojong.

The rural people of the villages around the park area also practiced the slash and burn methods of farming. Slash and burn is a method whereby, a piece of land is demarcated and set on fire after which the soil is tilled and crops planted on the piece of land. It usually takes place in the dry season and is a common practiced in the research community. Due to the poor nature of soils, a piece of land is cultivated for a short period of time and is abandoned. Burning of the soil only leads to a short term high productivity. As a result of low yields and the inability to meet up with household demands, local people are forced move further into the forest for fertile land and extraction of forest products.

The practice of slash and burn has led to increase in uncontrolled wild fires resulting to forest destruction. The practice exposes the land for erosion. Reduction in forest and its resources like NTFPs, fauna has negative effects on the livelihoods of the people (Iyassa et al., 2009).

They have to move for longer distances and spend more time in order to fetch water, wood and other basic household needs.

The population of the Korup area is involved in food crop (cassava, plantains, bananas, beans, cocoyams etc.) and cash crop (cocoa, coffee, oil palm) production. While women tend to cultivate food crops mostly with the exception of bananas/plantains, men are involved in cash crop production commercially oriented. While food crops are mainly for household consumption, cash crops are for commercial purposes.

In general farming is done using family labour except in areas close to the international boundary at the western side of the park where cheap labour is gotten from Nigeria for cocoa production (Vabi, 1999). This has led to a high level of encroachment at the western borders of the park (Vabi, 1999).

- **Hunting and bush meat marketing**

Marketing of “Bush meat” is the main source of income to communities around the park. Bush meat is a term referred to meat of wildlife harvested and consumed by the people of this area. It ranges from rodents to large mammals. Illegal hunting is a major activity in this area which is a threat to wildlife (Vabi, 1999; Malleson 2000). Despite restrictions by the conservationists, the local people are noted for illegal hunting (Iyassa et al., 2009). Major wildlife species harvested include duiker, gorilla, antelope, chimpanzee etc. (Appendix 4).

These illegal activities are carried out by local people in co-operation with neighbouring villages posing a threat forest and wildlife. Large gangs of well-organized and heavily armed poachers based in Nigeria also operate freely in the park (Lennon, 1997). Frequent incursions are due to insufficient game guards and inaccessibility of the park. This has resulted to large portions of the park left unprotected (MP, 2003).

- **Livestock**

Livestock as a means to improve the livelihoods of the people of this area has not been successful. Unlike in the past when livestock was regarded as wealth, today it is seen as a pest or nuisance as it destroys crops (Vabi, 1999). Not only are these livestock attacked by diseases such as coccidiosis, newcastle disease, swine fever etc, they are also killed by wild animals from the forest. Hence, the people consider livestock as a burden rather than an asset.

Livestock production in this area is therefore poor and few domestic animals are raised more for ceremonial purposes and welcome of guests (Devitt, 1988). However, some households keep a few chickens, and some goats and pigs for household consumption (Butcher, 1997).

- **Fishing**

Fish and crustaceans are a major source of animal protein to the inhabitants of the Korup area especially women and children (Malleon, 2000). Fishing is practiced in small scale though surplus is usually sold (Infield, 1988). However, due to the fall in prices of cocoa and coffee the relative importance of fishing as a source of income for men has increased (Vabi, 1999). Fishing is a seasonal occupation with high seasons between October and June and lowest months (July, August and September) with least activities.

Methods used in fishing include hook and line, sleeping hooks, basket traps and nylon nets of various designs and poisoning of streams. Streams and brooks are poisoned with vegetable toxins derived from the macerated fruit of *Strychnos aculeate*, *Blya supida* and *Massularia acuminata*. It is an ancient traditional practice (Reid, 1989). Today, other poisonous substances such as chlorinated hydrocarbon insecticides (Gammalin-40, Gammalin-80) intended for spraying cocoa. This has resulted in a reduction in fish populations and threatens the endemic species e.g rare giant otter shrew (*Potomogale velox*) and human health (Gartlan, 1986). Use of these poisonous toxins is noted in areas like Ejagham and Esukutan (Thomas, 1997).

- **Non-Timber Forest Products (NTFPs)**

NTFPs are a major source of income to women and increasingly men and youths. These products include bitter kola (*Cola spp.*), country onion (*afrostyrax lepidophyllus*), njabe (*Baillonella toxisperma*), bush mango (*Irvingia gabonensis*), eru (*Gnetum spp.*), shea nut (*Poga oleosa*), njangsang (*Ricinodendron heudelotti*), chewing sticks (*Garcinia mannii*) and (*Massularia acuminata*) and numerous medicinal plants (MP, 2003).

Most of these products extracted are found in the support zone and are usually collected from farms, fallow or the forest. In the northern and eastern regions of the park, bush mango, eru and njangsang are the major products extracted especially for economic purposes. In the southern support zone bush mango and njangsang are extracted from the forest. There has been however, a decline in the availability of these products as a result of excessive demand for commercial purposes and felling of NTFPs by logging companies (Vabi, 1999). Many

men and youths have developed growing interest in NTFP collection and marketing due to the decline in cocoa and coffee. This increase in demand has led illegal practices in the forest.

Several Korup villages use sap from raffia palm (*Raphia hookeriana*) and oil palm (*Elaeis guineensis*) as an alcoholic beverage called “palm wine”. Palm wine due to its perishable nature is usually distilled to produce illicit gin known as “*afoko*”.

- **Logging**

There is small scale of timber logging in the support zone by the local people for commercial purposes. Planks are extracted which are used for furniture and construction. The trees are felled and cut using chainsaws and cutlasses. Usually permits are obtained from the local council though not officially or legally obtained from the forestry department (MP, 2003). Unauthorized felling of trees by operators is sanctioned by the local council. The leaves and branches of trees felled are collected as firewood for the household.

4.2.3 Biophysical characteristics

The biophysical characteristics of the KNP described include topography, drainage, climate, geology, soils, vegetation, rainfall etc.

- **Topography**

The park is made up of mainly low lying flat or undulating land surfaces of the African shield (Precambrian basement rock). The dissected upland areas are characterized by long steep and irregular slopes and deep streams and rivers. While the southern part of the park is low in elevation (50m or less above sea level) and rises steadily northwards with rugged terrain (granite boulders, *kopjes* and *horsts*), the eastern sector slopes down towards Bake-Munaya River.

- **Climate**

Climate in KNP is characterized by two seasons: dry season which begins from December to February and wet or rainy season which is at its peak from June to October. The mean annual temperature is 27°C with the coolest month in August (25° C) and the hottest month being February with about 33°C (Iyassa et al., 2009).

The annual rainfall in the Southern park is more than 5,000mm per year (Zimmermann, 2000) with the wettest months from July to September. Rainfall declines as one moves towards the north and east of the park. There has been a remarkable change in rainfall over the years. The mean annual rainfall between 2005-2009 was 13.2mm³ maximum rainfall between June and October and minimum rainfall between December and February (Iyassa et al., 2009).

▪ **Vegetation**

According to Richards, (1952), KNP is reputable and is considered as the best remaining example of the Guinea Congolian forest refugium (Maley and Brenac, 1998) richer than any African forest for which comparable data is available (Songwe, 1997).

The KNPA though with nutrient poor soils is a home to 620 species of trees and shrubs with almost 30% endemic. It contains 480 species of herbs and climbers. The park is made up of four different forest associations (Letouzey, 1985; Thomas, 1997):

- The Atlantic Biafran forest occupies a greater portion of the forest, the support zone and surrounding forest reserves such as Ejagham forest reserve and Nta Ali Forest Reserve. Conserving this area is very important because of its richness in species and the fact that it contains rare and endemic plant species. This forest area is also noted for timber production and NTFPs.
- The swampy forest is characterized with sandy soils and contains sparsely populated herbs and shrubs. Species diversity is poor and examples of such are *Crateranthus talbotti*, *Mitrgyna stipulosa*, *Diodpyros preussi*, *Spondianthus preussi* etc.
- Piedmont forest is a semi-deciduous forest located at altitudes 500m and 800m. It acts as a transition between lowland evergreen forest and sub-montane forest.
- The sub-montane forest is known to be a hotspot of botanical diversity and supports plant species of particular botanical interest due to their narrow distributions.

▪ **Fauna**

The KNPA is renowned for its faunal richness and diversity. It contains one quarter of all Africa`s primate species containing small and large mammals, avifauna, herpetofauna, butterflies (Korup National Park, 2007). It is characterized with birds, reptiles, amphibians and butterflies. It consists of 33 families with 161 different species (Korup Management Plan,

2008). Some of the mammals include drill, chimpanzee, red colobus monkey, red-capped mangabey, red-eared monkey, antelopes, duikers, forest elephant, buffalo, bush pig etc.

Table 3. Mammals occurring in the KNPA with degree of threat

Name	Scientific Name	Degree of threat
Preuss`s guenon	<i>Cercopithecus preussi</i>	Endangered
Gorilla	<i>Gorilla gorilla</i>	Endangered
Drill	<i>Mandrillus leucophaeus</i>	Endangered
Chimpanzee	<i>Pan troglodytes</i>	Endangered
Red-eared guenon	<i>Cercopithecus erythrotis</i>	Vulnerable
Leopard	<i>Panthera pardus</i>	Near threatened
Allen`s galago	<i>Galago alleni</i>	Near Threatened
Hippopotamus	<i>Hippopotamus amphibius</i>	Threatened
Collared mangabey	<i>Cercocebus torquatus</i>	Near threatened
African golden cat	<i>Felis aurata</i>	Vulnerable
Elephant	<i>Loxodonta africana</i>	Near threatened
Giant Pangolin	<i>Manis gigantea</i>	Threatened
Bay duiker	<i>Cephalophus dorsalis</i>	Near threatened
Sitatunga	<i>Tragelaphus spekeii</i>	Near Threatened

Source: IUCN and Ministry of Forestry and Wildlife (MINFOF)

- **Drainage**

Within the KNP, there are three major drainage systems. The north-eastern sector which consists of about 40% of the total park has three major streams which empty itself into the Bake-Munaya River. The western and south-western sectors consist of about 19% of total park area and use Akpasang and Korup Rivers which flow to the South as drainage systems. The central part consisting of the largest area (41%) of the total park forms a basin which empties itself in the Ndian River.

- **Soils**

Little research has been done in the KNP on soils and as such, the information is provided by Gartlan (1985), Brunt & Brunt (1965) and a survey carried out by IRAF-ONAREST (1980) to assess the suitability of the soils for the cultivation of palm nuts. In general, the soils in the

KNPA are sandy, low in nutrients, possess low water retaining qualities and hence, infertile. There are four main types of soils which have been identified in the area.

Old sedimentary soils which are derived from Cretaceous sandstone and non-volcanic plain soils are found in the Southern sector and cover an area of about (4% of the park). These soils are noted for their acidity, sandy nature, inability to retain water and as such, not good for agriculture. Farmers however tend to use this area for farming since there is no alternative.

About 7% of the park at the north-eastern boundary is a covered old sedimentary soil produced from degraded sedimentary rocks of tertiary origin. The high acidic nature and low nutritive value of the soils prevent local people from using the land for farming.

The extreme north-eastern part of the park consists of old volcanic soils which are fertile. These fertile soils are used heavily by farmers for the cultivation of cocoa and food crops. The soils occupy about 7,000ha (5%) of the total park area and is derived from underlying basalt and andesite.

The remaining area of the park which is made up of about 104,000ha (84%) of the total park area is made up of soils from degraded Precambrian basement rocks. The soils are strongly acidic; possess low nutrient status, permeable with poor water retention, coarse grained and not suitable for farming.

4.3 The Bechati Forest Area (BFA)

The Bechati forest area is located between northern latitude $5^{\circ}37'$ - $5^{\circ}42'$ and eastern longitude $9^{\circ}53'$ - $9^{\circ}58'$ (Fig. 6) in the South West Region of Cameroon. It is bordered in the North, in Wabane subdivision, in the South in Alou sub-division in Lebialem Division. The Bechati Forest area is an undulated landscape situated along the Cameroon Mountain chain with a total surface of about 8234 ha highly vulnerable to stochastic events like landslides, soil erosion and floods (ERuDef and ACF, 2011). The area has a population of about 35, 000 (Ajabji et al., 2008).

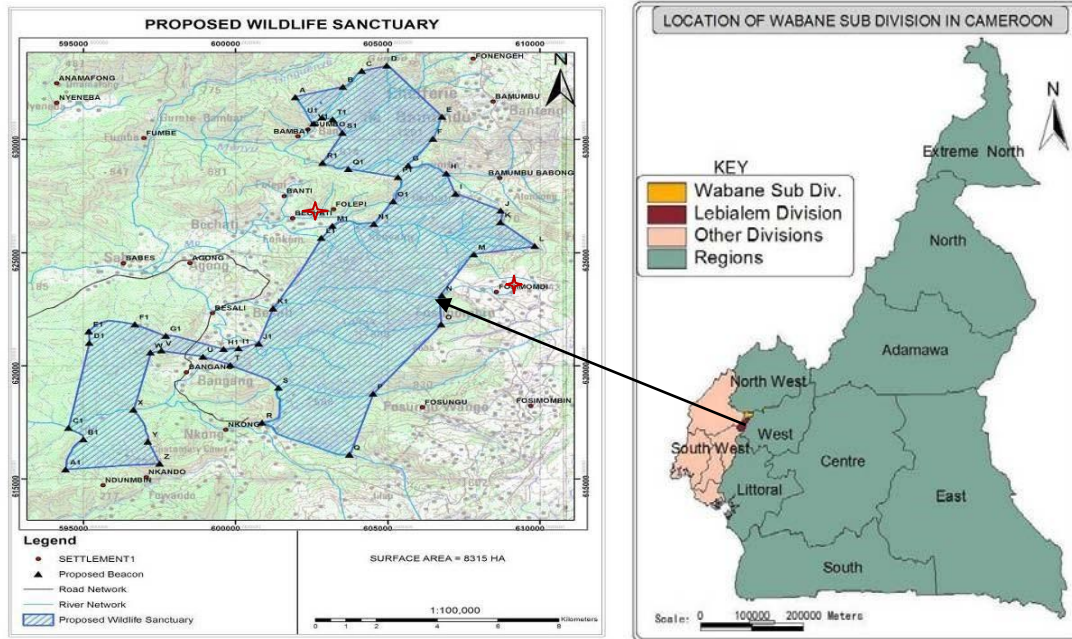


Fig. 6. Location of study area-Bechati Forest Area (Nkempi et al., 2009)

4.3.1 Cultural and Institutional background

Located adjacent to the BFA are over nineteen villages with a population of about 35, 000 with an estimated average density of 3 persons per sq. km (Nkempi et al., 2008; ERuDeF and ACF, 2011). The people are solely dependent on the forest for their livelihoods. The villages include Bamumbu, Igumbo, Banti, Folepi, Bechati, Besali, Bangang, Nkong, Fossimondi, M'mockbin, Ndungate, Fonjumetaw, Bambat, Besom, Ewai, Njen, Ebensuck, Sabes and Agong (Nkempi et al., 2008).

- **Cultural and Linguistic groups**

The area is comprised of four ethnic groups with Mundani being the dominant ethnic group Bayang, Moghamo and Nweh respectively. Although these ethnic groups are characterized with different languages, cultures and traditions, they are similar in the use of forest and its products and exhibit similar livelihood tendencies.

Parts of the forests are observed by the people as shrines or homes to their ancestors and thus, held with high esteem. Some animals are known to be totems and as such, are prohibited from hunting (Etiendem, 2008). This is because they believe that these animals have a human spirit residing in them and thus, killing them would mean killing a human being.

The communities also have traditional houses (juju houses) where magical and mysterious activities are performed. This is usually during festivals such as death and birth celebrations, coronation of a traditional ruler etc.

- **Local institutions**

Communities in Bechati forest area are attached to their traditional norms and beliefs. Hierarchy in these communities is highly respected. The local people are obedient and accountable to the local authorities. The traditional council is the highest body in the village with the chief or fon (Brain, 1967) at the helm of authority. Chiefs are enthroned by traditional ritualistic sacred societies and are recognized by the political administration (Atem, 2000). The traditional council consists of councilors, quarter heads and some elderly people in the village who jointly take decisions on behalf of the entire community.

The communities of the BFA are characterized with local development groups like community development group, local farming groups (bee farming groups, cassava farming groups etc) and “njangi” groups, women’s groups and traditional dance groups (Fualefeh and Nkafu, 2009).

- **Customary land use and rights**

The BFA has a long history of communal ownership. The land is considered as a communal property with the fon as overall custodian (Fualefeh and Nkafu, 2009). Land in local communities is divided into sections such community land is controlled by the local authorities, family land is controlled by heads of households and individual lands usually acquired through purchase (Nkembi and Mbah, 2009). Ownership and control of family land is hereditary and usually handed down to male heads of household by the father. This has existed for generations and women through their husband or relatives can use land mainly for agricultural purposes (Atem, 2000).

Land use patterns in BFA include timber concessions, farmlands, settlements and forest areas by the local communities for subsistence and commercialization (Ekinde et al., 2006).

4.3.2 Socio-economic conditions and income generating activities

- **Human population**

The BFA has a population of over 35,000 inhabitants who largely depend on farming for survival (Ajabji et al., 2008). Population increase in these communities has greatly affected the forest and its resources (Nkemnyi, 2011) resulting to the intensification of land use, social inequality, new markets and competition over scarce resources (Bergl et al., 2009). The intensification of human activities by communities adjacent to the forest constitutes a major threat to the forest and its resources (Nkembi et al., 2008; Nkemnyi et al., 2009). According to Nkemnyi (2011), the communities living adjacent to the BFA depend largely on forest resources for their livelihoods.

- **Agriculture**

The inhabitants of the village live in remote areas and farming is one of the main occupations of the people. Subsistence farming is a common practiced in this area with slash and burn method widely used (Nkemnyi, 2011). There is constant encroachment into the forested area for agricultural purposes. The main cash crops include cocoa and palms usually for commercial purposes (Muh et al., 2010). This has resulted to greater conversion of forest lands. Food crops produced include cocoyams, cassava, bananas, vegetables etc.

- **Hunting**

Hunting is also practiced on a significant scale in this area. According to Bergl (2006), hunting of especially Cross River Gorilla (CRG) has in the past been practiced on large scale. He further states that hunting is more intense in lowlands and mostly for local consumption. Though wildlife hunting has reduced since the 1980s (Oates et al., 2003 cited in Bergl, 2006), hunting still remains a major threat to wild life survival (Wright and Priston, 2010).

“Bush meat” is seen as a major source of income and protein to households. While part of the harvest is used for household consumption, part is sold in nearby markets and restaurant owners for cash. Hence, a need for proper conservation and protection of threatened species in particular.

- **Livestock**

Livestock farming is one of the livelihood activities of the people of BFA. Livestock rearing is practiced for subsistence and for sale to local markets (Nkemnyi M., 2011). Livestock species in the area include cows, goats, pigs and fowls. Although livestock rearing is largely traditional with little number of animals per family, they encounter diseases and attacks from animals (Fualefeh and Nkafu, 2009).

- **Fishing**

Fishing is also practiced in this area usually with locally made equipments like hooks and nets. Chemical substances are used by the local people in fishing leading to the poisoning of streams and aquatic life which has curtailed fish yields. Coupled with poor preservation methods, the local people over the years have reduced the intensity of fishing and often, it is done for household purposes. Use of poisonous substances for fishing is not only harmful to humans but also to fishing communities as they have greatly reduced in number.

- **Non-Timber Forest Products (NTFPs)**

The inhabitants of these villages as a result of poor market prices for cash crops and restriction from further encroachment into the forest have tend to greater harvesting of NTFPs. Forest resources harvested in the area include eru, njangsa, bush mango, bitter kola, bush pepper, flat, cane, Ngogo leaf, bush onion, chewing stick, Alakata pepper (Appendix 7).

- **Timber logging**

Also practiced in this area is selective logging of timber. This is done usually by locals and the products from the timber are used in the construction houses roofs, bridges, production of household furniture etc. It is done in a small scale and does not pose a major threat to forest depletion.

- **Petty trading**

The local people in this area trade with neighbouring villages and towns in exchange for cash. The high demand for bush meat has resulted to increased activities of illegal hunting and harvesting of forest resources. According to Nkemnyi 2011, the availability of *Gnetum africanum* has dropped drastically as compared to previous harvests.

Poor transport network in this area has slowed down its trading activities. Movements are restricted as a result of poor roads to nearby villages and towns. Goods are transported on heads and locals trek for about 20km to the nearest urban market for sale (Ajabji et al., 2008). It is worst during the rainy seasons as the roads are almost inaccessible.

4.3.3 Biophysical characteristics

▪ Topography

The Bechati forest area (proposed Tofala hill Wildlife Sanctuary) is characterized by an undulating landscape. It begins from the Bechati community with the altitude of 365m to Lower Fossi-Mondi community with the altitude of 2400m. It is characterized by a chain of peaks notably the Tofala hill (866m) (ERuDef and ACF, 2011). The area is situated along the Mount Cameroon chain and highly vulnerable to natural disasters caused by seismic activities (Nkemnyi, 2011).

▪ Climate

The climate of this area is characterized by low temperatures, low rainfalls and high relatively high humidity. Temperatures vary between 20°C to 35°C with highest temperatures in March. The annual rainfall is 3500mm (Garlan, 1986). The region is characterized with two major seasons: wet season between March and October and dry season from November to February.

▪ Vegetation

According Muh (2010a), the area is made up of mainly primary (70%) and secondary (30%) forests. The area is characterized by different forest types and falls within the GuinoCongolian tropical lowland rainforests. It varies from lowland rainforest through sub-montane to montane forest.

The Lebialem-Mone forest landscape is noted for its richness in flora. The rich and diverse nature of the flora is a major source of livelihoods to the local communities. About 72 plant species are found in the lowland and mid elevation forest and about 297 species in the sub-montane area among which some are threatened. These species are Mahogany (*Entandophragma angolense*), *Panda oleasa*, *Canarium schweinfurtii*, *Terminalia ivorensis*, Ebony (*Diospyros zenkeri*, *Diospyros suaecolens* and *D. crassiflora*).

Also found in this area are NTFPs-Njangsa (*Ricinodendron heudoleuti*), Alligator pepper (*Aframomun sp.*), *Tetrapleira tetraptera*, Eru (*Gnetum africanum*), Bush pepper (*Piper gineense*), Bush onion (*Afrothyrax kamerounensis*), African plum (*Dacryodes edulis*), Bitter cola (*Garcinia cola*), Kola (*Kola acuminata*) (Harvey and Tchiengé, 2010).

▪ **Fauna**

The area is noted for its richness in species and wildlife and is a home to some critically endangered species of mammals e.g two great ape sub-species, one critically endangered (*Gorilla gorilla diehli*) and the most endangered sub-species of the African chimpanzees (*Pan troglodytes ellioti*) (Oates et al. 2007; Bethan et al., 2010; Nkemnyi, 2011). Lebialem-Mone Forest Landscape is a home to many and different large mammals (Appendix 6).

The area is also a habitat to a variety of fish species. It harbours about 166 fish species from 15 orders, 42 families and 97 genera (Leveque, 1997). According to a study carried out by Erukwa, 2010, the fish species recorded in this area include *Mormyrus tapirus*, *M. rume*, *Tilapia zilli*, *Tilapia galilaea*, *T. nilodica*, *Labeo batesii*, *L. pseudocoubie*, *Channa obscura*, *Alestes nurse*, *Al. macrolepidotus*, *Hepsetus odoe*, *Barbus bynni occidentalis*, *Auchenoglanis occidentalis* and *Heterobranchus bidosalis*. *Tilapia spp.* is an endangered species in this area due to excessive exploitation by the locals and use of poisonous substances like gammalin in fishing has greatly reduced fish population. Hence, a need for the conservation of aquatic systems in the Bechati forest area.

Also found in this region are various species of reptiles and amphibians some of which are considered endemic. These include Bamboutos small tongue throat (*Werneria bambutensis*), Bamboutos egg frog (*Leptodacylodon axillaris*) (Cameroon Frog Project in 2004 by San Francisco State University). According to Nkembi et al., (2008) in a preliminary assessment of reptiles, a number of different reptile species exist in the area.

▪ **Drainage**

The Lebialem-Mone forest Landscape is drained by four main rivers: Manyu, Mak, Bokwa and Bagwor. They take their rise from the Bakossi and Lebialem mountains and are emptied in to the River Manyu (Nku et al., 2008).

- **Soil**

Soil composition in this area varies in relation to the altitude. Basalts and trachytes are a characteristic of the high lava plateau with the altitude of about 1900-2400m. These types of soil are very fertile and not very good for agriculture. Found at a lower altitude of about 200-350m is the Bechati forest area. Its geology is composed of decomposed basement complex rocks which have given rise to sandy soils with low fertility (Garlan, 1989).

Chapter Five

Demographic and socio-economic characteristics of research communities

This chapter provides background information on the respondents and their activities in the forest giving an insight on the lives of the people and why they carry out the activities they do.

5.1 Characteristics of respondent

With reference to data collected through household survey from the four research communities, the characteristics of respondents such as age, occupation, gender, literacy rate were identified. These characteristics were realized to have an influence on the activities of the population in relation to the forest.

5.1.1 Age groups

The age of respondents have been classified into three categories with 0 to 14 years considered as children, 15-59 years considered as the economically active or working age and 60 years and above as the elderly age. In this study, children were excluded as respondents because they are not independent and any their activity was to assist parents.

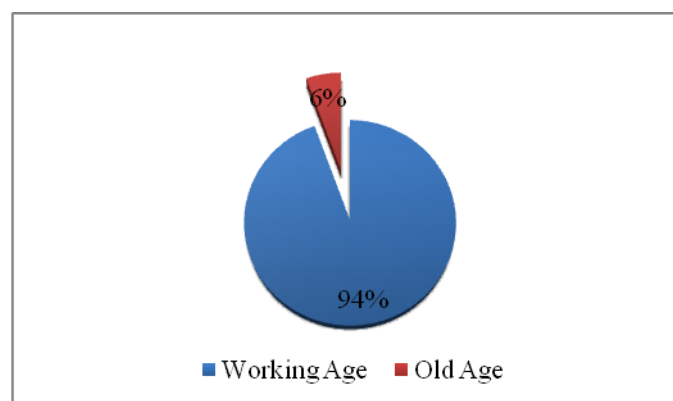


Fig. 7. Age group of respondents

According to the sampled households, the range of minimum and maximum age of respondents was between 15 to 78 years.

The respondents from the elderly as well as the working age were from the communities of Fabe, Ikondo-Kondo I, Bechati and Lower Fossi-Mondi. The working age of the communities of Ikondo-Kondo I, Fabe, Lower Fossi-Mondi and Bechati were represented as, 24, 18, 20 and 40 respectively. Likewise data on the age category of the elderly or old age was represented as 2, 2, 0, 2 of the total sampled households of the research communities.

Among all respondents, Bechati accounted highest with a percentage of 37.03% of the working age followed by Ikondo-Kondo I with 22.22%. In total, the working age in all the communities were represented with 94% while the elderly with 6% (Fig. 7). Generally, from the analysis in all the communities, it was revealed that the elderly had a low percentage while the majority of the respondents were from the working age group. Age group of the communities is important as the working age group is more active and thus would have an impact on the forest than the youths and the elderly. In the communities studied, the middle age group is registered highest and active and could be attributed to the increased activities in the forest.

5.1.2 Education

The education of the respondents was categorized into two groups: that is, literate and illiterate. The literate are considered as those who attended formal education while the illiterate are characterized as those who had no formal education. Formal education is from primary to higher education while informal is when knowledge is acquired at home without attending any lessons in a formal institution.

In all the research communities, a majority of the respondents have some form of formal education (primary, secondary or higher level of education) with respondents from Bechati scoring highest in formal education 21.3%, followed by Fabe with 15.7% and Lower Fossi-Mondi and Ikondo-Kondo I with 13%.

Similarly, Bechati has the highest percentage of respondents (17.6%) with informal education followed by Ikondo-Kondo I (11.1%), Lower Fossi-Mondi (5.6%) and Fabe (2.8%) (Fig. 8).

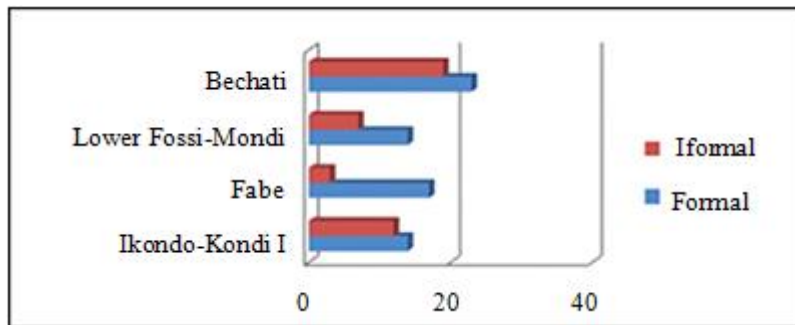


Fig. 8. System of education

The overall percentages of the formal and informal education of all sampled households were 62.04% and 37.04% respectively. Although the overall percentage of sampled respondents shows that a majority have attended some form of formal education, generally, the level of education in all the communities is still low. Most of the indigenes have attended only primary level of education. Hence, the general population of the sampled communities is still illiterate and hence, highly dependent on the forest and resources for livelihoods.

In as much as there were two systems of education in the research communities, the analysis also show gender differences in the educational system. As seen on figure 9, men were predominant in formal education. While women recorded the highest score in informal education, men recorded highest in primary education. It is also noted that in all the research communities, no woman had attended university education. In all, the rate of illiteracy was higher in women than men. This can be due to traditional practices where women considered as property and as such parents would not “waste” their resources on someone’s property. As she gets married to someone from another family, she is considered a part of that family. If she is educated, the benefits will go to someone else.

Hence, the family will prefer to use the limited resources to educate the male child in order to preserve the lineage and also partake in the benefits of education. Illiteracy or low education could affect the participation of especially women (higher rate of illiteracy) in forest management activities.

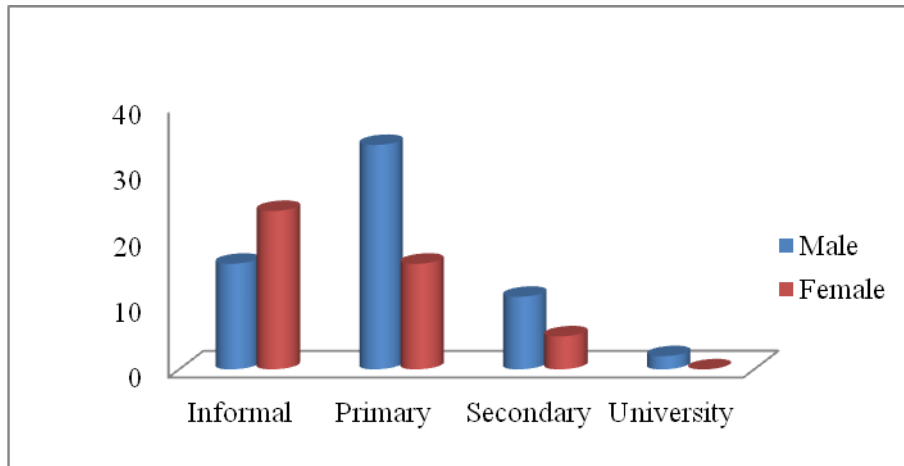


Fig. 9. Gender differentiations in education

5.1.3 Occupation

The occupation of respondents from the sampled households was categorized into six groups (farming, hunting, fishing, gathering, logging and trading). Farming was the primary occupation which covered 42% of total respondents. The remaining 17%, 10%, 15%, 6% and 10% were occupied by hunting, fishing, gathering, logging and trading respectively (Fig. 10).

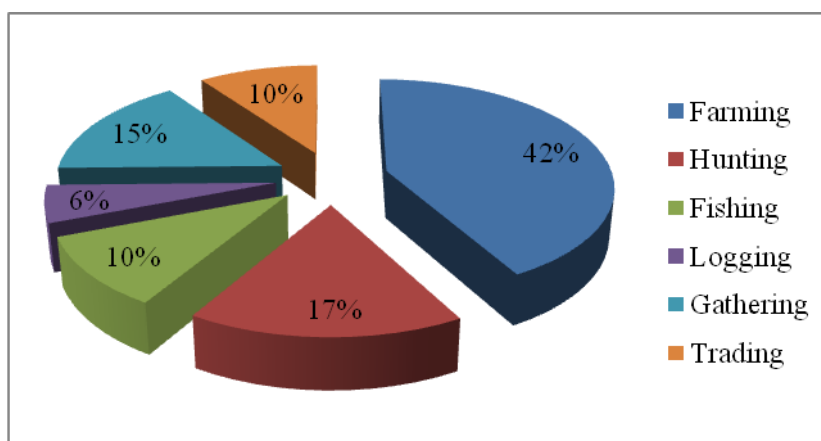


Fig. 10. Occupation of respondents

As presented in figure 11, the younger population is highest in all the activities (farming (43%), hunting (17%), fishing (10%), gathering (15%) and petty trading (10%) and logging

(6%). Working age of 15-59 is recorded highest in all activities with the most being farming. Although farming is the highest activity for the old age, their farming activities are lower as compared to the ages of 15-59. Among all the ages, farming, gathering, fishing, petty-trading and hunting are the major source of livelihoods of the people.

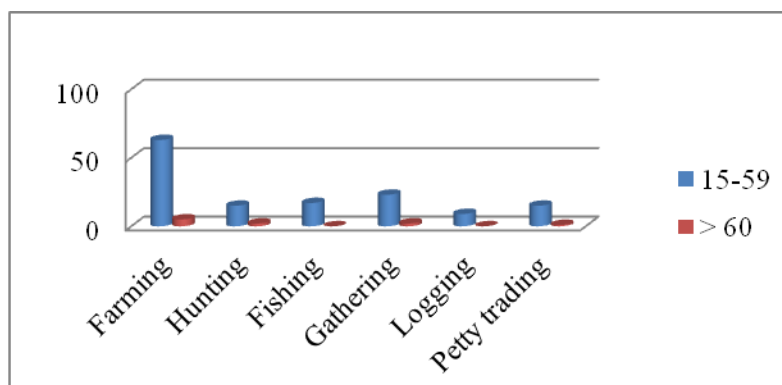


Fig. 11. Age and occupation of respondents

5.1.4 Decision-making process in the household

Decision-making in households in all communities (Table 4) were more or less the same except for Ikondo-Kondo I community where there is a slightly higher percentage of consensus in decision-making between husband and wife.

This is because most of the men in Ikondo-Kondo I are usually away from home either to the former settlement or in nearby cities in search of jobs. Women as a result take up all responsibilities in the household and community than men and as such, more knowledge on household and community issues compared to men. This has made some men to consult women before taking some decisions.

Table 4. Decision-making process in the household

Community	Husband	Both	Total
Ikondo-Kondo I	15	11	26
Fabe	16	4	20
Lower Fossi-Mondi	18	2	20
Bechati	33	9	42
Total	77	31	108

Field Survey, 2010

The traditional norms from ancestral lineage still have great impact on these communities. It is a male dominated society and most decisions in the household are made by men with little or no consensus between husband and wife. In some cases, women are consulted if only they are elderly or have specific knowledge on specific issues. In this case, they are consulted in private but only the men are allowed to speak on behalf of the household. Women on the other hand are obedient to tradition and do accept their position as they prefer men to take decisions on their behalf.

However, the system is gradually fading away as the young generation due to education and exposure to modernization do not agree with the system. They think it is socially unacceptable to object someone from voicing his/her opinion.

5.2 Household Characteristics

5.2.1 Family system

In both research communities exist mainly two types of family systems namely the monogamous and polygamous systems. Monogamy is a system of marriage between one man and one woman while polygamy is a system of marriage between one man and two or more wives.

About 65% of the total households had a monogamous marriage system in all the research communities (Fig. 12). In this respect, Ikondo-Kondo I, Fabe, Lower Fossi-Mondi and Bechati are represented respectively as follows (24%), (19%), (28%) and (29%). About 35% of all households in the research communities are polygamous families. Generally, polygamous marriages were seen more in the BFA and have been influence by foreigners living in these communities. It also occurs in cases where a young spouse loses the husband and is made to marry the brother or uncle of the deceased.

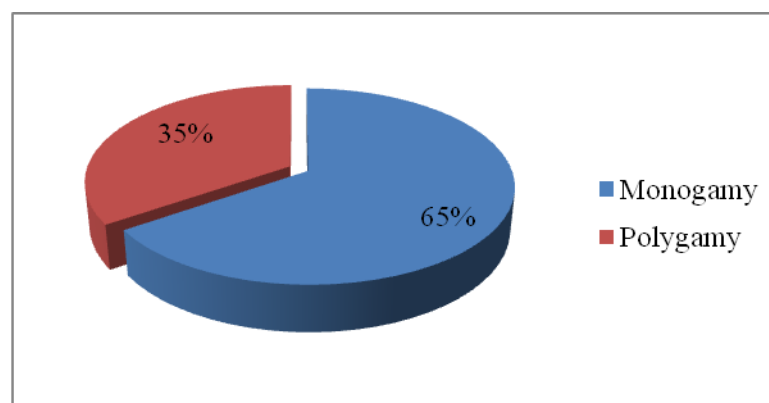


Fig. 12. Marriage systems of respondents

5.2.2 Marital status

A typical traditional society in Africa is closely attached to family orientation and as such, it is reflected in their day-to-day lives. The researched communities were characterized with statuses such as single, married, divorced/separated, widow. According to figure 13, more than half of the respondents with 51% are married. Also worth noting is the single population with 26% and the widowed with 10% (Fig. 13).

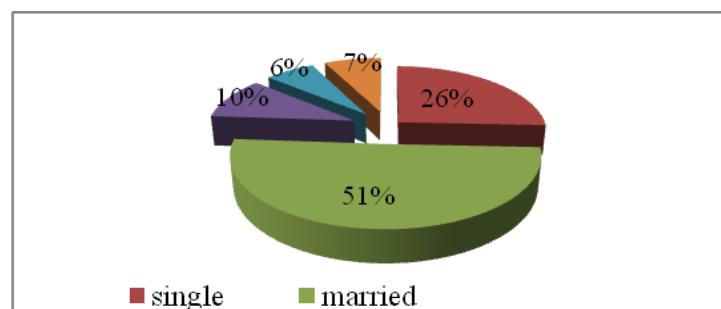


Fig. 13. Marital status

5.2.3 Number of dependence

The research communities are highly polygamous and as such are attached to the system of extended family. According to fig. 14, most households have dependents of less than 4 (57%), followed by the number of dependence between 5-12 with a percentage of (37). Household size is very important on forest management and sustainable livelihoods as the larger the household size, the greater their impact on the forest and its resources. More than 50% of households have dependents between <4 to 12 (Fig. 14).

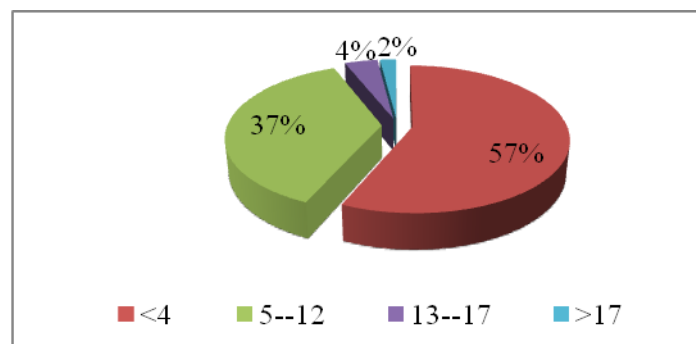


Fig. 14. Family size

5.2.4 Religion

Christianity and tradition are the two main belief systems practiced in the studied areas. From the sampled households, 38% were found to believe in tradition and customs, 18% in Christianity and 44% practice both belief systems (Fig. 15). Most respondents preferred the practice of both systems. According to a respondent from Lower Fossi-Mondi,

“Christianity is a foreign religion from the “white man country” and our tradition has existed for generations and is our identity. We cannot abandon it. We are bound to practice both as they have their positive and negative sides. A combination of the two will lead to a peaceful and better society for all. I think we can manage it”

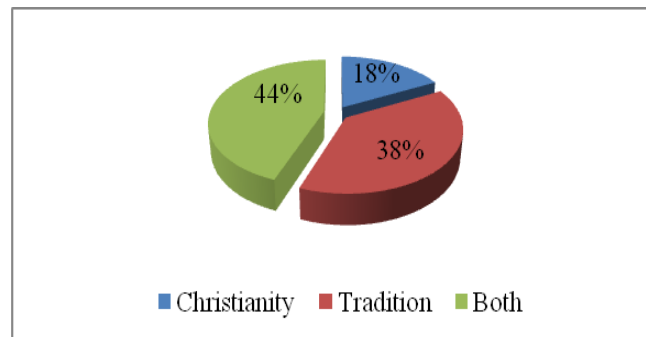


Fig. 15. Belief systems

Figure 15, shows that a majority of the population (44%) practiced christianity and traditional belief systems. Few have been converted from the traditional belief system to christianity. There is a general awareness of christianity in all the research communities. In Ikondo-Kondo I village, there was a glaring example of both practices as a traditional hall (Epkwe) used for traditional ceremonies had the writings of the catholic denomination on its walls.

Chapter Six

Forest management practices in the KNPA and BFA

Forest management is an important issue in the research communities as destruction or degradation would have direct impact on their survival. Some form of management practices had existed in both research communities before the formal system of management introduced by the state which has evolved from the pre-colonial to the present era. This introduction of forest management systems shows how important forest is to the state and local people.

6.1 Forest management in pre-colonial Cameroon and colonial influences

Cameroon like many other nations has undergone changes in order to improve on the management of its forests and resources (Lowry, 2003). The nation has witnessed transition from one era to another in environmental issues especially in the area of natural resource management (Mbatu, 2006). Information in relation to the history of forest management in the research communities was obtained from elders in the various communities, the Divisional Delegate for Ndian, conservators, game guards and some extension workers working in the communities. Information was also obtained from the Korup library in Mundemba and ERuDeF office in Buea.

6.1.1 The colonial era

This era started after the annexation of Cameroon by the Germans in the 1890s. The arrival of the Germans led to a shift in the management system from the indigenous people to the state (Adeyoju, 1976). All natural resources and land were considered as state property. A formal institution of a forest management administration led to the alienation of local communities from the vast areas of land (Adeyoju, 1976) considered as theirs. In 1882, the first natural reserve, the Limbe Botanical and Zoological Garden was set up followed by the establishment of plantations in the coastal areas. The Forest Service (FS) created in 1912, encouraged harvesting of timber by setting up provisions for logging through extraction techniques and enforcement of cutting diameters for timber (Adeyoju, 1976; Mbatu, 2006).

Britain and France took over the management of Cameroon forest after the defeat of Germany in WW1. Although both powers granted the local communities usufruct rights over land, they owned trusteeship over the forest. The jurisdiction over forest was with the FS. The local communities could only extract resources from the forest for household consumption (Amanor, 2004). During this period, the British policy recognized and preserved the native rights of the communities. This differed from the French and German policies of “*terres vacants et sans maître*” and “*herrenlos*” respectively where they ignored the rights of indigenous populations (Egbe, 1997:9).

In 1935, the French forest code introduced a license to a system of logging that granted commercial rights over forest products. While the French encouraged logging practices especially in the eastern part of the country (Adeyoju, 1976), with logging concessions and extractions exported to France, Britain adopted the policy of indirect rule in the management of forest resources. Through this system, traditional laws and institutions were retained as long as they did not interfere with natural justice, equity and good conscience (Anyangwe, 1987 in Egbe, 2012). Policies to be discussed in this section are based on the British colonial rule since the Korup forest area (British Cameroons) was under the authority of the British.

The Forestry Department and the Native Administration (NA) units were established by the British. Through the policy of indirect rule, these units controlled all unoccupied land and forest resources (Jua, 1999; Chilver, 1963). Between the 1940s and 50s, forest Reserves were established all over the territory and forest resource management was extended to the native administrators (Chilver, 1963). Forest governance was vested in the hands of the British Crown with headquarters in Nigeria. Local chiefs who controlled issues on land and forest in the communities were answerable to the British Crown.

Although local chiefs had some level of authority, deviation from the official policy of the British was not allowed. Traditional authorities like chiefs in the system of indirect rule were answerable to the forest service of the British rule. Although they participated in developing projects and creating forest reserves, the forest department they had no legal rights for intervention (Amanor, 2004). However, to an extent, the colonial regime recognized the role of the local institutions and laws in its management policy.

6.1.2 Early and post independent era

- **Korup National Park Area**

The post independent years were characterized with bureaucracy that affected the management of forest in Cameroon. Unlike the British colonial order No. 25 of 14 October 1937 which led to the establishment of the Korup Native Administration Forest Reserve (KNAFR), where rights were given to villagers to hunt, fish, collect forest resources with regular checks, mid 1960s marked the official control and ownership of forest by post-colonial state (Malleon, 2000).

The first forestry legislation was established in 1974 according to Ordinance No. 74/357 of 17 August, 1974 which called for national integration and development agenda of the independent state (Eyong, 2009). It was replaced by Ordinance No 83/969 of 12 April, 1983. Decree No. 83/170 of 1983 which followed suit established laws on national parks in Cameroon. This decree prohibited hunting, fishing, logging, farming and gathering in national parks. The establishment of a presidential decree No. 86/1283 of 30 October, 1986 led to the establishment of the Korup National park. By this, all extraction rights of communities around the park were withdrawn.

The inadequacies of the 1986 decree to preserve the forest led to the promulgation of Law No 94/01 of 20 January, 1994 that called for participatory forest management and the adoption of the concept of community forestry (Eyong, 2009).

This law became applicable in 1995 with the establishment of a National Forestry Action Plan and National Environmental Management Plan in 1996. An example of decrees and laws with relevance to the study case (Korup National Park) are stated in table 6.

Table 6. Relevant forestry legislation to KNP

Date	Laws, Decrees and Orders
14.10.1937	Order No. 25 established the Korup Native Administration Forest Reserve
30.10.1986	Decree No.86-1283 established Korup National Park (KNP)
20.01.1994	Law No.94-01 established forestry, wildlife and fisheries regulations in Cameroon
19.04.1994	Order No 037-CAB-PM classified KNP as Category One PA with priority protection
20.07.1995	Decree No 95-466-PM established conditions for implementation of wildlife regulations
18.12.1995	Decree No 95-678-PM establish indicative framework for land use in the southern forest
1996	National Forestry Action Plan and National Environmental Management Plan
10.04.1996	Decree No 96-237-PM defined the conditions for the functioning of Special Fund provided in the Law 1994 related to forestry, wildlife and fisheries
05.08.1996	Framework Law No. 96/12 on the Environment
21.12.1998	Decree No 98-345 of organized Ministry of Environment and Forest

Source: Korup Park Management Plan (2002:40)

In the 1990s, Cameroon experienced a major shift of paradigm in government policies with respect to how best the forest can be managed (Mbatu, 2006). Decentralization of authority or participatory natural resource management by devolution of power to local user groups has gained momentum over the years (Banerjee, 1997; Meinzen-Dick and Knox, 1999).

Although the concept of participatory forest management is now an acceptable and recognized tool in environmental and development policies in Cameroon, its realization is still to be

accomplished. Information from informants and group discussions reveal that, although it is still to be realized, the decrees, orders and laws issued by the government are contradictory making enforcement difficult (Amanor, 2004). In KNPA, chiefs appointed by government to represent local communities are stationed in Korup Park Service office in Mundemba as workers. They visit their families rarely and could go to the village to resolve community issues only when the chief council is not able to handle. These chiefs have very little interaction with the people they claim to represent. There is a need to use the existing traditional system and its leaders since they know the needs of the community rather than to hand pick leaders as it might have an influence on the management of forest.

The contradictions within decrees and laws have rendered application difficult. Some state authorities undertake certain actions to justify their claims based on legislation. For instance, a decree in 1983 states that in order to hunt with a firearm, an application must be written and approved by state authorities. The same decree further bans all types of hunting with firearms. With these, ecoguards find it difficult to execute their functions and as a result, corruption becomes the next alternative. More so, due to the cost and complex nature of the application process, many hunters resort to illegal use of firearms and when caught tend to bribe the authorities concern.

KNP is considered among the first Integrated Conservation Development Projects (ICDPs) in 1986 according to Order No. 036-CAB-PM is still endangered. KNP classified under category I for protected areas after eight years was still placed under protected area with high priority status instead of being an example for other reserves (Eyong, 2008). Given that it is a protected area, after eight years it should have been an example for other reserves to emulate but it was placed in high priority and protection status.

▪ **Bechati Forest Area**

Unlike KNPA, the BFA until recently have received little attention in terms of conservation and management of its resources. The Bechati forest area currently has no legal management status; however, management activities are being carried out in this forest given its rich and diverse nature. Lebialem highlands in which Bechati forest area is part is within the context of Cameroons Forestry Action Programme dealing with protection and management of afro-montane forests in Cameroon.

Apparently, ERuDeF is the major local organization working in this area together with some donor agencies in areas such as environmental education, alternative income generation activities and capacity building.

6.2 Cameroon forestry policy

Cameroon forestry policy is a component of the national strategy for enhancement of rural economic activities and sustainable management of forest resources with the state as the main body operating under the Ministry of Forestry and Fauna. It defines the general forest policies and laws and grants rights to logging companies. Since 1981, Cameroon environmental policy has undergone major reforms resulting in the establishment of the 1994 forestry legislation (Law N° 94/01 of 20th January, 1994) aimed at regulating forestry, wildlife and fisheries and Law N° 96/12 of 5th August, 1996 for Environmental protection. Alongside these reforms was the development of some measures in 1996 to define issues such as access to forest rights, protection, taxation, management of flora and fauna and logging practices (Cerruti et al., 2008). Conflicting issues resulting from the implementation of the 1994 and 1996 laws led to the amendments in the previous decrees:

The forest system Decree N° 2006/0129/PM of 27 January, 2006 modifying and completing the provisions of Decree N° 95/531/PM of 23 August 1995 and Decree N° 2007/0342/PM of 7 March, 2007 modifying and completing some provisions of Decree N° 95/531/PM of 23 August, 1995 establishing modalities for implementing the forest regime.

Reclassification of protected fauna Decree N° 0648/MINFOF of 18 December, 2006 establishing the list of animals in protection categories A, B, and C, and Decree No 0649/MIIFOF of 18th December, 2006 describing the distribution of animal species whose killing is authorized as well as the latitude of killing per type of spot hunting.

Classification of special forest products Decision N° 0336/D/ MINFOF of July, 2006 establishing the list of special forest products of particular interest to Cameroon.

Small scale forest logging permits Circular N° 0131/LC/MINFOF/SG/DF/SDAFF/SN of 20 March, 2006 relating to procedures for issuing and monitoring small scale logging permits.

The 1994 forestry reforms led to the establishment of permanent and non-permanent forest estates. The domain of the permanent forest included production and protected forests classified in the public or private domain. Protected forest (protected areas) comprised of reserves, biospheres, national parks and botanical gardens. Research, ecotourism and education are allowed in these areas and in other protected areas such as wildlife reserves, forest reserves and forest and marine sanctuaries, hunting and fishing are not allowed. According to article 22 of the 1994 Act, permanent forests cover at least 30% of the national territory and represent the ecological diversity of the country (De Wassiege et al., (eds) 2008).

The forestry policy aimed to develop all components of the Cameroonian forests by ensuring conservation and sustainable use of forest through the involvement of the local population and creation of community forests. For the purpose of this research, policy analysis will be based on policy framework on community forestry established in the 1994 forestry law.

Non-permanent domain consist of community forest (5000 ha) designated to be managed by municipality through legally recognized associations or cooperatives. The new decentralization laws of July, 2004 Law N° 2004/017 of 22 July, 2004 on orientation and decentralization; Law 2004 N° 2004/018 of 22, July on establishing the rules that apply to communes led to the establishment of communal environmental action plans and forest regeneration actors. While communal forest are protected by law and no conversion to other land uses is allowed, community forest is situated in the non-permanent forest zone with a maximum area of 5000ha under the jurisdiction of the Ministry of Forests and Fauna (Cerruti et al., 2008).

A community forest is “a forest forming part of the non-permanent forest estate, which is covered by a management agreement between a village community and the forestry administration. Management of such forest is the responsibility of the village community concerned, with the help or technical assistance of the forest administration”. Article 3(11) of Decree 95/531/PM of 23 August 1995. (Cuny et al. (nd)

Community forest answers one of Cameroon’s concerns on forest management which is the involvement of the population surrounding the protected areas so that they can have a fair and equitable share of the proceeds from extraction of forest resources. According to 1994 forestry law, the establishment of the state forest should not deprive the local communities of their usufruct rights although these rights can be limited if contrary to the purpose of the forest. In this case, the local communities are to be compensated (Law N° 94/01 of 20 January, 1994). Although the policy allows the local population to enjoy usufruct rights, they don’t have substantial share of the proceeds from commercial exploitation of forest resources. This has led to non-enthusiastic attitudes of local communities towards conservation.

According to the law, all logs with exception of artisanal logging conducted in community forest are required to be transformed or milled before exportation. This would add value in-country and provide jobs to the local communities. The forestry law was based on the assumption that transformation capacity would be limited by constraints placed on the rate at which concessions may be exploited. It however backfired as lack of limitation on milling

capacity led to far-reaching consequences. International companies have dominated logging industry in Cameroon. MINEF has shown more interest on forest exploitation than protection and management probably because it brings more revenue to government.

Revenue-sharing mechanisms with local communities and government are not transparent. As stipulated in 1994 law, the strategy of annual fee gives rights to local communities to benefit on taxes from forest exploitation. Logging activities are taxed by calculating the volume of wood felled, on a per hectare basis or on the volume of wood exported. From the taxes, 50% is distributed to the local communities where logging occurs, 20% to councils, 20% to FEICOM (Special Council Support Fund) and 10% to the affected communities (Freudenthal et al., 2011). The annual forestry fee framework warrants that funds for local communities pass through councils. However, funds have failed to reach the local people and the few projects implemented with these funds seldom match the needs of the communities. Respondents from both areas revealed that even little funds which trickle down to the local communities are often misappropriated by local elites. As a prerequisite for disbursement of funds, members of the community have to establish a legally recognized association which often is done by elites, considered more knowledgeable by the community. Another mechanism for benefit sharing used by the government is direct payment for services rendered in forestry jobs but usually only a tiny proportion of local people benefit from it. Based on these mechanisms, distributing revenue from forest resources to local communities would not benefit the entire community. Communities are hardly aware of their rights (percentage of tax revenues or even the amount due them). In several instances, indigenes and even some councilors were not aware of the amount of community revenue found in treasuries.

Cameroon forestry department recognizes the important role women play in activities in the forest and considers them as a target group in conservation strategies. Women make up more than 51% of the total population and about 84.5% live in rural areas with 92% who live off land (Mengang, 1998). They are responsible for fetching firewood, gathering hay, fruits, small animals, harvesters of forest products and are custodians of traditional herbs (Mengang, 1998). Although Cameroon government has acknowledged the need to involve women in the development process by creating ministries such as Ministry of Women and Social Affairs (MINASCOF), Ministry of Economics and Finance (MINEFI), and departments (Community Development) to assist women, little has been achieved. There is lack of empirical evidence on the involvement of women in forest management programmes in local communities in

Cameroon. In conformity with this study, few studies indicate low participation of women especially at decision-making level in forest management issues (Oyono et al., 2006).

A press released from the Cameroon REDD community consultations and civil society workshop (2010) revealed that indigenous people in Cameroon have called for a new bottom-up and rights based approach to forest protection based on the recognition of rights and community control over forest and conservation areas. An indicator to the government and conservation NGOs to rethink their strategy and consider community concerns in community based forest management. In order to ensure sustainable forest management, there should be clarification of rights to land, territories and natural resources ensuring that all policy actions recognize and respect rights to land ownership. Reforms should be made to include detail procedures on inclusion of indigenous and local communities in the management process rather than much emphasis on the involvement of logging companies and organizations in establishing and managing protected areas (Freudenthal et al. 2011). There is a need for the 1994 forestry law to consider the consultation of local communities in decisions that would result to changes in their access to resources (Law N° 94/01 of 20 January, 1994).

Although literature shows that Cameroon forestry policy has undergone major policy shifts from a centralized form of management to a more decentralized system that seek to incorporate the local communities, many opinions have emerged as per the success of this approach. To some, decentralization is a panacea to all the difficulties related to unsustainable management, to others no much change has been recorded and yet to some, it brings disorder in resource use causing rivalry in local governance. However, the ambivalence notions are likely related to inconclusive empirical evidence. More so, there is a lack of empirical studies which has moved beyond qualitative research of selected localized experiences where inferences can be drawn on tendencies about governance outcomes.

6.3 Existing management systems in the research communities

There exist two kinds of management systems (formal and the traditional) in the Korup National Park Area and the Bechati Forest Area. In both management systems, several groups of people and institutions are involved performing distinct roles.

6.3.1 Actors involved

In both management systems, it was realized that various actors are involved. While the formal management system encompasses the government, community and institutions and

organizations, the local management system is made up the local community comprising of local authorities, villagers and local institutions. All the systems are geared towards sustainable forest management. In all, several actors participate in forest activities in different areas and at different levels. They include the state, conservation projects, local communities (men/women), logging companies, safari hunters, poachers etc.

The government under the Ministry of Forest and Fauna is the central actor in the management of forests in Cameroon. It relates with all the actors involve in the management of the forest. It stipulates rules and regulations to local forest users, conservation projects, safari hunters and local communities. The rules are transferred to the other stakeholders by the Divisional delegation of forestry through conservation projects and local administration. They are usually autocratic rather than participatory as they are decided at the top by government officials (Djeumo, 2001) and presented to the conservation projects for implementation.

Conservation projects through extension worker, guards etc work with local communities by controlling their activities in the forest. They also monitor them to see to it that the rules and regulations instituted by the state are obeyed. Violators are punished. Conservation projects act as intermediaries between the government and the communities. Information from the state is transmitted to the local communities through conservation projects and feedback to the state is usually by these projects through reports and workshops.

Safari hunters are recognized by the state and are involved in controlled used of forest resources like killing only certain quantity and species of animals in a given forest. They also need permits in order to hunt.

Poachers exhibit illegal hunting activities as they are not permitted to carryout hunting activities in the forest. As a result, sanctions are placed on them by the government and at times local authorities especially when animals considered as totems by the local people are killed.

The local community is made up of ethnic groups, the elites, men, women and youths. These groups of people use and manage the forest in various ways. Cameroon is noted for its ethnic diversity just as KNPA and BFA with many ethnic groups. These groups exhibit different cultures and attitudes towards the forest. The use of local knowledge in forest management based on customs and norms known as traditional or local management system (Che, 2008) is

common among ethnic groups. This method aims at preventing forest loss thereby increasing productivity and regeneration.

Local associations are recognized by the local administration and are involved in the use of forest and its resources. While some are economic in nature that is, carry out activities to sustain the family (income generating activities), some are cultural (Epkwe rites, birth and death rites) and others developmental (construction of bridges, community halls etc.).

Elites are considered as actors in the management of forest. They are the educated members of the local communities. The elites are well-respected by the society and regarded with high esteem. They have the capability to sensitize and even influence the decisions of the local people.

Men in these communities play a major role in forest management. They are considered as the breadwinners and heads of households and as such, major decisions in relation to household and community activities which have an effect on the forest are usually taken by men. The communities are patriarchal societies giving men an edge over women especially in decision-making on behalf their families.

Women are the main livelihoods providers in the local communities. They are concerned with daily sustenance of families usually with products from the forest. They are solely dependent on forest and its resources for daily needs and as such, are constantly in connection with the forest.

Youths take part in forest activities as they assist parents through subsistence and extraction of forest products. They are more active in illegal hunting and extraction of forest products for sale in nearby towns and cities for income. This is to enable them meet up with school fees, buy books, afford basic needs (clothing, leisure, health etc.).

6.3.2 Formal systems of forest management

Cameroon's forest sector is of primary importance to the nation and since its 1994 legislative policy, several changes have been made so as to improve on the management of this rich resource. Based on the forest legislation, the formal management system is an approach whereby the government uses institutions and local organizations to work with the local community to enforce forest policies that will benefit all the actors involved especially the local communities. With this approach, laws and regulations on forest management adopted

by the state are supposed to be presented to the local communities for dialogue and eventual implementation through mutual acceptance. This is usually done in collaboration with international, national and local organizations and institutions who oversee the eventual applicability of the policies. The decentralization of powers to involve the local people is considered as a way forward by the Cameroon government in forest management and the implementation of this policies has achieved little success. Formal management system is practiced in both research areas as seen below:

- **Conservation organizations in the KNPA**

Conservation organizations found in the KNPA are both international and local organizations aimed at improving the management strategies for a sustainable forest. The German Development Cooperation (GIZ) working under the programme “Programme Sectoriel Forêts Environnement” (ProPSFE), works with the local communities in and around the KNP on conservation issues. It works with the local communities on capacity building and is working on the establishment of council forest to improve on the management of natural resources in the area for the wellbeing of the rural communities. It is a process whereby a group of villages under a chosen leadership represented by all villages and involve collaborate with the government to manage the forest. Local councils are created by the organization in every village having part of the council forest in their jurisdiction. This has been greeted with some agitation as some villages have existing conflicts which may hinder effective co-operation with other villages.

Also, present in the KNPA is a local organization known as the Korup Rainforest Conservation Society (KRCS). It advocates for participatory forest management and is made up of mostly pro-conservation minded members of the local communities and some others (from different parts of the world) who are out to use their expertise in ensuring sustainable management of tropical forest while increasing the involvement of the locals. KRC since 2009 is working in collaboration with Pro-Wildlife and WWF-CPO to prevent conversion of forest into palm plantation. It is also involved in assisting researchers with guidance, ensuring the recruitment of locals in different capacities in park activities and environmental education.

- **Conservation projects in the BFA**

In the BFA, ERuDeF, Wildlife Conservation Society (WCS) among others have made great strides towards forest management and conservation. These organizations seek to foster management of the area through promotion of community participation through outreach programmes, capacity building of the local people to be more involve in forest activities and also share responsibility for law enforcement. They also help develop alternative livelihood activities (micro-enterprises) to the locals so as to reduce pressure on the forest (non-extractive resource use).

In order to reduce over harvesting of fauna, primate sanctuaries have been created in Cross River State, Nigeria and Limbe Wildlife Centre in Cameroon. It raises awareness and the importance of monkeys and apes while acting as a safe haven for confiscated wildlife. The Limbe Wildlife centre works in collaboration with WCS through education outreach programmes in the South West Region. These organizations also work in collaboration with international organizations as they take up responsibilities after the departure of international partners.

Although, many organizations have attempted to implement the 1994 forestry policy in their project areas, the procedure to implement the policies is lacking giving way to autocratic management and corruption. Most decisions are imposed on the local communities rather than a consensus. The fact that most organizations have created new institutions in the villages and appointed leaders usually the elites has made the local people not to be involved in their activities. As a result, only a few individuals do benefit from conservation projects. Although the main actors are the state, organizations and the local people, to larger extent organizations backed by the government implement the policies on the local people with little or no dialogue. Conversations with elders of the Fabe community and focus group discussions in Bechati reveal that the communities are not very happy with the manner in which the NGOs carryout forest management activities. Villagers argued that most often, their opinions are not considered. This new management approach instead of benefitting local development has undermined traditional power structures leading to the deterioration of relations between elites and local communities over management of forest.

The management system is weak as it does not have effective mechanisms and methods to monitor the level of success and to punish violators. This has resulted to increased corruption and lack of transparency at all levels of management. Benefits from management are not

received by the targeted actors. For example, proceeds from logging companies to the local community are hardly received. Poaching though prohibited by law is seen in all of the communities. Poachers bribe ecoguards and make away with large hunt for sale. An ecoguard in KNPA confirmed this statement;

“We are poorly paid, yet we spend sometimes weeks in the forest meanwhile, our bosses sit in offices and collect all the money from permits and taxes from loggers and hunters. We need money to survive. I have no option but to collect mine from the poachers.” Anonymous

To a larger extent, the formal management system as stipulated in the 1994 forestry policy has been inclusive in that so many actors are now involved in the management of forests. Unlike the past where the system of centralized management was practiced, today, there is participatory management though full application as defined by Agrawal (2001) is still to be attained. In Cameroon, community participation is viewed especially in community forests in collaboration with organizations and state institutions.

6.3.3 Local or traditional management practices

The traditional form of forest management has existed in these communities for centuries moving from one generation to another. Before the institution of contract system of management of resources by the colonial administration, the indigenous people through the law of status regulated the use of resources. It is a management system whereby the forest resources are managed through traditions and customs based on local beliefs, tenure arrangements and regulation. Although tenure arrangements and property relations in the communities are governed mainly by customary law, it is not recognized by statutory law (Egute, 2012).

Hierarchy, customs and traditions are basis for the law of status. The traditional ruler or chief has paramount responsibility and overall say over every aspect in the village including the management of village forest resources. The chief who is most respected and feared works in collaboration with family heads, quarter heads and sub-chiefs to oversee that laws are respected. In relation to extraction of forest resources, the decision of local authorities are considered especially when the resource is endangered, for example, what should be hunted, when, where and what quantity. Violators are grievously punished. In all, natural resources are considered the property of the local people and are supposed to be managed by them through local institutions such as traditional councils, societies, women and youth groups.

▪ **Taboos**

BFA and KNPA communities believe in taboos. They believe in animal totems. They attribute the spirit of a human being residing in these animals and if killed, the individual dies. The animals used as totems differ from one community to another. In Ikondo-Kondo I, the villagers explained that they do not kill animals like elephants, crocodiles or buffalos at random because most of the villagers have totems of these animals. In conformity to Roschenthaler, 2003:34, killing them has mystical implications and necessitates the premature end of individuals. In Ikondo-Kondo I, it was purported that some years ago, a hunter was “beaten” in the forest by a Chimpanzee which they believe had a soul of a human being. As a result of this, Chimpanzees are not eaten in this community.

Over 83% of respondents in BFA agreed that animals are used as totems in their community. Animals mentioned include gorillas, chimpanzees, leopards, monkeys, owls etc. In like manner, Ikondo-Kondo I and Fabe do not kill some animals for fear of destruction of human-beings. According to reports from some villagers, a hunter once killed a gorilla in Bechati and the owner of the totem died as a result. Conversations in the communities showed that some villagers were of the opinion that gorillas should be preserved in order not to kill villagers who have gorilla totems.

In all the communities, both men and women use animals as totems. This is labeled as witchcraft and is not discussed in public. Totemic kinship is usually handed from one generation to the other. In Bechati community, a youth recounted that when your mother or grandmother loves you so much and always hands you gifts like food, drink after eating, there is a likelihood that she will hand over her totem to you before death.

Taboos are seen in the area of food in all the communities. Taboo in eating habits was highly noted among women. Most villagers were either restricted by local customs or for personal reasons not to eat certain plants or animals as food for fear of mysterious happenings in their lives or families. In Bechati and Lower Fossi-Mondi communities, villagers are restricted from eating gorilla since they have a belief that they are totems. Parts of gorilla are used for medicinal purposes like the skull, dung, hairs and bones (Etiendem et al. 2011). In addition to village taboos, the villagers from BFA held some personal reasons for not eating chimpanzee and gorillas.

According to a woman named Mme Folefac from Lower Fossi-Mondi;

“.....eating an animal that is used as a totem can result to ill luck in the village. It is difficult to identify that which is not a totem and as such, you can eat a human being. And you know what it means in this village. Even if everybody eats, I and my children will not”.

Respondents explained the morphological similarities between human and gorillas. According to one respondent, it is difficult to eat an animal that looks like a human-being. It was said that pregnant women do not eat gorillas or they will bring forth gorilla-like off-springs.

In the KNPA, certain types and parts of animals are not eaten by pregnant women for fear of miscarriage. Specific types of snakes, duikers, chimpanzees, tortoise, leopard among others were not eaten by pregnant women for fear of severe pains, excessive bleeding during childbirth and a reduction in the flow of breast milk after birth. Some women believe that animal parts such as a skull of a chimpanzee, deer etc. can cause fetal abortions. As such, they do not eat these animals. One woman in Fabe village narrated a situation where the daughter almost bled to death after eating meat from a chimpanzee. Since then, the chief sent a warning throughout the village for all pregnant women not to eat meat from taboo animals. Apart from the taboos created by the village through its traditional rulers to male and female, some men indicated that they do not eat specific animals because of membership into some traditional associations. According to the associations, eating these animals will weaken their powers. Hence, in order to sustain the power in their traditional associations, animals are also being protected.

- **Sacred sites**

Shrines and temples are local management practices in forest management that have existed for generations. Rural communities have demarcated and preserved specific areas in the forest for cultural, ceremonial, spiritual and utilitarian purposes. These sites are reserved for traditional rites and ceremonies with the belief that these areas are inhabited by ancestors. To compare these sites with other forest areas around the community, they are richer in terms of plant species and diversity.

Men are involved in carrying out the rituals to the gods of the forest while women have the responsible for providing food during the ceremonies. According to the customs of the Lower Fossi-Mondi people, women at certain periods of the year sacrifice food at the shrine to the ancestors for protection and better crop yields. Also, food and other traditional instruments are taken to these sacred places to appease the gods of the village in case of an outbreak of

epidemic, lack of rainfall etc. This is to strengthen the ancestors to fight with the opposing spirits on behalf of the community.

Although all the communities believe in this tradition, Lower Fossi-Mondi compared to others was more reliant on totems for protection. They believe that their ancestors are still alive and that the forest is their abode. During the research, one could observe that at the backyard of almost every compound in this community was seen either a tree or a constructed shrine where libations rites are carried out at certain periods of the year to appease gods. According to the villagers, different gods govern different substances such as gods of the moon, fertility, fire, trees, rivers etc and as such, their dwelling places are to be protected from bush fires, human damage etc. Responses indicate that a pentecostal church named Full Gospel which does not believe in totems and ancestral spirits has been burnt down twice to prevent them from convincing the villagers to abandon tradition.

Responses from Ikondo-Kondo I indicate that their traditions have been lost as a result of resettlement. They complained that the new settlement has no land for their shrines and they are prohibited from moving into the forest. According to an elder in Ikondo-Kondo I, “there is no bush for our village juju, “Nyamkwe”. Unlike a previous study which indicated that the Oroko tribe to which Ikondo-Kondo I is part had no burial grounds or shrines (Malleon, 1999), this study shows that in the former settlement, shrines and graves exist. The villagers bury the dead inside their houses for protection. A case was reported of a sacred grove of Ndekedekpwe in Ikondo-Kondo 1, a protected area along the river Ndekedekpwe. In this community, no activity like fishing or clearing is supposed to take place in the area. The area is believed to be inhabited by totems and powers of the leaders of the village and as such, the area is to be protected. This river however, contains a lot of fish probably as a result of protection. Information from some members of the community revealed that some years ago, a man disobeyed the laws of the land and fished in the sacred grove. He was seen by some women fishing crayfish on the opposite side of the grove which is an unrestricted area. The matter was reported to the chief’s palace where he was summoned before the chief and his councilors. The fisherman pleaded guilty and was asked to pay a fine in cash and also provide some wine “*afoko*” to the local council. This made many villagers not to do fishing in the area for fear of punishment.

The resettlement programme of Ikondo-Kondo I also affected their traditions. It led to the construction of homes made of concrete with corrugated zinc instead of the traditional mud, sticks and straw used in the former settlement.

An example is seen where though a traditional hall for performing traditional rites was constructed by government authorities, villagers prefer to move to the forest to perform traditional rites in their old shrine. As a result, not everyone is able to move to the forest especially the elderly members of the community. This has reduced the number of performances of village rituals as in the past.

Respondents of Bechati and Fabe communities also concerted on the fact that their traditions are not as vibrant and powerful as in the past. A member of a secret society in Bechati community stated that they cannot visit their shrines in the forest anymore. The newly established ones in the village are considered not as powerful and as such, many villagers are not interested. Also, the youths have moved out of the village for studies, employment and other purposes and when they return, they are not interested in tradition. According to the chief,

“You know the forest is different from the village, we cannot perform our activities as in the forest, the village is exposed and everybody sees what happens unlike in the forest. Many villagers are no longer interested as the rituals in the forest are more powerful. They spend nights in the forest communing with the spirits but here it is not possible. We do everything in a hall”. Chief of Bechati.

Knowledge on this form of management system has survived for many years and still being practice at the present. It is transferred using local knowledge usually through instruction, practice, observation and other traditional information exchange mechanisms (Hanyani Mlambo & Hebinck, 1996). However, transfer of local knowledge through oral tradition makes management vulnerable as external exposure, displacement or loss of key members in the communities will affect its value (IIRR, 1996). In all, the research communities, conversational interviews with elders of the villages reveal that, tradition is dying out. It does not carry the authority and charisma as in the past. Modernization has infiltrated the villages through especially migration and education. Christianity has also weakened tradition in various communities. Many churches have convinced some members of the secret cults in the communities to abandon the practice. Some of these members tend to reveal the secrets of these societies to the church and community.

- **Traditional institutions**

Epkwe is the most powerful society in the communities of KNPA. They exercise power and control over the community. It is a male-dominated society and according to informants, it originates from Nigeria. It is handed from generation to generation and male children who are unable to meet the requirements are assisted by their parents. Once considered a member of this society, the individual takes part in the governing of the community. It is usually headed by the chief of the village and most elders are represented.

The Epkwe society is made up of levels ranging from ordinary membership to inner core which is considered the highest level. With ordinary membership, you have rights to participate in the public sphere during festivities but do not have full rights and are not allowed to participate in decision-making in the inner core. The higher one ascends in the stages, the fewer its members. This is because promotion is based on hard work and commitment to the rules. A conversation with some elders in Fabe village showed that rules for promotion are strict and demanding, hence, hindering many people from getting to the highest rank. Members of the inner core take part in economic, political and cultural decisions which are then announced to the general assembly. Disobedience to community laws and rules lead to punishment through fines, community labour and in some serious instances excommunication.

The society is well respected and feared in the community. In an instance where they perform rituals, men, children and women who are not members are not allowed to see the masquerade. It is believed that if someone sees it, he may die or he/she is taken immediately by members of the group to the stream for cleansing with libations. Pregnant women are forbidden to see the masqueraders because they either have miscarriage or their babies will take the form of the masquerades.

Epkwe is the main arm of these communities responsible for executing sanctions meted on individuals or groups in the community. Recalcitrant members of other societies are sent to Epkwe for punishment. It resolves cases between families, community members and the members of the society. Different kinds of sanctions are meted by Epkwe upon individuals depending on the crime committed. It ranges from beatings (corporal punishment), fines to excommunication. For instance, some villagers stated that in the past, people were excommunicated for fornication, adultery, murder etc. but today, one can hardly hear of banishment. An elder in Fabe remarked that he cannot remember when someone was sent out

of the village. However, fines are the most common form of punishment today- usually in cash and kind such as money, bush meat, drinks and community labour.

Although the Epkwe society is very secretive, there are some activities which are carried out in the presence of the general assembly and the community. Membership begins with initiation and usually inherited but today according to some elders, some members of the community especially young men are buying positions in the society. According to Malleson 2002, some young men become Epkwe members for prestige, enjoyment and in order to take part in decisions concerning the village.

The research communities of KNPA have a linear settlement pattern and the Epkwe halls are located along this pattern between other huts in the village. The Epkwe halls are similar to other buildings in the community. The inner court is used for ritual activities and is forbidden from entry by non-members while the outer court is used for traditional ceremonies in the village.

The female society in the KNPA like in Ikondo Kondo I village called Uwom plays a greater and open role in community life and resource management. It is considered inferior to that of men and respects decisions from Epkwe. It is usually headed by the eldest woman in the village. According to some members, she has to be a member for a long time with more experience, knowledge and wisdom on its activities. It is the custom in the communities that the younger women respect the elderly women. Disobedience and disrespect to the rules is punished by the elderly in the group through fines, community labour, apologies etc. If the individual refuses to adhere to the punishment, she is reported to the Epkwe society where harsh sanctions are meted on her.

Lefem traditional society in Bechati and Lower Fossi-Mondi communities in Lebialem is regarded by the villagers as the most famous and dreaded society. Although other societies exist, lefem is noted for its influence on the daily lives of the local population. It has governmental and judicial functions. For instance, settling of disputes between members and implementation of government regulations in the community.

Lefem is a meeting place to discuss important governance and traditional leadership issues. Although membership into lefem is linked to status or rank, it is opened to all who can afford to pay their dues for initiation into the society. According to some elders, a man's rank determines the number of gongs played in his lefem. Lefem also has oathing sites where those who violate their laws or commit crimes in the community are taken to.

In these communities, there is no stated rule prohibiting women from participating. However, for the majority of women, only mafwa and the great chief's wives were seen taking part in their meetings. From casual conversations, some women concerted fact that, it is men's society and also that, the requirements prevent them from becoming part of the society. They however acknowledged that they believe in tradition and do respect and obey decisions taken by members of lefem.

- **Traditional Councils**

There are similarities in the research communities. They are traditional institutions which are respected in all the villages. Villages characterized four groups of people which constitute men, women, youths and children exhibiting different levels of power in their various communities. There is the local population known as the "commoners", the general assembly of the traditional or local council known as the councilors, the council chairman (chief council)- a representation of the chief. The founding families or lineage heads of each family in the villages are represented in the traditional council.

Traditional council is the highest decision-making body in the village with the chief or fon as the head. The traditional council has the following responsibilities; conflict resolution, organization of community development work, maintenance of peace and order in the village, collaborates with the government and NGOs, takes decisions on behalf of the entire community and represents the village. During meetings, issues discussed include families, community, forest resources, traditional laws and customs etc.

The traditional council is the law-making body in the communities and their rules and laws are respected by all members of the community. Failure or opposition could lead to punishment such as fines, excommunication and at times death penalty. The activities of the traditional council have a considerable effect on the livelihoods of the local people and forest management.

Decision-making in these communities is hierarchical with the chief considered as the highest authority. The general hierarchical structure in decision-making captured from all the research communities can be seen below;

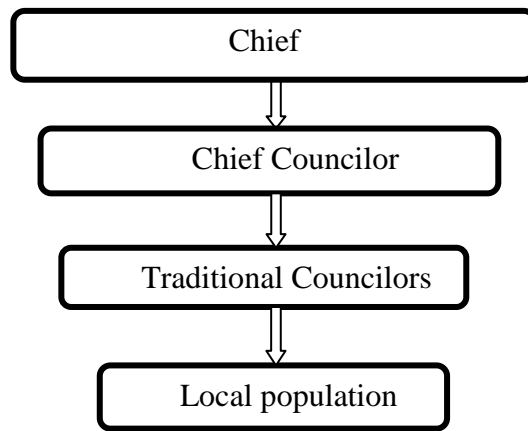


Fig. 16. Hierarchical order in the local community in KNPA

Traditional councils are different from village natural resource committees (Schmidt-Soltau et al., 2004) as they have specific objectives and activities in the villages. In Cameroon, traditional councils are recognized by the government but however, according to informants from all the research communities, there exist no significant relationship between the government and traditional councils as the villagers have resentment over government views relating to community activities and forest management. Attendance in traditional council is opened to all in the community. However, observations showed that those who attended meetings were mostly the elderly and even women who attended hardly speak during meetings. A unique case was observed in Fabe village where a young woman was interrupted when she raised up her hand in response to a discussion on community labour. An elderly member of the council reiterated that whatever is decided by the elders is to be obeyed without arguments.

“We know this community, before you were born some of us were already married with children. What we see in this community, you sitting on a tree cannot see. So be quiet and listen to your fathers” An elderly member of the traditional council.

- **Women and youth groups**

Youths and women’s groups in all the communities were social incline. With these groups, membership is voluntary and it is based on loyalty, trust and respect. They serve as a safety-net for the youths and women. They carryout activities like group work which benefit its members and their families.

Youth groups are seen in all the villages. Most youth groups identified were made up of males like in Ikondo-Kondo I and Fabe communities. Found in Bechati were several groups mixed and separate. The ages in all the groups vary between 14 to 38 years. Some villagers within the ages considered themselves as youths. Some of the youths are married with children. The groups carried out activities such as community development (constructing culverts, bridges, clearing of roadsides etc.), group work in individual farms, participation in birth and death celebrations and promotions of members.

In comparison to the communities of Ikondo-Ikondo I and Fabe whose youth groups were males, communities of Bechati and Lower Fossi-Mondi consist of separate and mixed groups. Groups made of girls and boys rarely held meetings and could only assemble during festivities such as birth ceremonies or death of a member and community work. Youth groups made of single sex are involved in group work (farm activities) and meet regularly averagely twice a month but are more regular during farming and harvesting seasons. These groups “njangi groups” are based on mutual trust and respect. In the rotating work groups (njangi), they have a calendar drafted orally on the work schedule as they rotate from a member’s farm to another. During the work, the host provides food and drinks to the others. There is no specific amount of food or drinks stated but what is provided should be enough for all the participants. If a member is occupied on the day of the activity, she or he sends someone to represent her. Members also have the freedom to choose any activity outside farming to be carryout by the group.

According to Fokwang, 2003, “the concept of youths in most African societies is not tied to fixed notions but shaped by context and time”. This assertion is confirmed in this research as the notion of youths is culturally defined. Some of the youth groups in this community include the Korup youth task force for Ikondo-Kondo I resettlement formed by the Korup project to assist in construction works. It ended in 2000 after the resettlement phase but present in this community is an active age group call Ekhan (Eyong, 2009) consists of males. In Fabe, the youth development group is involved in community development. The appellation of groups in BFA are determined by the activities they carried out like farming groups, bee-keeping groups, community development groups. These groups are governed by rules proposed and adopted by all the members and refusal leads to sanctions like fines, labour etc.

Women groups in the KNPA include Ka Changa Korup (women of Korup) in Ikondo-Kondo I and Fabe cassava women’s group, Bechati women farmers association and women’s group in

Lower Fossi-Mondi. In all communities, women's groups' main activity was farming. Also found in these communities were women self-help groups like njangi groups. It functions like a bank where they gather weekly and make contributions. Amounts to be contributed are determined by members and differ between groups and from community to community. In these meetings, the savings and credits are based on informal contracts and mutual trust between members. As a member of this group, you can be granted a loan considering your savings, longevity and behavior. These groups are structured consisting of the president, treasurer, social coordinator among others.

6.3.4 Gender and other management practices

According to Howard (2003a), gender differences in knowledge and management practices is not only related to cosmology and norms but also gender influence on the division in roles and responsibilities in terms of age, sex, ethnicity and other social factors. Not all knowledge is practical and experiential but is related rules, social institutions and cosmology (Howard, 2003a; Wiersum and Person, 2000; Turner, 2003). Ellen (1998), further pinpoints on the differences as she states,

'...individual subsistence techniques, and therefore different overall combinations of strategies employed by particular populations, have different ecological profiles: in terms of energy transfer, limiting factors and carrying capacity, the degree of human effort required, their effects on the landscape, the cultural regulation of environmental relations. But by the same token, they must presumably also have different knowledge profiles' (1998:8).

There is an intertwined between knowledge and management. In order for men and women to cope and protect themselves from vulnerability, they have developed different expertise and knowledge about the forest, its resources and uses. This difference in gender knowledge has impacted forest management and local livelihoods.

In the research communities, there is variation in the use of forest resources and management practices. Proximity to forest, tradition and customs, household (marital status, livelihood activities etc.) and individual characteristics (demography, education, class, gender etc) shape and condition differences between communities.

- **Crop diversity**

Continuous scarcity in forest resources has intensified the local people's activity on the domestication and cultivation of more than one species of crop on a single plot. Tree seedlings which are raised in nurseries are planted directly in between already planted annual crops. The trees subsequently are used in supporting crops and when they are mature, they are used as fuel wood and for production of furniture. This system of cultivation of multiple species on a single piece of land does not only prevent further encroachment into the forest land but also helps in prevent the cutting down of trees from the forest. Typical with this practice was the specific roles of men and women in the activities carried out. Men in all the research communities were more involved in the planting of tree crops and women with planting of food crops. While the men at a later stage cut down the mature trees for furniture and construction, women used the food crops mainly for household consumption. This is in order to fulfill their social role as caretakers of the home and the welfare of the family.

- **Land and water resources**

The local communities over the years have preserved streams which are a source of drinking water for the household, irrigation of gardens and by cattle. In order to preserve streams, the vegetation close to the source of the streams and along its path is preserved so as to prevent the water from evaporation. The land close to these streams consists of trees and vegetation which serve as food and shelter for the cattle.

The streams are used as a meeting point for lovers. The young men in search of life partners usually wait at road corners to meet young girls on their way to streams. It is also an opportunity for women as well as young girls to meet with others and gossip on social issues happening in the village. Disrupting this would mean disrupting social order in the society. It is believed by locals, that the water is pure, fresh and most rural people prefer it to pipe-borne water. For example, even with the borehole constructed in Fabe community, most villagers still move to streams to fetch water and do laundry.

The local management system is supplementary to the formal system of forest management in the research communities. Although the local management practices are well respected by the local people, there is a need for the formal management system as most local people are ignorant of the value of some forest resources and do carryout activities that are detrimental to forest resources. Traditional laws in the research communities do not prevent local people

from carrying out farming activities in the forest (only certain portions like altars or shrines are reserved). With the increasing demand for forest products and new markets, increased activities in the forest would lead to forest degradation and food insecurity, so the formal management system prohibiting such activities in the forest reserve would save the forest and resources from destruction. Although both systems have different approaches, all are aimed to preserve the forest and its resources.

6.4. Tensions between formal management systems and local people

Forest decentralization reforms aimed at the devolution of forest management rights to the local users has triggered tensions and conflicts among and between stakeholders in the conservation and management of protected areas in Cameroon. In order to implement the 1994 forestry law, a multiplicity of measures has been employed by government and conservation agencies mainly to ensure that activities other than research, recreation and tourism are not carried out in the protected areas. The management of the KNPA and the BFA are characterized by conflicting interests resulting to tensions and conflicts between the local people and government representatives and organizations.

The use of exclusionary measures and unjust conservation practices has been used by park authorities over the years (Messe Venant, 2009) which have resulted to poor social performance in protected areas in Cameroon. There is therefore the need to consider aspects such as rights, livelihoods and equity issues to ensure proper application of the new inclusive and rights based “paradigm” for protected area management (Freudenthal et al., 2011). The Korup Project in the KNPA since 1988 has employed several measures which include the policing and surveillance of the protected area. This is so that no human activity takes place within the park or reserve. Constant infighting between ecoguards and poachers in the forest has led to confiscation of weapons, arrests and sometimes death. This further heightens tensions between local communities, conservation agencies and government. According to responses from Fabe and Bechati communities, several villagers have been jailed for illegal hunting. Methods of penalty by imprisonment and torture have led to rivalry and tensions which have affected conservation. There is lack of cooperation and trust between the local authorities and government officials and organizations.

“The government has trespassed. How can his officials arrest my people and put to jail without seeking my opinion? We have a way of punishing culprits which we learnt from our fathers and it worked and is still working. Well, since they have the power, let them continue”.
Chief of Fabe.

The management strategy in the KNPA on relocation of park villages was met with resistance. The aim of relocating park villages was to stop their activities within the park which threatened conservation. Ikondo-Kondo I was relocated in 2000 with high cost and little conservation benefit as they still continued with their activities within the park. Although they are met with resistance, at certain periods of the year, some Ikondo-Kondo I villagers temporarily relocate to the former location within the park especially for farming purposes. They complained of land inadequacy and infertility and more so, clashes with neighbouring villages like Fabe on land and as such prefer to move to the former settlement temporarily for farming purposes.

The promise of infrastructural development was received with skepticism. Although, projects have provided infrastructures such as roads, bridges, culverts, pipe borne water; alternative income generating activities were encouraged through the provision of cassava grinding mills, piglets and cane rats. Sustainable forest management was encouraged through capacity building and formation of forest management committees.

During field work, we realized that most of the provisions were short-lived as we could hardly find a trace. The bridges and roads are bad without repairs and accessibility to these communities is difficult. The villagers lacked the knowledge and skill as the cassava mill in Fabe was dysfunctional and even the cane rats escaped. According to the villagers, the material used for construction of the fence for the rats was weak and the fence was short and as such, many canes destroyed it especially the few that grew older. The local community saw the project as deception and has continued to carryout activities in the protected area. More so, it has become difficult for other organizations to implement projects in these communities especially if they are affiliated to the government.

The failure of policy to permit some level of forest use considering the poverty nature of rural societies makes acceptance of local people that conservation of “their” forest will have a positive outcome difficult. Prohibition from forest would mean hunger and starvation as they consider the forest as a source of livelihoods. Although some developmental needs were

addressed, they were short-lived and as such, some members of the community still carry out activities in the reserved area. According to some villagers, government laws are being applied because they prevent them from carrying out activities in the forest. Reasons cited include “there is no forest for village juju, conflicts between villagers and game guards, we have no farmland and we are deprived of our identity-what belongs to us.” An example was stated by Fabe elders as four Fabe indigenes were killed for unauthorized hunting activities. As a result, a hunter in Fabe by name Mr Orume threatened some game guards who came to the village and entered the homes of villagers in search of bush meat. The conflict led to the poisoning of a game guard by a villager. Although some were against the act, others accepted government intervention as they stated that the forest is dwindling away and so are the animals. If not protected, their children will have no knowledge of how rich the forest was in terms of fauna and flora.

There is a lack of an interdisciplinary approach to integrate conservation and development like most integrated conservation and development projects (ICDPs) in developing countries (Tutin, 2002:78, Eyong, 2009). The conservator of the Korup Project is vested with authority to make decisions on behalf of the Ministry of Wildlife and Protected areas. He considers ecological issues of more importance to locals and as such, integration of the local community is not a priority. He cares less about the direct economic and social values of the local people. Unlike the case in Uganda (Kibale National Park, Columbia, etc. (Borrini-Feyerabend et al., 2004), this approach further deepens conflicts between the local people and conservationists.

The isolationist policy of the operating organizations in the KNPA has intensified confusion and tensions between organizations and the local people respectively. The separation of extension channels and institutional development activities made coordination difficult and brought confusion in the locals as they decide on which side to participate. According to Obase et al., 1997, the GTZ component of the KNP functioned independently from the Korup project as a whole. The lack of cooperation in addition to the short term of project cycles (48years) and lack of right tools and capacity kept the locals in confusion. Creation of awareness through revitalization of village natural resource management needs more than eight years to be self-reliant in conservation and development that would results to long term benefits. Some villagers have contested the management strategy opting for the traditional knowledge system for sustainable agriculture and the extraction of NTFPs like the case of Bayang Mbo reserve (Waltert et al., 2002).

Lack of communication between the conservationists and the local people is a threat to conservation. The flow of information from the law-makers to the enforcement officers and the villagers is low and at times the information does not reach the appropriate quarters. According to reports from the field, queries and administrative letters sent by the local people to the administration are often not responded to. In Fabe, a member of the hunters group who decided not to reveal his identity attested to the fact that they still carry out illegal hunting usually at night. He retorted that,

“When the cane rats which were given in replacement for hunting failed, we wrote a letter to the government asking for what to do since to obtain a permit for hunting was difficult and expensive but received no response. We cannot allow our families to perish, we forcefully moved into the forest killing whatever we find. That is why even as a group, we always fight with those ecoguards”. Anonymous

Although the provision of community forest as stipulated by the 1994 forestry legislation was seen as a land mark for the local people, its operation by multiple partners has resulted to tensions and conflicts till this day. Small logging operations permitted in the community forest zone has allowed for potential conflicts between the community and loggers. The general outcry of the villagers especially in Fabe as noted by the researchers is due to the fact that small loggers undermine the rights of the local people. Complaints of destruction of crops and younger trees by loggers’ are very common. The local people for fear of the future as younger plants are being destroyed have decided to seize machines from especially loggers who do not cooperate with them. They believe that smaller loggers who are usually outsiders have negative impact on the forest than the local people because they are engaged in logging mainly for commercial purposes unlike the local people who extract timber mainly for home construction.

Corruption and lack of accountability in sharing proceeds from logging companies between local communities and municipal council staff has resulted to tensions. According to the 1994 forestry law, 50% of logging forest management unit’s tax would target municipalities and local villages in order to alleviate poverty and improve on development with 40% to the municipality and 10% to the villagers. However, very little has been achieved partly due to lack of appropriate accountability mechanisms in the 1994 forestry law and its decrees (Cerutti et al., 2006). Responses from some local people revealed that the taxes paid by loggers hardly ever reached the local people as they are frequently appropriated by rural

political elites confirming the works of Oyono et al., (2006) and Logo, (2003). Corruption is noted in the country and the forestry sector as it is embedded in lack of transparency and accountability especially to the local population resulting to mistrust and lack of cooperation.

Destruction of crops by animals from the forest reserve is met with anger and resistance from the local people as they tend to kill the animals regardless of whether they are in the IUCN red list of endangered species. According to respondents from both areas, it is a major problem as they need to protect their crops and even their lives from these wild animals. Killing these animals especially endemic species has led to conflict with patrol guards.

Communities around the forest also suffer from illegal exploitation from outsiders. Lack of technical skills, conflicts of interests and the inability to resolve conflicts with neighbouring villages and towns by the state has led to increase suspicion and fighting between communities. This was noted in the KNPA where high demand for and unsustainable extraction of forest products are smuggled to Nigeria. The poorly equipped and inadequate number of ecoguards makes tasks of especially anti-poaching more difficult and demanding. According to Eyong (2009), the staff working in the KNPA since 2003 included one conservator, 3 employed and 23 contracted ecoguards. As a result of the death of three ecoguards and the resignation of one, only 19 ecoguards patrol over 248km park boundary which is more than the recommended IUCN standard of 3000 hectares per guard. Effective enforcement of national park laws in the research areas requires adequate financial, material, human resources as well as mutual understanding and cooperation among stakeholders.

6.5. Local perceptions on forest degradation

6.5.1 Reduction in forest resources

Information from this research work reveals that most villagers in the communities in and around the forest develop their knowledge on the rate of degradation of forest resources through daily interactions with the resources. For the fact that they have been using the forest and have firsthand experience, it can be argued that experience based knowledge is important for endorsing or contesting official claims. Though in the case of hunting, there were differences in responses between experienced and amateur hunters as to why there is a reduction in wildlife in the Korup National Park, all had the same conclusion acknowledging the fact that they has been a reduction in animals over the years. While some attested of the fact that reduction is as a result of many activities taking place in the forest at the time, others

argued that it is because they hunt regularly in the park. A respondent said, “if hunting is suspended just for a month, animals will come to the village and destroy our farms”. According to him, animals should be hunted otherwise they will outnumber forest space and invade villages.

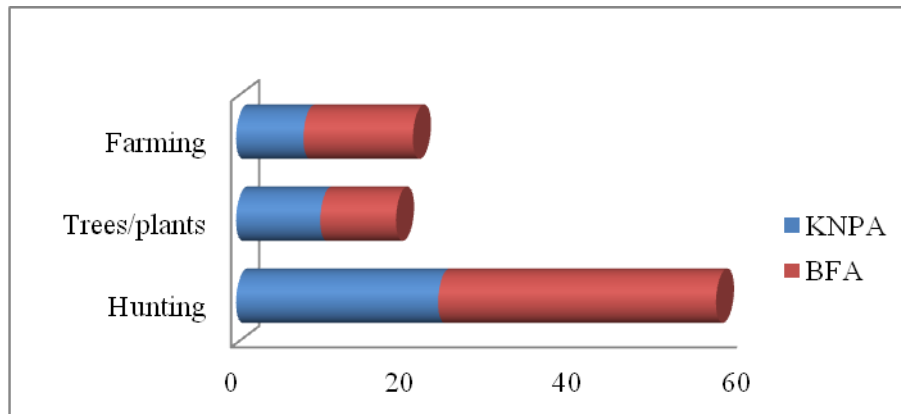


Fig. 17. Reduction in forest resources

The responses show that fauna and flora in the KNP and BFA have experience reduction over the years though in varying degrees. According to the figure 17, a greater number of respondents from KNPA (24) and BFA (33) indicated that highest reduction has been witnessed in terms of wildlife probably due to illegal hunting. Both areas have registered increasing number of hunters and harvesters and frequent hunting and harvesting rotations. Although more respondents chose hunting as the first area where reduction can be seen, others argued that crop destruction and human invasion in the village by animals are local indicators for the presence of large and small mammals in the forest.

It is argued that knowledge from demographers and conservationist biologists guides local people’s dependence on the parks for wild resources and other livelihoods activities (Shackleton et al., 2007:708). With this, it is feared that unsustainable hunting affects conditions of the forest as wild animals that help in seed dispersal and predators (Moegenburg, 2002; Forget and Jansen, 2007) are killed or displaced. More so, the local people could be forced to clear forest for other uses because of “low economic value” of rainforest, secured lands and property rights (Godoy et al., 2000:62). The dysfunction of this process would affect the reproductive process of plants, soil fertility (Redford, 1996:41). According to some critics, over-harvesting of certain species of NTFPs will lead to the depletion of nutrients in the soil and affects the ecosystems functions. However, in order to validate these claims on the two research areas, studies should be carried out.

Based on many years of yield monitoring, 97 out of the 108 respondents attested that they have experienced reduction in forest resources in the KNPA and BFA. According to respondents from the KNPA, 24 households stated that animals have reduced in the forest, 10 showed that trees no longer bear much fruits and 8 respondents acknowledged that they move longer distances than ten years ago for farming due to infertile soils. In the BFA, 33 of the respondents showed a reduction of animals in the reserve, 9 stated that there has been a reduction in fruits from plants and trees and 13 attested of the fact that they now move longer distances to carryout farming activities. A total of 10 households have either not notice any change in the forest in the KNPA (3) or the BFA (7) or did not respond to the question. The general decrease in forest resources has led to an increase need for food. Longer hours are spent to carryout tasks like farming, fetching of fuel wood and water with more burden on women since they are responsible for household chores.

Data analysis indicated that most respondents (18 out of 20) from Lower Fossi-Mondi in comparison to Bechati (17 out of 42) acknowledged that though there is a general decrease in forest resources, the areas of forest exposed to Lower Fossi-Mondi village has witnessed less deterioration compared to the other sections. This however is probably related to their inept traditional beliefs in the protection of totems and shrines.

6.5.2 Effects of forest changes on local households

In order to gain information on the effect of forest changes on the daily lives of the local people, selected households in each of the communities were interviewed. This was to connect local perception to community wellbeing. Results in figure 18, revealed that a greater proportion of the respondents experienced low incomes and standards of living which impacted on both men and women in the communities differently. More than 50% of the total households interviewed complained of lower incomes and standards of living. About 14% of respondents complained of hunger, poverty and not being able to meet basic household needs due to resource reduction in the forest. However, 18% of households indicated that changes in forest have made them to work hard and their lives have been improved. About 16% did not respond to the question.

According to figure 18, most households have a negative perception on the effects of forest changes on their wellbeing.

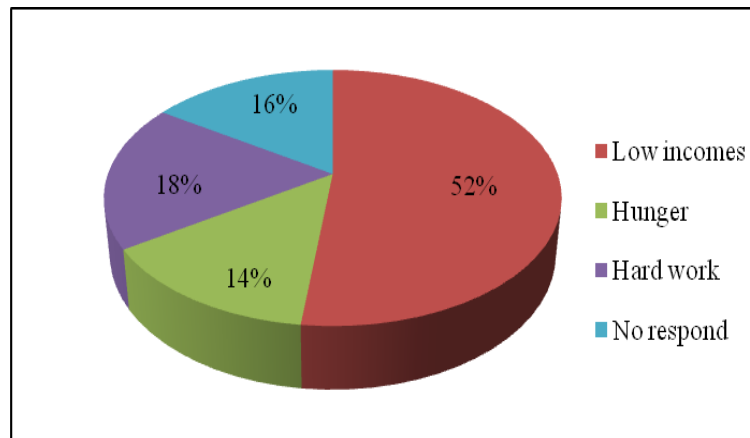


Fig. 18. Impact of forest on households

In a focus group discussion, a group of 20 women were chosen to respond on how changes in the forest have affected women in the research communities. In all, 19 of all respondents revealed that in addition to household chores, women are also involved in other activities. All respondents in Ikondo-Kondo I, Fabe and Bechati responded in affirmation to this fact. Almost all respondents in Lower Fossi-Mondi confirmed. The only respondent from Lower Fossi-Mondi who refuted the opinion stated that;

“I am a trader and do not have time for cooking and other household chores. Besides, my children are grown up and do take care of themselves. I am old and my husband does not really need me as such especially now that he has a newly wedded wife. I have to work hard to take care of my children. I move from village to village buying and selling.” Mrs Fonkem

In all the communities, more than 98% of all the respondents showed that in addition to household chores, women are mainly involved in collection of forest products, weaving of baskets and farming. The impact has been felt deeply by women as they explained that their work at the farm and even at home has increase and they spend longer hours compared to ten years ago. This could affect their participation in forest management meetings as they have to share the time they have with other duties.

6.5.3 Local views towards management laws

In the research communities, respondents have mixed views in relation to the forest management policies instituted by government. While in some cases they acknowledge and are in accord, in other cases, they refute and even work against the laws.

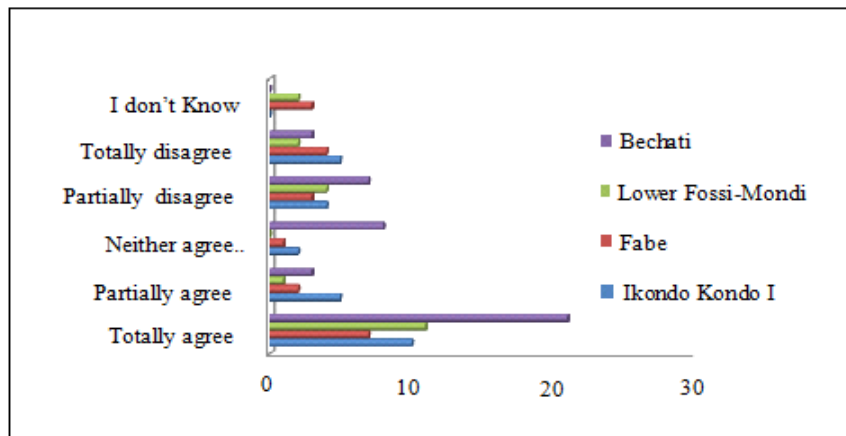


Fig. 19. Importance of forest to rural communities

Figure 19 indicates that in all the research communities, a majority of respondents are for the fact that forest should be protected with Bechati community being highest. Though some are negative about implementing forestry policies, some are indifferent and are simply not interested.

The fact that all the communities are aware and do accept that conservation is important is different from results documented in 1988 which portrayed a negative perception of local people as only 50% of the villagers around the Korup National Park were willing to cooperate with conservationists (Infield, 1988). Theoretical approaches at the time were in line with the results as it was based on the premise of meeting the direct economic needs of the local population through alternative income generating activities (Schmidt-Soltau, 2001) and not educating them on the need for conservation. However, the inability to meet the costs incurred from lost access to resources has resulted to continuous pressure on forest through hunting and gathering (Curran and Tshombe, 2001). Today, the concept of conservation is widely known and the call for greater community participation in forest conservation and management by the Cameroon government in its 1994 forestry legislation has led to widespread sensitization on conservation and management issues. Conservation projects have carried out sensitization workshops and seminars in local communities. Capacity building of the local people on conservation issues has also created awareness.

Chapter Seven

Livelihood activities in the research communities

Forest resources and rural livelihoods are connected. This is because their major source of livelihoods is forest resources. Major livelihood activities of the people include farming, gathering of NTFPs and hunting.

7.1 Strategies for sustainable living in the study communities

The villagers in the study areas have diversified activities in order to meet their changing needs. These activities are marked by shifts due to seasons. During peak periods of NTFPs harvest, most locals spend more time in temporary huts constructed in the forest for collection (Malleon et al., 2008). Livelihood strategies are the approaches used by men and women to reinforce the positive aspects of their activities for sustainable outcomes. They are engaged in productive activities, investment and reproductive choices. The choice of strategy is often dynamic depending on the availability of resources. For example, in most households involved in farming in the research communities, they were not necessarily confined to agricultural activities but were also involved in other non-farm activities to diversify income and meet household needs. Diversification of activities also acted as security checks. Failure in one activity due to seasonal trends, institutional policies or shocks will be compensated by the other.

7.1.1 Agriculture

The major occupation of the people in the study areas is farming. Conversations with the locals and personal observation of their farmlands showed that they carry out food crop and cash crop cultivation. Most of the products cultivated in the farms are used for household consumption. However, part is sold and cash crop production is practiced in these communities. Various farming methods found in the communities include slash and burn methods. The local people are allowed to cultivate the land assigned to them by the state as parks or reserved areas are prohibited from farming activities. These lands are usually closer to their homes and made up of secondary forests.

During a focus group discussion, three men and women in each of the communities were assigned to discuss in detail farming processes in their various communities and the

importance attached to these. According to the results, there was no much difference in the practice, method and meaning but rather there was a glaring gender difference in carrying out their activities.

The farming season begins from mid-November until end of February marked by clearing of forest land. This period is marked by the dry season and since early rains start in March, the land is cleared and the grass burnt in preparation for the rains. Land clearance is mostly done by men except in cases where the woman has no husband, and then can she pay for the land to be cleared or do it herself. Usually land clearing is considered strenuous and given that these communities are in the rural areas, the terrain is too rough. According to the respondents, to clear virgin land especially, the locals form rotating groups who clear individual land area one after the other. The cleared land is left for about a week after which the grass and trees are wrecked, gathered and burnt. Wrecking is done by men, women and children. While women and children gather grass and leaves, men gather trees and large branches pruned from large trees. At sunset, women set the piles of grass and trees on fire.

Burning of slashed material makes land ready for tilling and planting. According to the villagers, by burning cleared materials, nutrients return to the soil from ash after rains. They preferred burning rather than allowing the materials to rot because it is time saving and burnt portions usually have better yields as compared to others. A respondent from Bechati insisted that burning increases soil water retention level and thus good for plant nutrition. The entire process is continued until March when the rains fall.

- **Cash crop farming**

The practice of cash crop farming had existed in all the research communities for generations. Cash crops cultivated in the communities include palms, cocoa and coffee. In the communities of the KNPA, the locals were involved only in palms and cocoa production while in the BFA both communities cultivated cocoa, palms and coffee. However, the locals reveal that coffee is not being cultivated anymore since the fall in coffee prices in the 1990s. It was observed in especially Lower Fossi-Mondi that there has been a significant decrease in cash crop production. Palms are produced largely for household consumption while cocoa is specifically for export. This may be due to the fact that they lack the means of processing cocoa to the stage that can be locally consumed like palms being used as oil.

According to the elders of BFA, cocoa plants came to be known in that area during the colonial era but palms were handed to them by their forefathers who probably discovered it in

the forest. The government chief of Ikondo-Kondo I stated that the palm seedling cultivated by the people of Ikondo-Kondo I were handed to them during the resettlement period by the government of Cameroon.

Cocoa production is characterized by various activities carried out based on seasons and months of the year. The virgin forest is cleared between late September and November followed by wrecking and burning usually by women and children. The land is prepared for planting which takes place during March. Before planting, seedlings are prepared in nurseries usually at backyards of homes.

Cocoa plants take 5-9 years to mature and during this period, there is constant care of the plants. Weeding which is predominantly carried out by women and children is done occasionally depending on the fertility of the land. Men are involved in pruning the plants several times into desired shapes and to allow sunlight to get to the bottom.

In order to prevent loss from pest and diseases, some farmers allow cocoa plants at the tertiary stage in grass so as to prevent rodents from cutting off the tips until at about 50cm. Though some acknowledged that this can lead to poor plants, it is the only option. Few farmers could afford herbicides used gammalin 20 or 80 to spray their plants against blackpod diseases and viruses.

Harvesting of cocoa is all year round but more appropriate during the dry season for easy processing. Harvesting is done by men using cutlasses. The pods are collected in baskets by women and children and packed into heaps. Men, women and children later break open pods taking out cocoa beans which are packed into bags and allowed to ferment. This process takes about a week and after which the bean is removed and spread on plantain leaves or large bags in sunlight. Some farmers also use locally made ovens to dry the cocoa bean. Empty cocoa pods are dried and used as wood at home. In areas where farmland is further from home, cocoa pods are left to ferment and act as manure for next planting.

Sorting of debris and defected beans was predominantly carried out by children assisted by women. The cocoa bean is sorted and packed into bags for sale. Men dominated in the selling process. In Ikondo-Kondo I, most men carried the cocoa bags on motor bikes to nearby towns like Mundemba where there is a farmer cooperative union for sale. Cash crop farming is gaining grounds in Ikondo-Kondo I as in the former settlement, this was not practiced. In Bechati, farmers organized in a group to facilitate sales to buyers who come to the village.

Although cash crop production was generally noted to be the activity of men. Results from discussions and observations indicated that there is a complementarity of roles in the cultivation process. While men slashed and cleared the forest, women were mostly involved in wrecking, burning, planting, weeding, gathering and sorting. In all, men and women need the services of one another in the cultivation process. The leader of cocoa farmers group in Fabe village, Mr. Mbah noted that,

“we prefer women to do assist us in our farms especially in activities such as weeding, gathering and sorting because women are patient and keen to details”. Many of our members have acknowledged that cocoa farms weeded by their wives are better than theirs. Every woman in this village knows that she has assigned days to work on her husband cocoa farm”.

- **Food crop farming**

From group discussions and household interviews, women are predominant in food crop production. Food crops cultivated in the communities include banana, plantain and short term crops like corn, cassava, beans, potatoes, cocoyams, okra, leaves etc.

The process of food crop cultivation is largely similar with cash crop production. It begins with clearing of farms plots mainly by women assisted by their husbands or male children. This is in preparation for the planting season in March when the rains fall. While waiting for the rains usually in March, activities such as tilling, selection of seed varieties are carried out. Observations showed that there are differences in land tilling in the KNP communities and the BFA communities. The communities in KNPA till the soil by molding it in to heaps where crops are planted while the communities in BFA molded ridges usually vertically except in hilly areas where ridges were molded horizontally. These ridges are placed horizontally to give access to rain water to the valley. The ridges range between 3-4 meters. The villagers explained that tilling the soils allows water and nutrients to get to the plants easily. It also facilitates tuber crops to have good and healthy tubers. Food crop cultivation is mostly carried out in secondary forests.

The major difference is in the production system where food crop is more of mixed and intercropping which was confirmed by households in the research communities. Although, cash crop farms were sparsely inter-crop usually with perennial crops like bananas and plantains, food crop cultivation was noted for mixed cropping. About four varieties of crops can be seen on a piece of farmland. Conversational group interviews with the elderly women

reveal that they plant several varieties so as to be able to meet up with household demand. According to a farmer in Lower Fossi-Mondi village,

“we plant some many types of crops on one piece of land because they help to meet the needs of our families. If I am from the farm, I should be able to have something to cook for that day. So in my farm, u usually plant beans, maize, cassava, pepper and bananas. The beans use cassava stems and corn stems to support themselves and since they have a short during, I harvest them first while waiting for corn or cassava. The pepper is used as ingredient in the preparation and the family is able to feed”.

Results from discussion reveal that this method also helps in soil fertility. The short duration crops and used and their leaves and stems fall back to the soil as manure. In all the communities, leguminous plants like groundnuts and beans were intercropped with cassava and maize. Respondents in all the communities reported of crop rotation and farm fallowing. Though Ikondo-Kondo I acknowledge this practice, the majority of villagers revealed that most of the fallowed farms are their first practice probably because it is not long since they were relocated.

About 7% of villagers acknowledged using fertilizer to buzz yields though a greater proportion of the population in the villages (67%) use rotten cocoa pods and animal feaces as fertilizers. Some equally cultivated without the use of organic or inorganic fertilizer (26%). Fertilizer is applied 2-3 months after weeding when the plants are still young. This is followed by mulching as it is feared that rain will wash it away. According to a female farmer in Ikondo-Kondo I, these give crops stability and the fertilizer or manure gives soil fertility and healthy plant growth. The process of weeding is continuous and selective as only weeds are removed. This process is carried out repeatedly until the crops are mature for harvest.

Crops are harvested at different intervals; crops like beans take about three months to mature, maize between three to four months, groundnuts about four months while cassava, bananas and plantains take about 12-18 months to mature. The quantity of crops harvested by households from the farm plot could not be estimated as all is not harvested at once. What is harvested is usually for household consumption may be for some days or a week and usually ranges between half a bucket to two buckets depending on the size of the container and the household size. Information from the community and observation show that household meals were of varieties and as such different products were extracted from the farm on different days.

Responses from group discussions indicate that although food crops are for household consumption, surplus is sold in local markets and nearby villages to buy other basic needs in the household. The villagers in Ikondo-Kondo I have greater access to markets as they are close to Mundemba town than Fabe village. Both villages however have access to nearby villages through an earthed road from Mundemba through Fabe to the neighboring villages. Fossi-Mondi and Bechati are further from nearby villages and cities but do trade among themselves and through earthed roads to other parts of the division for trade. From Menji to Bechati and Lower Fossi-Mondi are 11 and 12 hours respectively (Wright et al. 2010) and from Mundemba to Ikondo-Kondo I and Fabe are about 25 km (Eyong, 2009) and 32km respectively. From expert interviews and discussions, the situation in all the villages is changing as the demand for products from other areas and the quest for cash has resulted in increased sale of food crops.

Several studies illustrate this pattern of gender roles where change, continuity, flexibility and rigidity have played a major role in shaping rural livelihoods. Evidence from the study suggests that agriculture is the most important contributor to rural livelihoods with more than 60% of respondents involve in farming as a major occupation. While more women are involved in farming, more than 90% of men are involved in hunting in all the research communities. In most communities in the Asian region, agriculture is the major source of livelihood and is the primary economic activity of women in the rural areas. In Bhutan communities, women dominate in agricultural activities than men with distinct division of labour roles (RGB and UN Agencies, 2001). In Nepal 40% of women who are economically active are in the agricultural sector considered unpaid labourers using primitive farming techniques and usually in subsistence farming. In this area, men are increasingly moving out of agriculture and it is increasingly being feminized (Acharya, Acharya and Sharma, 1999). Women in Sri Lanka in 1997 contributed about 42% in agricultural activities but unlike in Bhutan where their labour is unpaid, since the colonial periods in plantations, they earn wages (M.S Swaminathan Research Foundation). Gender roles in slash and burnt farming system and in home gardens vary according to the pattern of cultivation. Gender differences are recorded in cultivation as men participate extensively in land preparation, clearing and application of chemicals and women in activities such as transplanting, post-harvesting and household level processing of home garden produce. Also distinguished in the research communities are differentiated gender roles in home gardening and off-farm activities. Even though women contribute significantly in the agricultural sector, their role is still being seen

as secondary. Women farmers in Sri Lanka are considered as “farmer’s wives” rather economic producers in their own right (Jayaweera, 1999).

7.1.2 Harvesting of NTFPs

Extraction of NTFPs here refers to the extraction of products from the forest other than animals. This involves the harvesting of leaves, herbs, seed, medicine, bark of trees usually for household consumption, sale, health and for home construction. The most harvested NTFPs (Table 7) indicated by all the communities were used for consumption and sales.

For the purpose for this study, two products extracted (bush mango and alligator pepper) from the forest are described by the villagers from the process of harvesting to consumption.

Alligator pepper (*Fromomum melegueta*) is one of the edible forest plants found in the research communities. It has an aromatic spice with a hot taste like pepper (Eyong, 2009). The manner in which the fruit is harvested prevents damage of the parent plant. Unlike in the communities in the KNPA where alligator pepper is not sold, it is sold in communities of the BFA usually to foreigners’ especially traditional healers who use it for medicinal purposes. It used to be handed as gifts to other members of the community but because of high demand, it is being sold though rarely. According to some villagers, good luck is with those who chew alligator pepper and rub on their faces before a competition. According to a traditional herbalist, alligator pepper is in high demand and is being domesticated in the village. It is used as a remedy for many ailments.

Njangsanga (*Ricinodendron heudelotii*) is found predominantly in the tropical dense forest of central and West Africa. It is used in most communities for cooking as a soup thickener. Since the product is found in the dense forest, fast tracts and established and the tree are open up for better visibility. The fruits which have fallen from the tree are picked up and pile in heaps. These are then left for three to five weeks during which the fruit rots leaving the seed. The seeds are selected from the rotten leaves and carried in bags home for further processing. The seeds are washed and boiled usually for about 12 hours or throughout the night. According to the villagers, the seeds are boiled for a long duration to ease the cracking process. The boiled seeds are then placed in a basin with the water drained and left for several hours for cooling. The shells are forced open by cracking them with a stone or a flatten iron or metal after which the cream white kernels are dried in sunlight or using local ovens. These dried njangsanga kernels can be grounded into paste and use as a soup thickener in cooking.

From group conversations and observation, while picking of the fruit was done by men, women and children, women were predominant in sorting the fruit from the fermented skin, boiling and the cracking of njangsanga. They were also noted as the main sellers of this fruit.

Studies show that domestication of njangsanga is still new in Cameroon (Alene et al., 2005). The villagers from all the study communities however acknowledged the fact that this product is becoming scarce and as such, they nurture seedlings found in their farms and adult trees are not destroyed but protected during clearing and burning of fields.

Table 7 NTFPs and their harvesting methods

Name of NTFP	Method of harvest	Parts harvested
Njangasanga	Picking and debarking	Seeds and barks
Bitter Kola	Picking and debarking	Seeds and tree barks
Alligator pepper	Cutting and picking	Fruits
Eru	Picking and cutting of leaves and stems	Leaves and stems
Bush mango	Cutting, picking and debarking	Seeds and leaves

Source: Field survey, 2011

Table 7 is constructed as a result of discussions and questions answered by group members in each of the villages on the various methods used in extracting forest products. With these methods, it was realized that cutting and debarking of leaves and trees could affect the plants if done especially in a large scale. Most of the respondents refuted stating that they are very careful when cutting the stems and the barks. They complained of the children who are not patient in the cutting process. However, they do teach their children how to harvest the products.

Evidence from recent studies attests to the fact that men are more involved in hunting than women (Fa, 2007; Wright and Priston, 2010). According to a study carried out in 2010 on bush meat harvesting practices and human reliance in Bechati-Besali-Fossimondi forest, all

hunters and trappers in these communities were male (Wright et al., 2010). According to informants, even culture prohibits women from hunting though women in the KNPA are involved in trapping than women in the BFA. Women are actively involved in the trade of bush meat as wholesalers and sellers (Mendelson et al., 2003; Solly, 2003; LW Nkengla Pers. Obs.). Age plays a major role in the exploitation of forest resources. Like the case of the KNPA, where most hunters were of ages between 15 and 59, the majority of bush-meat harvesters in the Bechati-Besali-Fossi-Mondi forest were of ages between 30 and 55. This age group is considered to be an active age group in the community and is most likely to have large families with greater responsibilities. As such, they would move into the forest for hunting in order to earn an income.

Past literature had indicated that snares are regarded as the main weapons used in bush meat harvesting throughout afro tropical forests (Fa et al., 2005; Kumpel, 2006) but evidence from recent studies indicate the contrary. In this research, locally made short guns were the most used in both the KNPA and the BFA. In Lebialem, short guns were the choice of the majority of hunters (Wright et al., 2010). A study carried out in northeast Gabon revealed that trapping was an activity conducted by only males over 45 years and that short guns were used during 85% of recorded hunting trips (van Vliet and Nasi, 2008). Also, a study carried in the Bayangi and Mbo tribes revealed that majority used short guns in hunting. Increase use of short guns could be the reason for reduction of wildlife in the KNPA and BFA as with it, primates are nearly always shot (Fa et al., 2005). The population of drill has declined in KNPA as hunters combine the use of dogs and guns (Waltert et al., 2002).

Traditional beliefs of people transforming into animals appear to have an influence on hunting. Although some studies show that traditional beliefs have prevented the decline of wildlife in certain areas (Rose et al., 2003), decreasing availability of wildlife and modernization have eroded many traditional belief systems (Barnett, 2000). In Lebialem, the belief that humans transform into gorillas and chimpanzees which deterred the local people from hunting is fading away especially among the younger generation (Etiendem, 2008).

Studies conducted in some parts of Central Africa have revealed that wildlife from hunting is considered by the local communities more importantly as a source of income than a source of protein - in the Democratic Republic of Congo by de Merode et al., 2004; Gabon by Starkey (2004) and in Equatorial Guinea by Kumpel (2006). Likewise in this research, respondents in all the communities stated economic reasons as the first for hunting and from data, more bush meat was sold than eaten (Fig. 24). The reasons of respondents for harvesting wildlife differ

across the communities. Though all the communities in the KNPA and BFA predominantly sold bush meat, Fabe and Bechati communities mainly specified wildlife for household consumption. Poor roads and poor access to urban markets could be the reason why the Fabe and Bechati communities hunt more for subsistence. This occurs especially during rainy season where roads are inaccessible. Meanwhile Ikondo-Kondo I is relatively accessible to urban areas than the other villages.

In both research areas, farming is a major source of food for the families. Though both men and women are involved in farming activities, the type of crops cultivated differ, and the activities perform during the cultivation process also differ. In order to meet the immediate needs of the family, women tend to cultivate more of food crops especially with a short maturation period. Crops cultivated include cassava, cocoyams, maize, beans and vegetables while men were involved mostly in perennial crops such as palms, cocoa and plantains. Differentiation of roles was realized in the cultivation process whereby the majority of men were involved in clearing, felling and wrecking while women were mostly involved in burning, weeding, moulching and planting. Both men and women are involved in harvesting especially perennial crops like cocoa, coffee and palms meanwhile crops like cassava, cocoyams, beans which are mainly for household consumption is the duty of women and children.

It is worth mentioning that agricultural activities, hunting and gathering have reduced in the conservation areas in all the research communities. These changes are as a result of the enforcement of conservation and wildlife laws (Schmidt-Soltau, 2001b) and also the sensitization of the community on the need to preserve the forest for future generations. Given the fact that being involved in an activity does not reveal the intensity, information on income obtained from products on the forest showed that the communities are still highly dependent on the forest for income.

7.1.3 Trading

In these communities, petty trading is carried out within and outside the village. This is usually done by women as they sell basic items like magi, salt, pepper, kerosene, locally brewed whisky (*afofa*) in their homes. In the communities of the KNPA, there is no separation between a shop and the sleeping room as goods are placed in their rooms. Also, women use their living rooms as restaurants or bars.

In all the communities, everyone knows where to buy what. Found in Bechati and Lower Fossi-Mondi were local business stores where the rooms were purpose use for businesses. The stores contain just the basic needs of the community and were mostly scanty. An owner of a store attributed the emptiness of the store to lack of capital and the distance from towns where they buy goods. Apart from local stores, women in a similar manner as the women in KNPA were found to sell products such as magi, salt, palm oil from their homes. Men in all the research communities were noted for selling items such as guns, bullets and palm wine.

Conversations with elderly villagers and discussions show that the coming of visitors and exposure to cities has influence the taste of especially the youths in this community. In order to meet high demand for foreign (modern) products resulted to greater interaction and trade with the outside world. The indigenes move to cities for trade as well as during traditional market days. City dwellers also move to villages with items such as clothing, shoes, spices, jewelries and upon return purchase products such as njangsanga, eru, kola nuts and food items from the people.

7.1.4 Hunting

Hunting is as important to the indigenes of the research communities as agriculture. Hunting which is done by men and was usually for subsistence today is a main source of income for the people. The high demand has led to illegal hunting resulting in the excessive exploitation of even threatened species. The hunter killed which ever animal they come across regardless of their status. Most young men in the villages are involved in this activity since it brings in more income. Hunting is carried out using various weapons.

- **Fire arms and guns**

This weapon is used by men in hunting usually during the day or night. Types of guns include automatic rifles, short guns both locally and factory made. Guns are used in the hunting of large animals like chimpanzees, gorillas, elephants, buffalos etc. The locally made guns and manufactured by blacksmiths based in the villages. Bullets and firearms are bought from local markets as the case of communities in the BFA while the communities of KNPA mostly obtain their equipment through smuggling from Nigeria (Eyong, 2009). During expedition seasons, hunters using head lamps and torches spend weeks in the forest for hunting. They usually move in group and live in temporary constructed tents in the forest. A conversation with an ecoguard in the KNPA indicated that in the course of patrol in the forest, several huts

are destroyed belief to have been constructed by hunters and at times, hunters are caught in the forest.

In all the communities, hunting activities are done in secrecy. During the interview, most hunters declared that they are not hunters and could only accept to respond to our question after we convinced them that we are just students and will not take the information to anywhere. More so, they insisted not to be identified as hunters. This might due to the restrictions placed on hunting in the park. However, upon their return rumors spread to their neighbour who share in the booty.

In all the research communities, the majority of hunters were of the middle age (28-43). Some locals hold that hunting is a strenuous exercise especially with firearms and most hunters at the age of 45 do not have the strength to carry out long hunting expeditions. Many hunters at the age of 50s resort to trapping. Young men and youths who have abandon studies in pursue of fast income especially in Fabe and Ikondo-Kondo I are hunters. Likewise in the communities of Bechati and Lower Fossi-Mondi, hunting is the occupation of men and is passed unto their children. According to one hunter in Bechati community;

“I teach my son all the hunting techniques as he accompanies me to the forest because I know very soon my strength will not permit me to hunt and I need meat to eat. It is my son who will provide for me and my own family”. Mr. Oru

▪ **Trapping**

Trappings are carried out in all the communities mainly during the wet season. Equipments used in trapping include metal or wire snares. Trapping with wire snares are predominantly carried out by men but in all the communities, some women also acknowledge taking part in this activity. Group discussions and informant interviews indicate that women are the main watchers of the snares. Since the snares are placed in animals paths usually in secondary forests, women in the course of moving to the forest for farming purposes check the snares for a catch. Households in Ikondo-Kondo I during the field research had as few as 35 wire snares around their farmlands and in BFA was about 70 wire snares. Trappings are set around palms, cassava, sweet potatoes since these attract them. Traps were checked at the regular interval of two to three days depending on the distance. This is so that the catch should not get rot. Trapping in these communities is also a means to protect the farms from rodents and animal destruction.

7.1.5 Livestock production

In order to improve on livelihoods, local people are involved in livestock rearing whereby more stocks are consumed and less sold for income. In all communities, while some animals like ducks, fowls and dogs are allowed to stay in the community, pens are constructed at the back of homes for goats, rabbits, pigs, fowls etc. Animals like goats, sheep are taken to the forest usually secondary forest each morning for food. IN the BFA, animals like pig were fed with waste from households. From the results, not all households own domestic animals. For instance 9, 5, 13, 12 households in Ikondo-Kondo I, Fabe, Lower Foss-Mondi and Bechati respectively domesticate fowls. While 9 households in Ikondo-Kondo I domesticated pigs, none was found in Fabe and 15 and 20 in Lower Fossi-Mondi and Bechati respectively. Respondents indicated that these animals were largely for household consumption since most villagers opt for bush meat than domestic animals. Poverty also acted as a hindrance to the sale of domesticated animals. Most people prefer bush meat which they hunt freely than buying domesticated animals.

However, domesticated animals are sold usually for traditional and medicinal purposes. A case was noted in Lower Fossi-Mondi where a herbalist needed a “contry” fowl as part of the medication. In order to undergo treatment, the individual presents a fowl. To be noted is the fact that although domesticated animals are largely consume in households, Lower Fossi-Mondi as a result of many foreigners residing in the village sold more as compared to Ikondo-Kondo I, Fabe and Bechati. This may be due to the newly created secondary school and health centre. Also, domestic animals are used as gift to show gratitude or appreciation to a fellow villager.

Information from respondents reveals that women cater for animals found around the community. Feeding time is not specific and regardless of the owner of the animals (fowls, ducks) corn and remains from household are thrown to the animals. They are interested in animals with short lives span and animals that are affordable like fowls, pigs, rabbits etc. This is in order to have quick turn-over and also to invest less time. Men in all the communities are more involved in cattle rearing, sheep etc., which entails enough capital to purchase them and are usually taken to the forest as they need grazing land. Respondents reveal male children are responsible for feeding of larger animals owned by men. In all the cases, individuals were employed to take care of the cattle although the children of the owner usually accompany the

herder during holidays. Unlike in the KNPA where none of the households own cattle, 4 and 8 households in Lower Fossi-Mondi and Bechati communities own cattle.

Hunters and elders in Ikondo Kondo I and Bechati stated that in a few years, domesticated animals will be the next option as a source of protein due to the restrictions on hunting activities in the communities.

7.1.6 Fishing

Fishing in all the communities is done mostly for household consumption. Results from the communities show that fishing is done by men and women and mostly in the dry season. Equipment use for fishing includes hooks, nets, baskets, sticks with strings and poisoning. While men often use line, nets and sleeping hooks, women use baskets and traps. Discussions with fishermen and some elders in the village show that some villagers still use poison for fishing though prohibited by the traditional council in fishing. This usually destroys the aquatic system as every creature found in that area of the river dies. Consumption of fish caught through poisoning result to health problems. According to a fisherman in Bechati, a man used gammalin 20 which is used to spray cocoa for fishing. The entire family after eating the fish had to seek for medical help from the herbalist who gave them a plant to eat. After eating the plant, they vomited out the fish and regained their health.

In the KNPA, male fishermen were accused by women for poisoning the river which led to the dead of all fish. According to some villagers,

“We cannot find even the tadpoles which are usually available even where we bathe in the river. Some elderly women like us who cannot cast heavy nets or swim further into the river to fish have nothing to take home this season. It is really a bad thing, some people think only of themselves”.

In all the communities, the local people detest river poisoning as it is dangerous to the community and even communities downstream. Although many refuse using poisoning for fishing, the elders admitted that that rarely occurs.

7.1.7 Menial jobs

The people of Korup villages and BFA offer services as porters for wages. It was revealed that particularly young men in the village serve as porters to assist researchers to the forest and other villages and also clear farms for income.

The villagers are also assist in the construction of roads and culverts by conservation projects or government authorities. For instance, in the construction of an earthed road that passes through Ikondo-Kondo I and Fabe to neighbouring villages, the indigenes of both villages were recruited. Discussions reveal that while energetic men in the communities were selected to take part in the project, women provided food for the workers. All the input from the villagers were rewarded by the project operators.

7.2 Marketing of extracted products from the forest

Products extracted from the forest are sold in local markets within and in nearby villages and towns. Most of NTFPs extracted by these communities are further transported to other areas and other countries for sale by middlemen. For instance, products from the KNPA were transported to Nigeria and those from BFA are transported to Dschang, Mamfe and Bamenda towns. Although there exist differences in the price of product between seasons, the difference in prices between the research communities was insignificant. Some eru (*Gnetum africanum*) harvesters noted that prices during the peak season were lower than other seasons. Results reveal that the marketing of some of the products is gender-based. Three distinct activities of the people reveal gender differentiation. While women are noted to be highest in the harvest and sale of eru, men are more involved in the harvest and sale of bush meat. Both men and women in the research communities are involved in farming though with different crops.

7.2.1 Gender differentiation in the marketing of forest resources

According to figure 10, there are three major activities carried out by the indigenes of the research communities are; farming, hunting and collection of NTFPs in the forest for their livelihoods. The table below gives an overview of these activities.

The findings in this section seek to bring out different roles of men and women in specific activities stated in table 8. It identifies the quantity of products extracted within a given period and an estimated income generated. Data collected is based on reconnaissance and household surveys.

Table 8. Overview of forest activities for men and women

Communities	Farming	Hunting	Gathering
KNPA Women	***	*	***
KNPA Men	***	***	**
BFA women	***	*	***
BFA Men	***	***	*

- * passive
- ** active
- *** very active

▪ **Gathering: Non-Timber Forest Products**

The use of forest products was explored in order to give an overview of the resources available in the forest. In order to improve on livelihoods, the indigenes of the research communities collect several products from the forest such as fuel wood, medicinal plants, nuts, edible leaves, fodder etc. These products are used for subsistence, income generation and also for cultural or religious purposes. Each respondent from the sampled areas was asked to list the resources extracted from the forest and state their uses.

Aggregating all the responses, a list of forest products was generated stating their uses, method of valorization and exploitation effect over the years (Appendix 3). Found in the table below are a list of six most extracted forest resources in the KNPA which are used for subsistence as well as income generation.

Table 9. Commonly harvested NTFPs in the KNPA

S/N	Common name	Scientific name	Local use	Local valorisation means	Exploitation effect	Harvester	
						Men	Women
1	Eru	<i>Gnetum africana</i>	Vegetable	None	Increase quantity	**	***
2	Bitter Bush Mango	<i>Irvingia wombolo</i>	Soup thickener	Smoking/sun dry	Reduce quantity	*	***
3	Bush pepper	<i>Piper guinesis</i>	Spice	smoking	Reduce quantity	*	***
4	Njansang	<i>Ricinodendron heudelotii</i>	Soup thickener	Smoking/sun dry	Increase quantity	**	***
5	Sweet Bush Mango	<i>Irvingia gabonensis</i>	Soup thickener	Smoking/sun dry	Reduce quantity	*	***
6	Bitter cola	<i>Garcina kola</i>	Stimulant/medicinal	Sun dry	Reduce quantity	***	**

- * rarely
- ** regularly
- *** mostly

With respect to the various roles of men and women in the extraction of forest products, one can say that women are more involved in the harvest of NTFPs in all the research areas than men. However, their activities are mainly for subsistence purposes while men are involved for economic purposes. While women harvest products such as eru, njangsanga etc which are used for soup thickening at home, men extract this products like eru, njangsanga and bitter cola for sale in nearby towns and countries. According to the respondents, men are involved seasonally by undertaking this activity mostly when the products are mature and are in greater quantities in the forest. Meanwhile women though frequent move into the forest, harvest in smaller quantities until recently that they harvest to sell in local markets. To sum it all, while men are involved in large scale harvest for sale, women are involved in a smaller scale usually for household consumption.

According to table 9, *Gnetum africanum* is one of the most commonly extracted products in the research areas and is used as food for daily consumption and for commercial purposes. Data was collected during the peak season of harvest. Found below is an estimated quantity of *Gnetum africanum* harvested in a month in the KNPA and the BFA by women.

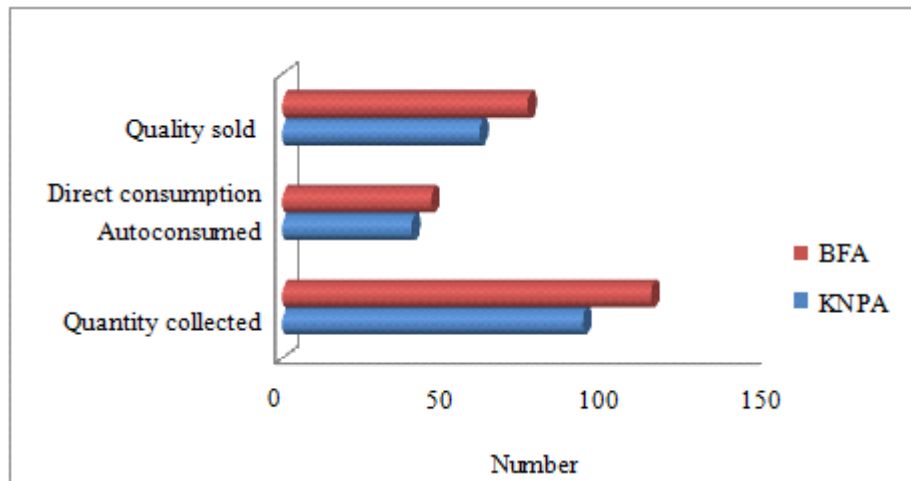


Fig. 20. Number of packets of *Gnetum africanum* harvested in KNPA and BFA per month.

From figure 20, it is realized that communities of BFA collected, sold and consumed directly (autoconsumed) *Gnetum africanum* than those of KNPA.

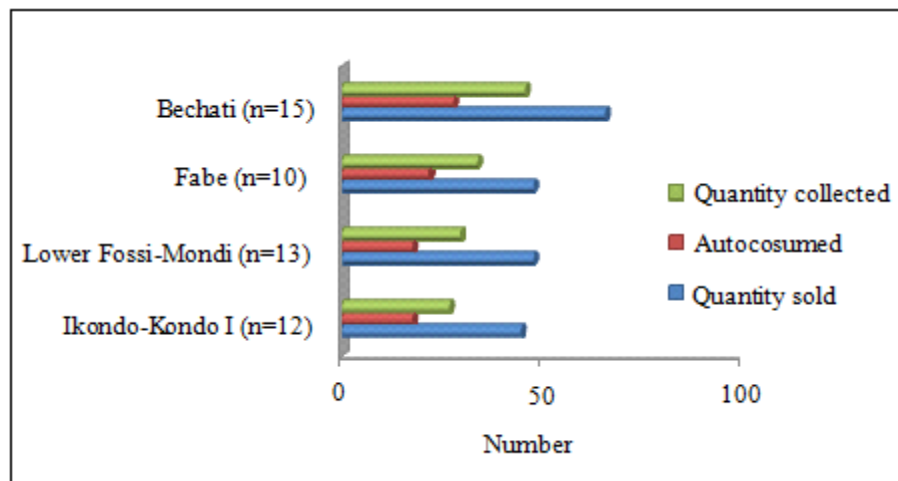


Fig. 21. Number of packets of *Gnetum africanum* harvested by each village per month (n=number of people interviewed)

The figure 21 shows that sales of the product in all villages were higher than what they consume directly in the household. While in Fabe village, the quantity sold was slightly higher than auto consumption, other villages were more involved in income generation. Ikondo-Kondo I village used a greater portion of the product for sale with very little for household consumption.

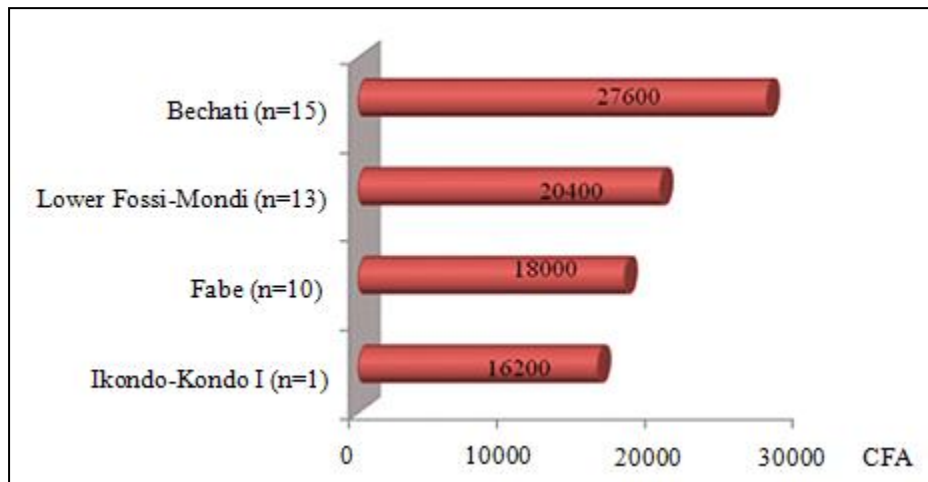


Fig. 22. Total income of communities in the KNPA and BFA in *Gnetum* harvest per month

Figure 22 shows that women from Bechati obtained highest income (27,600CFA) in sales compared to Ikondo-Kondo I with least income (16, 200CFA). However, prices vary from one village to another and according to seasons.

- **Hunting: Duikers**

Hunting, one of the major occupations of the local people (Fig. 10) has resulted to excessive and illegal harvesting of wildlife in the research communities. The villages surrounding the forest landscape are dependent on wildlife for their daily meat. Various species of wildlife were identified by respondents stating their uses and who has the responsibility of harvesting these animals. This was compiled into a list indicating the names of these animals and the hunting impact on their race (Appendix 5). Some of the animals are distinct as the respondents mentioned stating they are no longer seen in the forest. According to one respondent,

“About twelve years ago, we could see chimpanzees, monkeys around our homes in our gardens. They could even get into the compounds and play with children but today, except one moves deep into the forest, you cannot find one”. Mr. Folefac, Lower Fossi-Mondi village.

In all the research communities, hunting was predominantly carried out by men (Table 8). Women in all the research communities were involved in trap setting which usually caught smaller animals like rodents e.g rat mole, cutting grass etc. During the focus group discussion carried out in Fabe community of the KNPA, a woman hunter was being hushed at because she wanted to act like a man. According to a male member of a local council in Fabe,

“A woman is not supposed to play the role of a man in the home. Hunting is for men and is usually done in the night. So when she goes out for hunting, who takes care of the baby. Supposed she is a nursing mother, I the husband do not have breast milk to feed the child with at night. God has made it that a woman stays at home. I will not be the first to break the law by allowing my wife to go out. Besides, does she have the strength to resist wild animals in case of an attack?” Chief Councillor

According to respondents, though the state prohibits illegal hunting, many villagers violate these rules and are involved in hunting income. The harvesting of “bush meat” in all the communities was mainly for income (27), secondly as source of protein for household consumption (14) and lastly for cultural practices (9). In Fabe community for example, the hunters had an organized group with middlemen who acted between the hunters and the restaurant owners in nearby cities. The middlemen come to the villages usually at night on agreed days at stated sites where they collect “bush meat” to be distributed to restaurant owners in town in return for cash.

Table 10. Some most commonly harvested wildlife species in the KNPA

S/N	Common name	Scientific name	Local use	valorization means	Harvesters	
					Men	Women
1	Deer (Bay duiker)	<i>Cephalophus dorsalis</i>	Income source	Smoking	***	
2	Cutting grass	<i>Thryonomys swinderianus</i>	Income source/consumption	Smoking	*	***
3	Mona Monkey	<i>Cercopithecus mona</i>	Income source/consumption	Smoking	**	
4	Bush pig	<i>Potamochoerus porcus</i>	Income source	Smoking	**	
5	Tree Pangolin	<i>Manis triscupis</i>	Income source /consumption	Smoking	*	
6	Frotambo	<i>Cephalophus monticolor</i>	Income source /consumption	Smoking	***	
7	Rat mole	<i>Cicetomys emini</i>	Consumption	None		***
8	Alligator	<i>Osteolaemus tetraspis</i>	Consumption	None	*	*
9	Drill	<i>Mandrillus manni</i>	Income source /consumption	Smoking	***	
10	Bufallo	<i>Syncerus caffer</i>	Income source	Smoking	*	
11	Chimpanzee	<i>Pan troglodytes</i>	Traditional celebration	smoking	*	

* rarely

** frequently

*** very frequently

As portrayed in table 10, the most commonly harvested animal is the duikers and usually by men for commercial purposes.

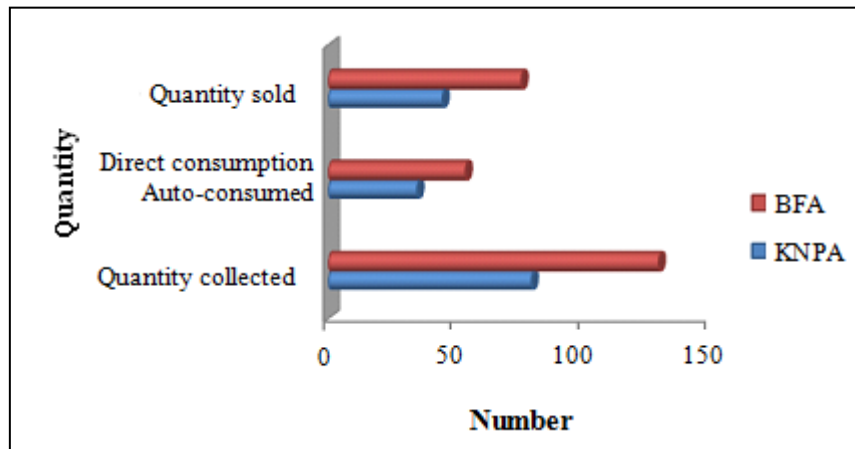


Fig. 23. Number of duikers killed in the KNPA and BFA per month

According to the analysis, communities around the BFA killed more animals than those at the KNPA. In all the research communities more animals were sold than were consumed.

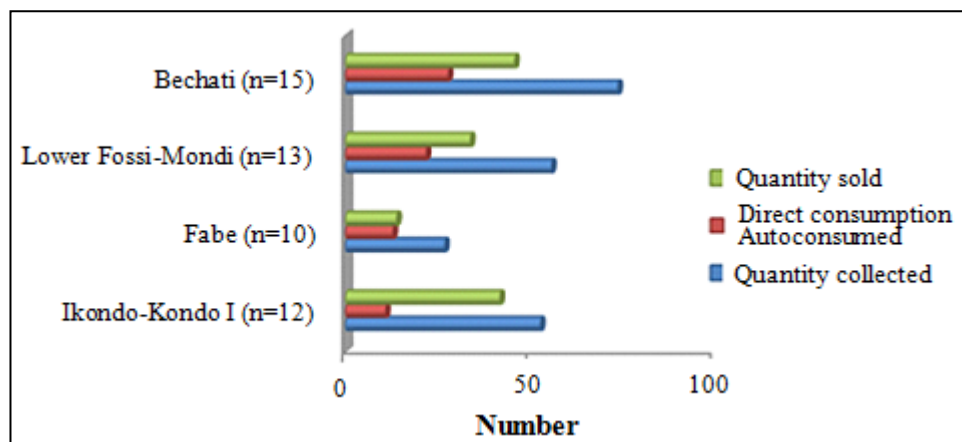


Fig. 24. Number of duikers killed, sold and autoconsumed in a month in KNPA and BFA

All research communities sold far more than they autoconsumed except for Fabe which consumed almost the same amount as that which is sold. Bechati and Lower Fossi-Mondi villages killed more duikers in a month compared to Ikondo-Kondo I and Fabe.

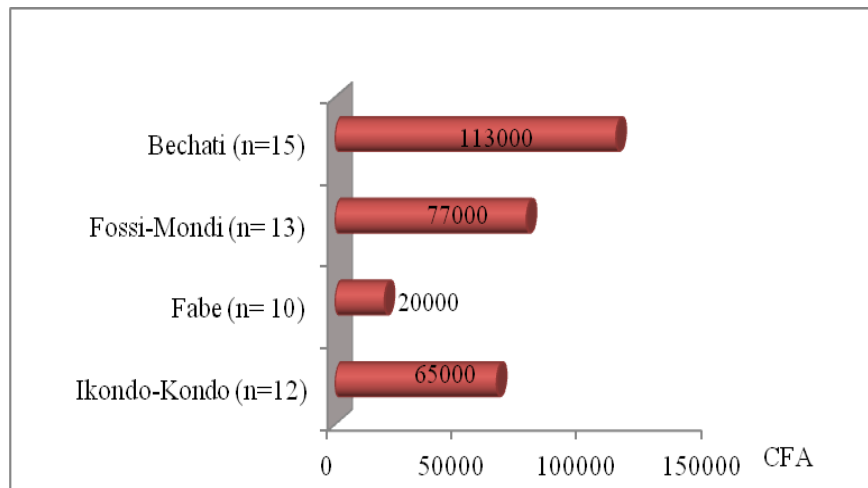


Fig. 25. Total income in hunting per month in KNPA and BFA

Figure 25 shows that all communities were involved in the marketing of bush meat. Bechati community was highest in sales with an income of 113,000CFA compared to Fabe community with lowest income of 20,000CFA. It is worth noting that prices vary from community to community and prices are determined by the weight and size of animals.

7.3 Factors that shape livelihoods strategies in the research communities

7.3.1 Vulnerability context

The forest and its resources act as a buffer for poor rural communities. It is a source of both food and income especially during lean periods. Shocks, seasonal trends as well as institutions and processes hinder local people from having access to livelihoods making them more vulnerable to poverty. This in turn can influence the decisions and activities of the rural poor on livelihood assets within their communities.

- **Shocks**

The worst shocks have been experienced by villages around the Bechati forest area. The exposure of land as a result of agriculture and wild fires coupled with the hilly topography is prone to landslides. Heavy rains have resulted to great landslides which have led to the destruction of food crops as well as infrastructures and human lives. This occurrence has significant effects on the livelihood strategies and outcome of the local people. A series of landslides which occurred across the highlands of the BFA in 2003 led to 21 deaths, destruction of property worth US \$ 1 million and rich biodiversity eroded (ERuDeF and ACF, 2011).



Figure 26. Distorted landscape after landslide in BFA

7.3.2 Trends

- **Government policies and regulations**

Policies, laws and regulations made by the government have an influence on the local people's access to the forest and its resources. The government works with conservation projects to implement the laws and regulations on the local people (See chapter 6). The rules and regulations could either exclude or limit the activities of the local people in the forest thereby affecting their livelihoods.

- **Population and demographic trend**

There has been a general increase in population in all the villages as compared to ten years ago. This increase is as a result of natural birth and also due to a high rate of immigration of people from neighbouring villages. Local businesses such as timber logging and conservation projects have also attracted foreigners into the villages.

Demographic movement in the KNPA and the BFA has been witnessed in two forms- from one village to another and from the villages to towns usually for business, employment and academic purposes. The oil palm plantation like the PAMOL plantation PLC (Public Limited Company) situated in Mundemba and the Cameroon Development Corporation (CDC) have influenced rural exodus in the KNPA. The Mundemba area is densely populated and is represented by almost every tribe at the KNPA. While emigration is common especially for educational purposes by the youths, recently, immigration has been on the increase. The global economic crisis has led many indigenes to return to the villages since they are unable to cope with the economic trend in the urban areas.

▪ **Resources Trend**

The research communities have experienced constant reduction in forest resources which has forced some of them to turn to the forest and its resources so as to secure their livelihoods. Most of the local people are indulged in multiple activities in the forest such as farming, (both for food crops and cash crops), harvesting of forest resources, fishing and hunting. The local people associate change in availability of resources with logging companies, safari hunters, increase in population and “bush meat” consumption in nearby urban areas which has led to high demand for forest products.

▪ **Economic Trends**

The scarcity of forest resources has greatly affected the local economy. The general economic crises especially in cash crops have also affected the local livelihoods. Many local people have opted for large scale food crop production like the cassava production group in Fabe to cash crop production. But they are faced with preservation problems as they are perishable goods. However, the local people processed this product to produce other foods which could last for a longer period of time e.g garri. Due to poverty, the local people over the years have increased their activities in illegal hunting. In order to meet up with basic needs, the rich and threatened species are killed and transported to nearby cities for sale. The coming of logging companies, local organizations and plantations has led to the employment of some indigenes, hence a new source of income for the family. While on one hand, some local people have experienced positive changes in the economic trend (employment), the majority are affected negatively by the activities of the companies on the forests.

7.3.3 Seasonality

The research communities are found in the equatorial climatic zone and have two seasons; the wet and the dry seasons. It influences the livelihoods of the local communities positively and negatively. Seasonal changes play an important role in the livelihoods of the local people. During some seasons, there is the availability of food products while in others, food products are scarce. During periods of less availability of food products, households tend to pay more money for less and vice-versa. Also, during planting and harvesting seasons, there are more employment opportunities as labour is needed in agriculture. The workers as a result obtain more income which influences livelihoods outcomes.

The results of these changes have affected especially the activities of women in the rural communities. According to responses from informants and conversations with the local people, mostly women bear the drudgery of the negative effects of changes in seasons. All the communities asserted that during the dry season water is scarce and thus women and children move longer distances to search for water and even other household items like wood, hay etc.

7.4 Institutions and processes in the communities that affect livelihoods outcomes

There exist many institutions in the research communities which affect their lives differently. These institutions are local, national as well as international. Some institutions are formal and well organized while others are not visible and as such, difficult to identify. In all, whether they are formal or not, they are important to these communities as they have value for their lives and thus do affect their livelihoods. Some of these institutions like Epkwe and lefem are discussed in the previous chapter (see chapter 6).

7.4.1 Rules and Regulations

International, national and common initiative groups exist in the villages in the study and their rules and regulations have an impact on the livelihoods of both men and women in these communities. Rules and regulations which originate from government are implemented by these organizations limiting the activities of men and women in the local communities in the forest. Activities such as farming, hunting, gathering and fishing is now restricted to certain parts in the forest. This has affected their livelihoods by changing their living styles and increasing chances to vulnerability.

Rules and regulation made these institutions usually conflict with the customs and traditional norms of the local people. The gazetting of the forest area and the prohibition of local people from using the area alienates them from sites where their shrines and temples had existed. They are not able to perform their traditional rites in these sites as in the past. They do not longer control or have access to their traditional sites and as such, the power of traditional or local governments is challenged. The Ikondo-Kondo I community does not longer have access to its traditional shrines and burial ground which is found in the forest. The relocation of this village from the forest by conservation institutions has had a strong impact on their social capital which is of great importance to their livelihoods.

The local people as a result of restrictions instituted by conservation organization and because of poverty have resorted to poaching and illegal extraction of forest resources. In all the villages, heads of households who are usually men move to the forest during the late hours of the night in search of wildlife. The rigid rules and sanctions have led to increase malpractices in the forest. Animals which are considered by the local people as totems and that are not to be killed today are being killed. The hunters irrespective of how endemic a species may be kill every animal in the forest.

In the communities of the research areas, rules and regulations were meant for everybody to be obeyed and as such violation meant punishment regardless of the sex although like the case of Bechati, the elders stated that more men are being punished than women. According to them, this is because men were more involved in hunting which is prohibited. Women who were involved in harvesting NTFPs had some restrictions and easily obeyed the rules than men.

7.4.2 Traditional way of life

The establishment of conservation areas, presence of plantation agriculture and the relocation of some villages from conservation areas has altered the traditional lifestyles of the people.

The people of the Korup National Park Area (Fabe and Ikondo-Kondo I) have witnessed a change in their traditional lifestyle especially with the creation of the Korup National park, the coming of international organizations, poachers, safari hunters, tourists and conservation projects. This has had profound effects on their livelihoods. Both villages have had greater exposure to the world especially after the construction of a main road through the villages. The road has facilitated movements as people are able to transport their goods to nearby villages and towns for commercial purposes. For example, the creation of the Korup National Park in 1986 with one of its objective being the relocation of villages found within the park led to the resettlement of Ikondo-Kondo I. It is one of the six villages in the park that was the first to be relocated. The relocation has affected the Ikondo-Kondo I people in almost every aspect of their lives- from physical to social capital and is expressed in relation to what used to happen in the past and what the current practices are.

In the past, the people in this community were involved in hunting for subsistence purposes but today, it is more for commercial purposes. Relocation has given them access to markets as the settlement is closer to Mundemba town and also situated besides a motorable road. Unlike

the past where there were only footpaths and no access to cities, nowadays, they are able to sell their goods so as to provide health care and education to their families. As a result of a main road, the people of Fabe are able to transport their goods to neighbouring villages and towns for commercial purposes.

The construction of houses in the new site by the government has created an impact on the lives of the Ikondo-Kondo I people. Unlike in the past where they used thatched, sticks and leaves from the forest to construct their houses, houses are built with concrete and roof with zinc. Although these infrastructures are durable and better looking than the former buildings, they local people complained of the sizes of bands and rooms and thus cannot effectively contain all their families and goods. Some simply are not used to the way of life and preferred their former location. While some have gone back to the former site, some have remained in the new site claiming it has more and better options for livelihoods. While most of the local people complained of inadequate land for farming and hunting area, others would hunt illegally and transport for sale in cities. Most indigenes went for hunting in the forest at the former site since they are used to the terrain. Also, they said more animals were found in the dark forest than in the new site.

The social capital of the people has been greatly affected. Not only are they forced out of their homes and traditional way of life but are also prohibited from visiting their shrines. They have abandoned their ancestors which they hold with high value. The attachment of the people to their traditional values has been affected and consequently their livelihoods. According to the tradition of the Ikondo-Kondo I, the dead are buried in the houses in which they live. This is to be directly connected to the death and also to protect them from being hurt. According to discussions with some elders in the community, they are guilty of neglecting their ancestors and thus believe that the some diseases or mysterious deaths in the community are caused by their ancestors. This can be seen as one of the villagers said,

“We are here feasting while our ancestors are lamenting in the forest alone being beaten by rain and scorched by the sun. We have abandoned them. I pray they should not become angry and curse us.” Njong, Ikondo-Kondo I village

7.4.3 Land use patterns and land tenure

The institution of land ownership and use is very important to the people of both areas. It serves not only as farmlands and for settlement but also shows power relations and determines the degree of authority a family or an individual possesses.

There exist two main types of land tenure in all the research communities, that is, the community land which is under the village traditional council and the forest land which is under government control. Within the community land are individual lands own by families. In these communities, the local people distinguish four main land use types: home gardens, crop lands, common lands (under community control) and forest reserves (parks) under state control.

Home gardens: They are agro-ecosystems located closest to areas of habitation. They are usually found in backyards, usually smaller in size as compared to other farmlands. Mixed cropping is practiced in home gardens as one can find a combination of crops, vegetables and trees or shrubs planted on a single piece of land. These crops, shrubs, roots, vegetables and herbs provide food, spices and medicines for the family. Found in home gardens are mainly food crops and vegetables which serve a staple food for the households. Trees and bananas act as a shade to the coco yams, legumes and vegetables which are mainly for subsistence. Generally, seedlings for cash crops (palms, cocoa, coffee etc) are nursed in home gardens after which they are transferred to other agricultural lands for production (see figure 29).



Fig. 27. Seedlings of cocoa and palms at the back of houses

Source: Author

In most cases, women determine the type of plants to be grown in home gardens. This is because they are responsible for food and healthcare within the family. Hence their choice in species and varieties is different and directly linked to the welfare of family.

Crop lands are also found in all the communities. Typical in these lands are monoculture (single species of crops) though other species usually short-term such as vegetables are planted at intervals to be consumed while waiting for the main crop to mature. Crop lands are usually larger than home gardens and further away from home. During peak seasons, most members of households spend days and even weeks in the farm living in huts in order to cultivate crops. Crops from this land are for subsistence as well as for sale.

The method of farming used by the local people is slash and burn and shifting methods. The forest cover of the land is cleared, gathered and burn so as to increase productivity. The local people usually are unable to control the fires especially in the dry seasons leading to destruction of the forest.



Fig. 28. Crop lands in KNPA

Common lands in these communities are lands that are allowed to fallow after cultivation over a period of time. The land areas are usually left uncultivated for many years so as to allow rejuvenation. As a result, they are usually covered over time with trees, herbaceous plants giving rise to a secondary forest. These lands though officially owned by absentee landlords are to a certain degree considered free (e.g fuel wood collection, fruits collection for home consumption) by the indigenes living close to them.

Reserved or state land or forest is an area marked out by the government with boundaries for the purpose of conservation. The state through its forest departments institute rules and regulations restricting access of use of the area to the local indigenes. The local people usually carryout activities like collection of fuelwood, forest products, authorized hunting activities etc. and mostly for subsistence purposes. However, there has been an intensification of activities in the forest by local people illegally as they violate the rules of the state.



Fig. 29. State or reserved forest land

- **Land acquisition**

Access to and control over land is important to both rural men and women in the research areas and influences their livelihoods. In the KNPA, land is acquired usually by clearing a part of the forest and demarcating it with pillars or trees declaring ownership. This portion of land is then handed to the family from one generation to the other. Even though in the KNPA, land ownership is by clearing the forest, women still own less land than men compared to men. According to a female respondent in Fabe community,

“All land around the village area has been occupied and in order to start a new farm, I have to move far away from the village. I do not have the time and the strength to open a new bush. What I do at home and in the farms nearby is already too much for me.” Mme Janet, Fabe village

Unlike in the past, ownership of land in the KNPA is gradually changing. The demarcation of the park leaving community forest has made the communities to be worried about the future. To them, community land is inadequate and as such, traditional laws on land acquisition are being changed. With the assistance of the local council, they seek to distribute the rest of the land to every household represented by the head of the household in the future.

In the BFA, men inherit land from their forefathers. They own and control the land unlike the female who according to tradition and customs cannot inherit land.

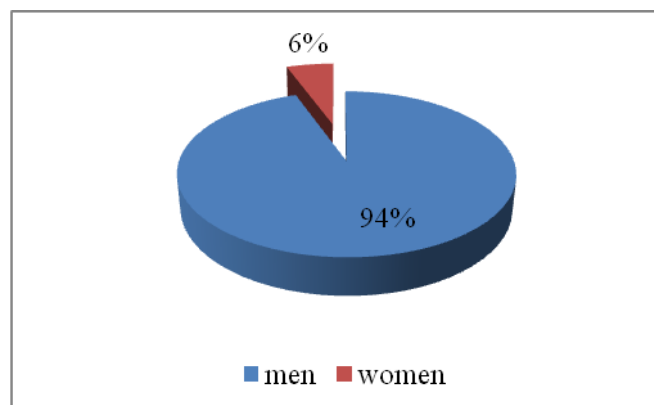


Fig. 30. Land ownership in BFA

With respect to the figure above, a majority of the male respondents (94%) owned land in relation to 6% of women in the research communities in the BFA. While it is the customary right of a male-child to inherit land, women can only own land where there is no male child in the family or all the male children are dead. In such a case, the land is seen as family land with the women having the capacity to exert control over the land and this is usually for the well-being of the family. Also, some women possess land through purchase and as such can make decisions over the land.

Culture plays an important part in land acquisition and ownership in the study communities. Evidence show that there are differences in land acquisition in both areas. While the BFA, land ownership is hereditary, in the KNPA land is acquired by simply clearing and demarcating a portion of the forest. However, already acquired land from fore fathers in KNPA is inherited by the male child of the family. Focus group discussions and key informant interviews reveal that though land acquisition is not rigid in KNPA, women are still among the lowest to acquire and own land. The results from this work correlate with other surveys as the gap between men (96%) women (6%) in land ownership is wide in the BFA. This is similar to some countries in Sub-Saharan Africa as like Zimbabwe where only 3% of women own agricultural land, 11% in Benin and 25% in DR Congo. In the Middle East, according to a survey conducted in 1999, only 5% of women own land (Keddie, 2007) with Egypt with less than 3% of women, 11% in Brazil to 27% in Paraguay (Katy, 1995). The landholdings of women are also smaller compared with men's. The average size of landholdings of women in Zimbabwe and Benin are 1.86 hectare and 0.98hectare as compared

with 2.73 and 1.76 for men respectively (Cotula, 2006). In Egypt, the average farm size is 0.7 smaller than the average farm size of men with 1.7 hectare (Tzannatos and Kaur __). Further, household surveys in eight Latin American countries reveal that the mean amount of land own by women is always less than that of men (Katy, 1995). Restriction on land ownership embedded in traditions and customs could result to the small land holdings of women in these communities since they are either to buy or obtain permission from their male counterparts.

Power relations in both research areas are illustrated in the institution of land ownership. There exists power inequality between the men and women in the Fabe and Ikondo-Kondo I communities and the Lower Fossi-Mondi and Bechati communities. The fact that women especially in the Lower Fossi-Mondi and Bechati communities rarely inherit land has an impact on their position in society. Women usually serve as custodians to the land given to them by their families or husbands and as such are not allowed to sell or hand it out without permission but rather, are to use for agricultural activities. They are solely dependent on whoever that has land to grant them permission to have access to it. The availability of land to be cultivated and consequently the quantity of products obtained will depend on access given them. The institution of land ownership is vital as it determines women's accessibility to land which affects a number of capital assets available to improve on her livelihood. Though in the KNPA, land is acquired by clearing and demarcating an area in the forest. Women still own less land as compared to men. According to information from some elderly women in the communities, land is now scarce and more so, land around the village has been occupied. Women with numerous responsibilities and for lack of strength cannot acquire land as compared to men.

Insecure land tenure, limit women from a wide range of opportunities ranging from limited access to credits to power relations. Reasons accounting for the inequality in land acquisition as recounted by some community members are due to customary practices and laws practiced in these societies and also the drudgery of burden on women.

- **Land use**

Land in the research communities is used for various purposes such as conservation, hunting, farming, settlement among others. The protected areas are however controlled by the government in collaboration with the local community. As such, the local people have restricted access to the forest and its resources which has impacted their livelihoods.

Land use in the communities involves many actors and is used for various purposes. Land is considered as a scarce commodity as greater portion of the land in this area is used for reserves and plantations. In the BFA, small plots for crop cultivation or home gardens are often granted to women by their husbands or elders (males) in the village unlike in KNPA, where women are free to obtain land individually from the forest. Women have limited access to agricultural services and inputs that are needed to improve on the quality of resources like fertilizers (*Informant*). As a result, women turn to be the most vulnerable. The study by Iyassa et al., 2009 confirms the issue of land scarcity as only 15% of land in the KNPA is allocated for farmland

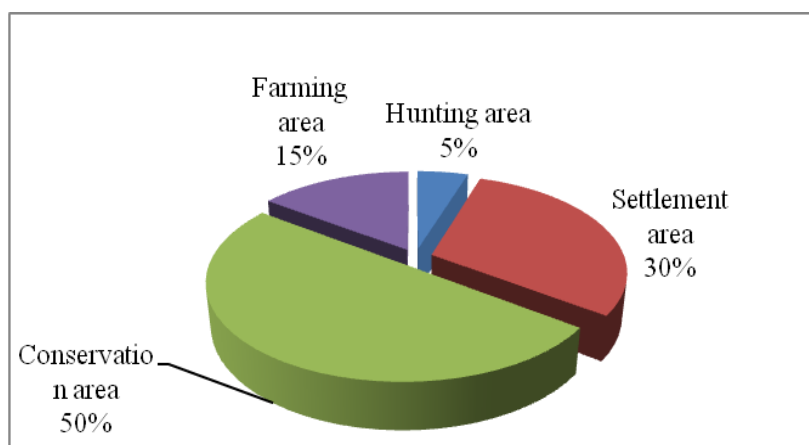


Fig. 31. Land use types in NKPA

Source: Iyassa et al., 2009

7.4.4 Gender, class and age as an institution

Culture and religion has influence on the gender, ethnicity, age and class in the research communities which further affect the livelihoods of the local people. In order to effectively understand the impact on livelihoods; this research would consider gender, ethnicity, age and class as an institution. Through culture and religion, power relations are seen between the different groups of people found in these communities. Rules and norms of the custom become a form of acceptable habit or law to the people. The relations in power usually affect the livelihoods of the communities as the less privilege are affected negatively while the privileged group uses it to improve on their livelihoods resulting to inequality.

The people of Fabe from the Bami ethnic group consider themselves superior over the Ikondo-Kondo I from the Korup tribe. The Fabe come from the largest ethnic group in this area and more so, Ikondo-Kondo I is resettled on part of their land and as such they have

established power over the Ikondo-Kondo I thus commanding respect. They are ready to intervene at any moment when they realized that the land is being misused and would not want this land to be sold especially to foreigners. In the research communities, there exist a patriarchal system with established rules that is for and is accepted and obeyed by men and women.

Gender plays a role as each sex is associated with different roles and is bound to accept and obey the rules governing the communities.

Class in these communities portrays the power inequalities that exist in the communities. Socio-cultural and economic status of the people divided them into different social classes. In all the communities, it was realized that wealthier families have a higher status and were well respected than poor families. These families had the most educated children and were influential in the affairs of the community. They were regarded with high esteem and usually their women were given administrative positions in meetings in the village.

Age difference of the different members of the community has an influence on the lives of the local people. As a custom of the people, old men are regarded as wise and demands high respect from the youths. Old women as well are respected and in some cases, are invited to some village traditional council meetings. The older members of the communities are highly respected by the youths or the younger generation as any parent (not necessarily the biological father or mother of the child) has a right to discipline a child who is disrespectful in the community.

7.4.5 Family and community as an institution

The family as an institution plays a major role in the outcome of the livelihoods of the people in the research communities. There exist in the research areas the nuclear form of family pattern made up of the man, his wife or wives and children or the extended family pattern which includes man, wife or wives, children and other family members such as aunts, uncles, nephews, cousins etc.

There exist strong bonds between family members and between other families in the community. This usually stems from inter marriages as well as friendship which makes it as an obligation to strengthen one another. Some families practiced group work and even share their resources together in order to improve on their livelihoods. During farming seasons, there is division of labour with the common goal of improving living standards.

The community is an institution as every family represented in the community is bound to respect the authorities, laws and the customs of that society. The local communities in the KNPA and the BFA have a form of local governing system and local authorities whom they pay allegiance to. Members of the communities have obligations and responsibilities to fulfill for the development of their societies. In order to develop the community, every family takes part in community work. In most communities like Fabe, the people have created a council development group which organizes members of the community to participate in projects like building bridges, cleaning market squares etc.

7.5 Livelihoods outcomes and opportunities

7.5.1 Food security

There is food availability to the people in all the communities as there were no instances of famine. The inhabitants used the technique of valorization whereby foods are processed and preserved for use in times of lack. Usually food crops such as corn, cassava processed into garri and fufu were dried and stored for use while waiting for the next harvest. However, this can only work well when the yields are good. They usually experienced bad harvest as a result of seasonal changes, destruction of crops by animals etc which forced them to turn to the forest. Women who have the responsibility of providing food for the family are more affected with scarcity and limited access and as such, would spend longer hours and move for longer distances to look for food.

7.5.2 Income and natural resource sustainability

In both communities, men and women carried out different livelihood activities so as to meet up with family demands. Income generated from various sources is able to improve on their living standards. However, in order to get more income for the household, pressure was increased on forest and resources leading to further degradation. This quest for cash led to violation of regulations and rules laid by the government, prohibited areas were being accessed and threatened species exploited. Hence, more income to the local people meant increase exploitation of forest resources which would affect the generations negatively.

7.5.3 Wellbeing

With the growing diversification of activities of the local people, the income generated from their activities was to purchase equipment and other food items needed in the household from local markets. With cash, the local people were able to improve on the community life as they were able to build community halls where festivities can be held, public pit latrines as well as construction of bridges facilitating movements. They have some access to services such as health care, education etc. although not in all the communities. The wellbeing of the local people has registered some progress, the government is willing to cooperate with the local and involve them in the management and conservation of the forests. They also receive incentives from the government and donor agencies which help in increasing the welfare of the local population.

7.5.4 Vulnerability

The local people in order to withstand the effects of the hostile environment diversified their activities and geared towards income generation. In spite of all these efforts to buffer against vulnerability, they are able to meet just the basic needs of their households. Many local people still live in poverty as they are unable to save for the future. Excess exploitation, poaching and occurrence of natural disasters only increase the vulnerability of most households. Even the fewer households which are able to withstand shocks are short-lived. Although members of some families usually work out of the village in companies, conservation projects and palm plantations where they have fixed wages, these families are still faced with challenges as the entire family is dependent on that one member. In cases of sickness, retirement, end of contract or death, the relatives would be susceptible to shocks.

In a nutshell, according to the discussions, it can be seen that the local population of the research communities have not achieved sustainable livelihoods. They are vulnerable to external factors like floods, changes in climate etc.

Chapter Eight

Gender roles and responsibilities in forest use and management

8.1 Gender differentiation in household labour

In order to answer the research question on the different roles of men and women in forest activities, an in-depth analysis was carried out on the different tasks and responsibilities of men and women within households in the research areas. In order to improve on the livelihoods of rural households, men and women perform varying roles and responsibilities.

An in-depth analysis on who does what by different members in the household revealed that sex and age has an important role to play in the research communities of the KNPA and BFA. The adult age considered for male and female was between 15 and older and for children both male and females was between 9 and 14 years. The majority of respondents in the communities of Bechati, Fabe and Lower Fossi-Mondi considered children (who can assist parents as well as work independently) as from the age of nine while other communities like Ikondo-Kondo I considered the age of eight). The majority with the age of (9) was considered for the study.

The following table shows the roles and responsibilities of each group in the homestead, home gardens, crop land, forest reserve and off-farm activities.

Table 11. Division of roles and responsibilities in households (n=108)

Location	Activity	Who is involved /Activity					
		F	M	C	F+C	F+M	M+C
Homestead	Cooking	67	3	8	18	0	0
	Collecting water	22	5	25	56	0	0
	Feeding livestock	30	0	6	64	0	8
	Child care	77	5	5	0	21	0
	House construction	6	85	0	0	10	7
	Home catering	70	7	8	23	0	0
Home gardens	Land clearing	43	24	30	17	20	0
	Plowing	35	25	0	12	36	0
	Sowing	90	0	03	03	12	0
	Weeding	70	0	20	18	0	0
	Mulching	85	0	5	20	0	0
	Harvesting	30	0	60	30	0	0
	Transporting/ Processing	32	20	33	23	0	0
Crop lands	Land clearing	12	59	23	2	8	3
	Plowing	15	58	10	10	15	0
	Sowing	30	40	14	10	6	8
	Weeding	52	16	24	5	0	9
	Harvesting	40	16	18	7	6	21
Forest area	Firewood collection	41	8	32	27	0	0
	Harvesting of NTFPs	33	22	28	15	5	5
	Medicinal plants	31	28	25	0	0	0
	Logging	0	30	0	0	0	0
Off-farm	Marketing products	41	57	10	0	0	0
	Paid work	20	28	0	0	0	0
	Community work	15	23	0	0	70	0

Source: Survey data

- ❖ F-Female,
- ❖ M-Male
- ❖ C-Children

In all the research communities, men and women within households play distinct roles. Information from the field at the level of the homestead showed that women and children above the age of nine are more involved with household chores (cooking, collecting of water, childcare) while men are involved in construction (Table 11). They construct houses, fences

for domestic animals, toilets etc. The society view women as weaker sex and as nurturers and as such, their responsibility is to stay at home. The traditions and customs of the communities in the research areas recognize men as breadwinners and heads of households (key informant). Men have the responsibility to provide cash for the household for construction of houses (shelter), to buy items which the family cannot obtain from the forest and farms, pay fees for the education of children, dowry or bride price if the son cannot afford, organization of family feasts etc while the women are responsible for providing the subsistence needs of the family. These include growing and preparing food for the family, home catering, children catering, fuel wood and water collection and the general welfare of the family. The differences in responsibility played by men and women in the household influences their activities in the forest.

According to table 11, roles and responsibilities of women in forest related activities were found to be significantly high in firewood collection (41) and harvesting of NTFPs (33), followed by children with (32) in fuel wood collection and (28) in harvesting NTFPs. While women and children predominated firewood collection, men predominated in logging activities (30). Other products collected by women in the forest include wild fruits, nuts and medicinal herbs for household consumption. The majority of men extract poles for construction, chewing stick and straw for roofing of houses. However, according some villagers, there is a gradual change in gender roles as women are now taking up responsibilities traditionally known to be male. (See section 8.3). It is worth noting that the activities of men in harvesting NTFPs have been on the increase over the years. This is as a result of wildlife scarcity and economic crisis (Key Informant). Collection of medicinal plants was the only forest-related activity where division of labour was not significant though women are more involved than men and children. This is probably because it depends on who is at home when a member of the family falls sick.

In home gardens, women dominate in all the activities like clearing, ploughing, sowing, weeding and harvesting in relation to men. From the table below, it is shown that men assist women in home gardens to clear and plough. Home gardens are considered in most rural communities as the responsibility of the woman since the products are to assist her in cooking. Most crops in home gardens are vegetables, condiments and few roots and tuber crops. Home gardens are usually smaller in sizes, of a quarter hectare to one. Mix cropping is usually carried out in home gardens with mostly condiments for soup thickening and at times

nurseries. The products from home gardens are almost entirely used for household consumption.

Activities in crop land are dominated by men like clearing (59), ploughing (58) and sowing (40). Although women and children are also involved in clearing and ploughing, they mainly assist the men. Women recorded a higher percentage in weeding (52) and harvesting (40) compared to men and children. Croplands are larger in size than home gardens. Crops cultivated include cocoa, coffee, palms, plantains, bananas, cassava, cocoyams etc. According to responses, men are more involved in cash crop production usually in large scale for commercialization while women are involved in food crops largely for subsistence. Surplus of food crops are also sold so as to gain extra income. Mixed cropping is carried out in most farms with the husband having ownership and control over the cash crops and women food crops. Women are compensated for hard work as they are allowed to pick up remains (cash crops) after harvest or are given a token by their husbands for catering for their farms. According to a farmer from Fabe,

“My wives always do a good job especially weeding my cocoa farm. You know women are generally patient and would not want their crops to be destroyed. With us [men], we have no time especially when the plants are still young to take care especially during weeding not to destroy the tips. In order to make my wives happy, I always buy a pair of shoes and a piece of cloth to each of them after selling the cocoa”. Mr. Mola

In off-farm activities, men were found to dominate the significant activities which were marketing of products (57) and paid work (20). In all communities, it was noted that men are more involved in the sale of cash crops like cocoa, palms, coffee. According to respondents, women were also involved in petty trade of vegetables, fruits, NTFPs etc. It was revealed that unlike the past where only men were involved in trade, women are now involved in larger trading to improve on livelihoods. Today, women do not only take up trading as an occupation but also move to nearby towns for paid employment. The participation of both male and female are almost equal in community work.

From table 11, men are more involved in off-farm activities while women are involved in indoor activities like home catering and subsistence agriculture. Men spend their leisure time attending meetings, discussing in bars or at market squares as stated by some elders in Ikondo-Kondo I village. As a result, most of the discussions done at formal meetings have been discussed during informal meetings usually by men and at times conclusions drawn

making it difficult for other suggestions to be agreed upon. Apart from the burden for women with numerous activities, culture also prohibits women from talking in public as it is a sign of disrespect for the elders in the village. This makes them less committed and some even considered meetings boring.

“I do not see the need of attending such meetings. I prefer to use that time to rest and think of the next day rather than sit and watch our husbands display their abilities in arguments which I cannot say a word. It is good for them because they are idle in the evenings after farm work.”Mrs Florence, Bechati

In the research communities, men are more involved in large-scale cropping for commercial purposes while women work on smaller scale to meet family needs and obtain modest income from local sales. In these communities while men tend to focus on staple and cash crops, women grow legumes, vegetables and root crops.

There exists a clear division of labour within HHs. Every member has different roles and responsibilities in the household which are not only based on sex but also on age. This is clearly seen in areas of activities like homestead, home gardens, off-farm activities (table 11). While women and children dominate the labour force at the homestead, men are seen to dominate in off-farm activities.

It is an acceptable fact that gender disparities in access to and control over labour can hinder productivity. Gender roles act as social determinants on availability of labour. Gender, agricultural and household tasks in the research communities are determined by social expectations which usually result in unequal bargaining powers that distort household allocation of labour and productive resources. In this research, while women and female children tend to carryout similar tasks related mostly to the household, men are indulged more in outdoor activities.

According to ILO, the discrimination against women and the minority in the labour market is a significant obstacle to economic efficiency and social development. Perceptions on the supposedly “natural” abilities of women has contributed to the assigning of women to unskilled and lowly paid jobs. This is seen in the case of the strawberries fields of Egypt where there is the belief that women’s familiarity with domestic work such as food preparation has made them suitable in handling delicate horticulture products like strawberries (Spring, 2000). A significant difference in labour allocation between men and women was found in all communities in agriculture and domestic labour. It was only after these

responsibilities are fulfilled (by her, children, in laws etc) then is she able to divide her time for income generating activities, her children and/ or her husband. As argued by Gurung, (1999), those rural women's work patterns are marked with continuity, change, flexibility as well as rigidity. The many and repeated farming processes performed by women made them to contribute more labour than men in agricultural activities.

Studies from across the globe indicate that rural women contribute more in agricultural labour force than men. According to a study carried out in Lao PDR, about 50-70% of agricultural activities are carried out by women in addition to household duties. Women produce mostly for subsistence and about 30% of household diet and household needs are catered for (UNICEF, 1996). Cambodia Human Development Report suggests that women contribute 55% of agricultural labour force in Cambodia (Royal Government of Cambodia, 2000) and out of about 80% of labour from agricultural activities, women make up 56% of the primary work force mainly in subsistence farming (MWVA, 2004). 63 out of 100 men in agriculture in Indonesia are women. They represent the mainstay in their rural households (Mugniesyah, 2002). Women apart from agriculture and due to the fact that they control small amounts of land resort to off-farm employment in small enterprises (Mugniesyah, 2002) in order to meet basic household needs.

In most regions, socialization often driven by tradition defines the responsibilities and taboos in the economic and social sphere of rural communities (Gurung, 1999). Most decisions on household labour are often bias and usually relegate domestic tasks to women and girls. However, with increasing economic pressures and modernization, women are taking up roles traditionally regarded as belonging to men. Women are now taking up new roles in farm production, community production and off-farm activities as seen in the study. This is to ensure that basic needs of the family are met.

8.2 Composition and distribution of household income

▪ Household income composition

The composition of incomes differs within households and between men and women. In this research, the resultant aggregate of total income from different members of each household is considered. Only items sold are considered as they did not keep record of what they consume in the household.

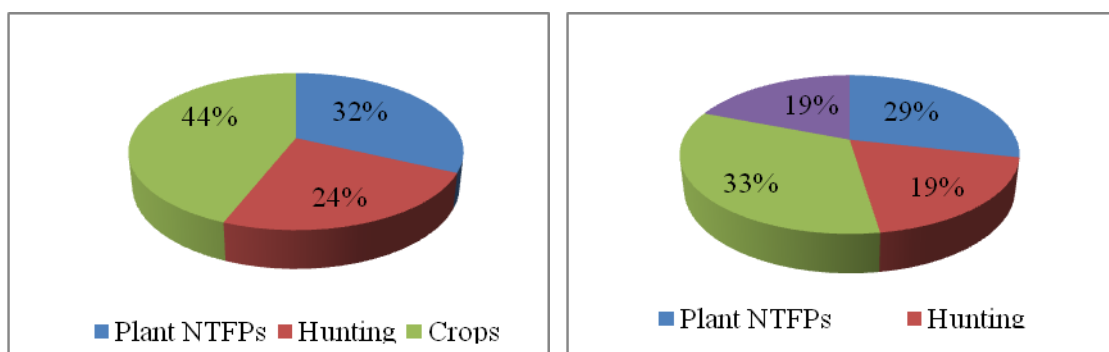


Fig. 32. Household income composition in Ikondo Ikondo I (left) and Fabe (right).

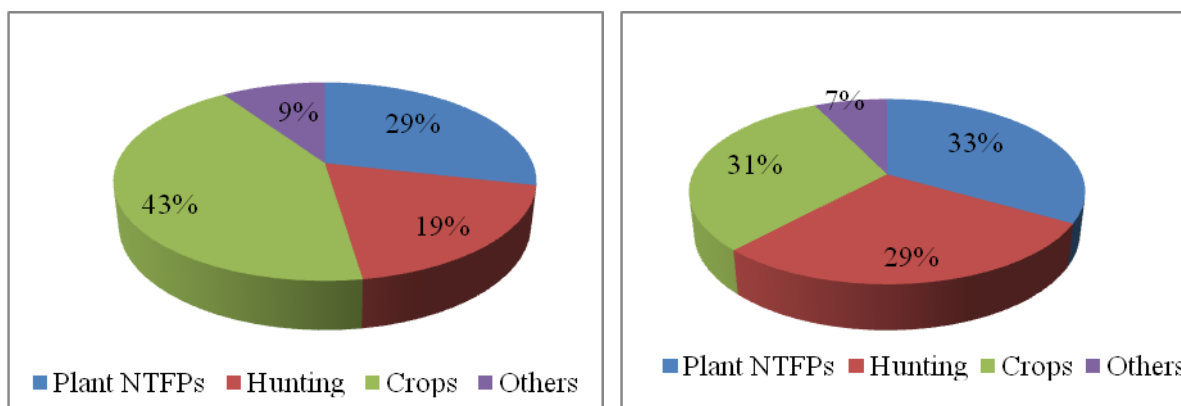


Fig. 33. Household income composition in Lower Fossi-Mondi (left) and Bechati (right).

In order to get an insight on income composition in the KNPA, harvesting of plants products like wild leaves, fruits in Ikondo-Kondo I community contribute 32% of household income and 29% in Fabe community resulting to a total of 61% in the KNPA. For households in the BFA, plants NTFPs contribute 29% and 33% of total household incomes in Lower Fossi-Mondi and Bechati respectively making a total of 62% making a slight difference with communities of the KNPA. NTFPs include bush mango, eru, njangsanga, alligator pepper, wild fruits and leaves.

Total incomes derived from food crops in the BFA indicate 43% and 31% in Lower Fossi-Mondi and Bechati communities respectively. Likewise in the KNPA, Ikondo-Kondo I community registered 44% and Fabe 33% as total household incomes in 2010. Results show that Ikondo-Kondo I was highest in total income from food crops. Discussions reveal that Ikondo Kondo I since relocation have embarked more on agriculture. This however challenges results from Eyong, 2009 which indicated that Ikondo-Kondo I depends more on resources inside the Korup park. Crops include cash crops (cocoa, palms) and food crops (cassava, cocoyams, plantains, bananas, egusi, yams, ground nuts etc).

Households from all the research communities except Ikondo-Kondo I also acquire household income from other activities such as tailors, porters, guiding researchers, teachers and manual labour. Activities like teaching and employment into neighbouring plantations brought income to families. Total income from other activities in Fabe showed 19%, in Lower Fossi-Mondi and Bechati, it resulted to 9% and 7% respectively. This activity recorded least total income in all the communities. Although responses show Ikondo-Kondo I as the least, elders in the village see petty business as an activity that will develop in later years.

“We are still studying the environment; it seems there are great opportunities for us. Very soon everybody will move to Mundemba markets especially now that there is a road. We will become richer than even the neighbouring villages because we are closer to town. We are still in the process of cultivation; this village will change completely in the next ten years.”

Mr. Mbah

▪ **Distribution of household income between male and female**

As observed in all the communities, income distribution varies between male and female and across villages (Appendices 8 & 9). A total of 20 households of men and women were selected from each community. Each household brought out a sum total of estimated income in a year, expenditure and savings. Expenditure was assessed based on expenses in and out of the household. Expenditure in the household is that which is used for the direct needs of the family (household utensils, health, education) while expenditure out of the household involves issues like social contributions to the communities for road repairs, dues into social institutions, rituals, dowry etc. The results highlighted differences in income within households between men and women and across villages calculated at LSD of 0.05.

Table 12. Income distribution in Ikondo Kondo I and Fabe communities

Village	sex	Est Income	Exp in HH	Exp out of HH	Expend.	Savings
Ikondo-Kondo I	F	51429	30479	15350 a	45829	5600
	M	92955	25718	33691 b	59409	29700
	P (0.05)	0.253	0.344	0.008	0.112	0.503
	LSD (0.05)	72559	10058	12629	16843	71577
	Significance	NS	NS	S	NS	NS
Fabe	F	55367	38378	15193a	53471	2673
	M	84715	28786	36546b	62605	22110
	P (0.05)	0.089	0.063	0.001	0.159	0.207
	LSD (0.05)	34455	10212	9654	13098	31174
	Significance	NS	NS	S	NS	NS

a,b- Significant differences

LSD- Lowest significant differences

HH- Household

S - Significant

NS - Not significant

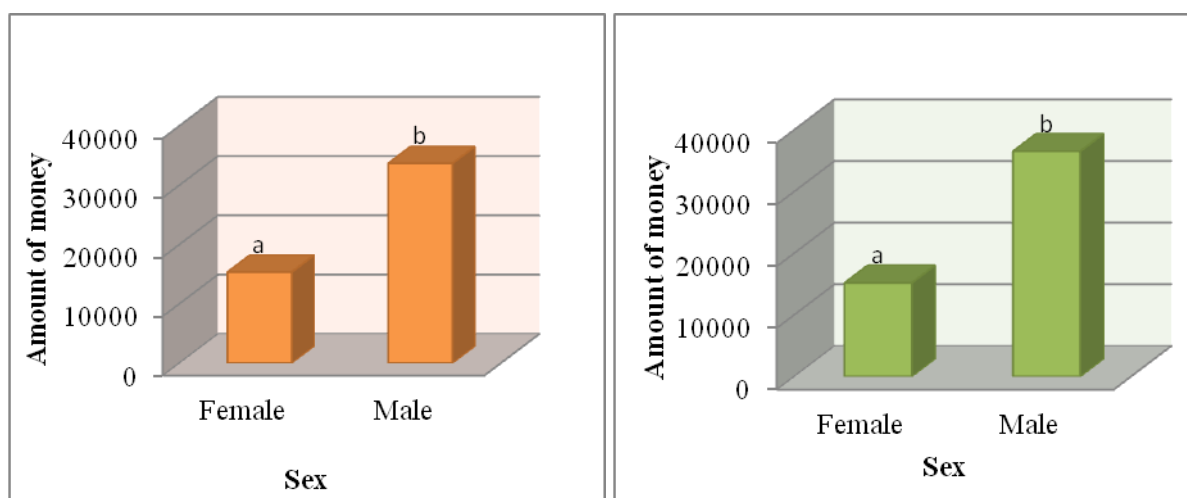


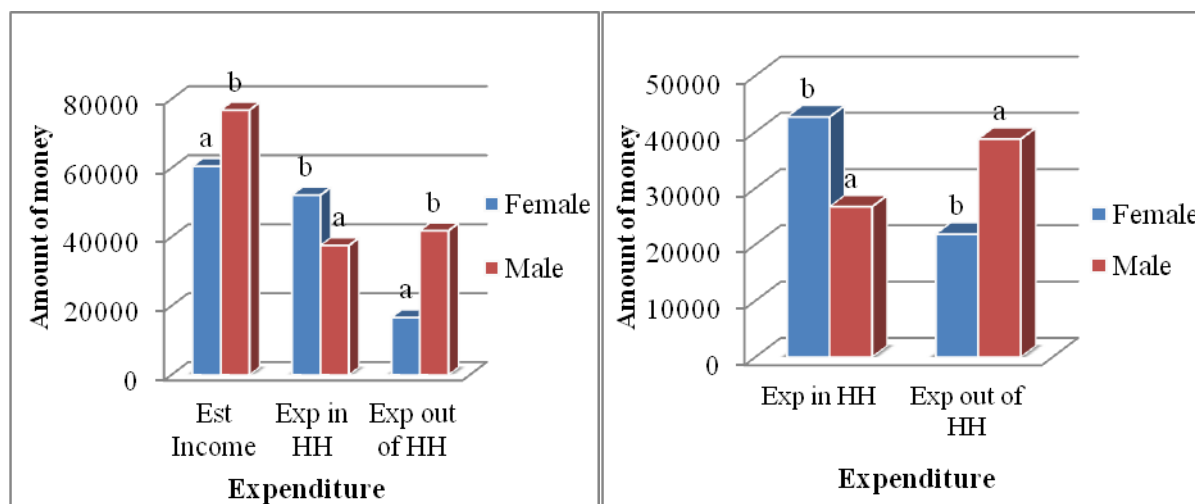
Fig. 34. Expenditure outside household in Ikondo-Kondo I (left) and Fabe (right).

Within villages, results from the table above show that expenditure out of household between men and women are significantly different in Ikondo Kondo I and Fabe communities.

Table 13 Income distribution in Lower Fossi-Mondi and Bechati communities

Village	Sex	Estimated income	Expenditure in HH	Expenditure out of HH	Total expenditure	Savings
Lower Fossi-Mondi	F	60545a	52185b	16640a	67825	-7280
	M	76850b	37563a	41850b	79413	-2563
	P (0.05)	0.015	0.006	0.001	0.143	0.514
	LSD (0.05)	12665	9734	11130	15974	14652
	Significance	S	S	S	NS	NS
Bechati	F	69989	42678b	21856a	63422	6567
	M	75715	26720a	38740b	65460	10255
	P (0.05)	0.467	0.002	0.012	0.759	0.636
	LSD (0.05)	15594	8816	12316	13604	15517
	Significance	NS	S	S	NS	NS

a,b- significant differences
 LSD- Lowest significant Differences
 HH- Household
 S - Significant
 NS - Not significant



a,b- significant differences

Fig. 35. Estimated income and expenditure in Lower Fossi-Mondi (left) and Bechati (right).

While in Ikondo-Kondo I and Fabe, significant differences were recorded only in expenditure out of the household (table 12), in Bechati and Lower Fossi-Mondi communities, there exist significant differences between men and women in both expenditure within and out of the household. Also shown in Lower Fossi-Mondi is a significant difference between men and

women in estimated income (table 13). In all the communities, there exists high variance in savings (Appendices 8 & 9).

Data was analyzed between villages combined to compare income distribution between men and women within villages. From the results, one could see the differences in income distribution between men and women in all villages.

Table 14. Combined analysis of variables over villages (sex * village interaction)

Variables		Estimated income	Expenditure in HH	Expenditure out of HH	Expenditure	Savings
Sex	F	59819 a	41849 b	17351 a	58603	1416
	M	83158 b	29181 a	37370 b	65801	1629
	P (0.05)	0.014	0.0001	0.0001	0.062	0.108
	LSD (0.05)	18484.2	5241	5332.17	7595.48	18273.3
	Significance	S	S	S	NS	NS
Village	IKondo-Kondo I	76806	27569 a	26558	54128 a	20328
	Fabe	71508	33103 a	26937	58495 ac	13364
	Lower Fossi-Mondi	67792	45686 b	27844	72975 b	-5183
	Bechati	73003	34279 a	30742	64495 bc	8508
	P (0.05)	0.936	0.0001	0.842	0.004	0.279
	LSD (0.05)	27545	7466	10070	10151	25971
	Significance	NS	S	NS	S	NS

a,b,c,ac,bc - significant differences

LSD- Lowest significant Differences

HH- Household

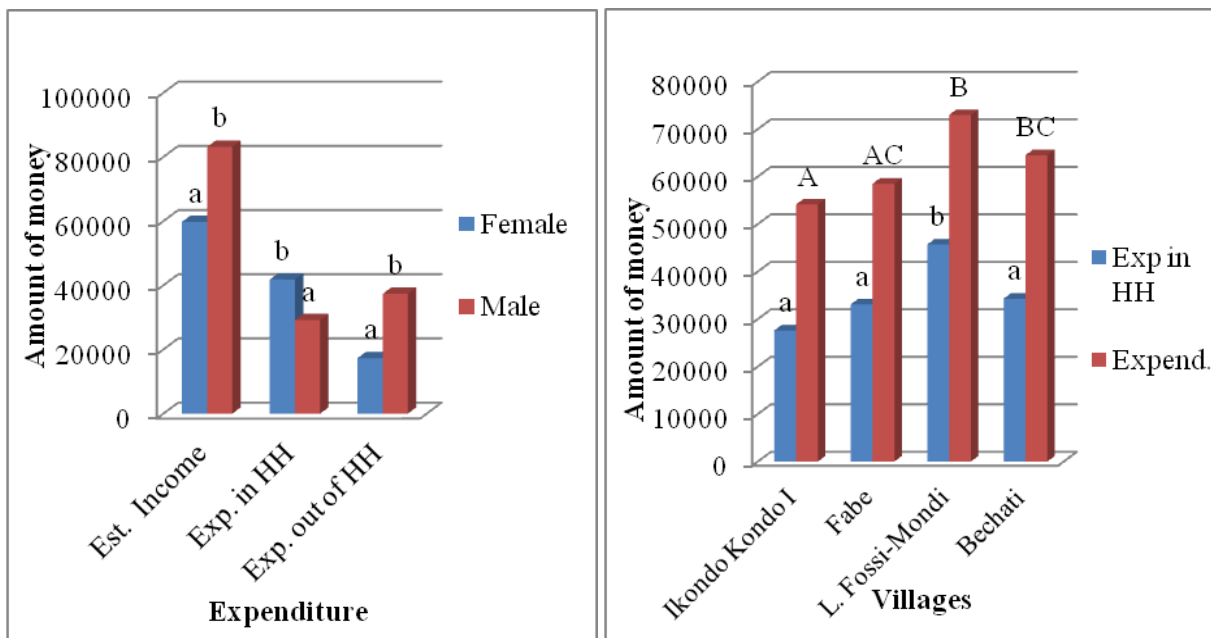


Fig. 36. Sex and income distributions in villages (left) and income distribution over all villages (combined analysis) (right).

This section examines the gendered patterns of income distribution in research communities. Results show that expenditure within households in Ikondo-Kondo I, Fabe and Bechati communities are significantly lower than in Lower Fossi-Mondi community. However, they are not significantly different between each other. For expenditure out of the household, the community of Lower Fossi-Mondi shows a significantly higher value compared to the two communities (Ikondo-Kondo I and Fabe). Although it is higher than in Bechati community, the difference is not significant. Expenditure out of the household in Bechati is shown to be significantly higher than that of Ikondo-Kondo I but the difference was not significant compared to Fabe community.

Results indicate that there is unequal distribution of household income between men and women in the research communities. However, women used most of their income within the household compared to their male counterparts. These results attest to IFAD's findings in a study in Ghana which found that women spend the largest portion of their income on food for their families (IFAD, 1998). In addition to basic needs like salt, maggi, they also buy supplementary foods, vegetables and other staples that they may not have grown enough. The possible explanation for this may be due to their numerous activities in the household. Women tend to be more attached to especially children and the elderly in families as they nurture and care for them. The increased spending of women in Ikondo-Kondo I (69%) compared to men (31%) and Fabe (71% to 29%) respectively show a relationship of men and women towards their families. Women are closer to the family as they see the day-to-day functioning of the household by providing food, nurturing the children etc. According to a woman in Ikondo-Kondo I,

“How can I sit and watch my daughter or son die with money in my pocket. Last week my daughter almost died of diarrhea had I not taken her to a health centre for treatment? I spent sleepless nights and saw her vomiting, sending out faeces and was losing weight. I could not wait, if I had no money I will borrow”. Mme Esther, Fabe

Although the estimated income of women in all the communities was less to that of men, they spent more on household needs. This was however different in relation to men as they spent more income on activities out of the household. Women in these communities rely mainly on subsistence farming and harvesting of NTFPs (Fig. 21) which yield low income compared to cash crops. This probably might have led to the low incomes of women. Also, the nature of land acquisition and multiple activities of women might limit their level of productivity and full participation in income generating activities. Women are involved in every aspect of life in the society (home, out of home and in the community). According to the findings of Ester Boserup, 1997, women have triple roles in the reproductive, productive and community domain.

High significance in expenditure within the households in Lower Fossi-Mondi than all other communities can be attributed to the in-coming of people from other villages to live. Lower Fossi-Mondi communities in comparison to other communities have two secondary schools and a health centre. This has attracted students from other villages and government teachers from other cities. Even the sick from nearby villages are brought to the health centre in this community. Furthermore, the chief of Lower Fossi-Mondi is a medical doctor and hence many rush to his village for assistance. The coming of foreigners has led to higher prices resulting to high expenditures within and out of the household.

In all the communities, there is a wide variation in estimated income and savings probably due to the fact that the area is remote and poor. In order to have basic amenities, people need high income which was not usually available. Some people could barely have savings at the end of the year and some even recorded minus in savings attesting that their livelihoods are not sustainable.

8.3 Changing gender roles in forest management

Forests are an important source of wild foods, fuel wood, fodder, medicines and other materials for the rural people. The changing conditions in the forest have led to changes in gender roles as the local people strive to sustain their livelihoods. Hence, the sustainability of rural livelihood is dependent on the availability of forest products and services.

As a result of forest degradation, the role of men and women in the rural communities is gradually changing. Increase in scarcity of forest resources and land degradation has impacted their activities as they adopt new ways to meet their needs. Both men and women have altered their roles by going into diverse and different directions and activities in order to meet their livelihood needs. The table below shows the changing roles of women in the past 10 years.

Table 15. Changes in roles of men and women

S/ N	Roles of women 10 years ago	Roles of women today
1	Solely responsible for the home	Multiple roles (home, community, extended families)
2	Activities carried out around the homes (farming, harvesting etc)	Move longer distances into the forest
3	Involved in petty trading for HH	More involved in income generating activities (cassava group etc)
4	Women were restricted in participating in traditional meetings	Women are represented in traditional meetings
5	Education was mostly for male children	Education is for all though preference is given to males
6	Women were restricted from speaking during meetings with men	Women can voice out their opinions though they are most often not recognized
7	Women were not involved in rural exodus	Women now move to nearby cities for jobs

Source: Survey data, 2011

According to information obtained from the research communities through focus group discussion and key informant interviews, there have been gradual changes in lifestyles and traditions of the people. Unlike the past where women were solely at home, presently they have multiple roles and extend their activities to the community. They are involved in large scale income generating activities like the women's cassava group in Fabe. Women are no longer restricted in traditional meetings as before and can even voice their opinions although they are often not recognized.

KNPA and BFA have witnessed a steady increase in rural exodus. Increased forest degradation, restriction on forest activities and general economic crisis have led to the movement of local people especially men and youths to other parts of the country in search of employment opportunities. Unlike in the past where indigenes relied on forest and agriculture, they have changed their roles as they now seek for employment in companies and plantations in nearby cities.

Many men in the rural communities have taken up paid employment thereby reducing and even at times ending their activities in the forest. Male members of the communities of KNPA have taken up jobs in nearby cities like Mundemba, Kumba, Douala etc. The chief of Fabe lives and works in Mundemba and only comes to the village on weekends or when need arises. So too are majority of men who come home occasionally to visit their families. This change however is culminated by a high demand for money, loss in or reduction in forest products which they solely depend on. The money earned is used to meet basic household needs like marriage, rituals related to birth or death ceremonies, construction, education of children etc. Some women especially female headed households have moved to nearby cities to improve on living conditions. In Fabe village, while some women have moved to Mundemba, a nearby town to operate restaurants, others have become PAMOL plantation workers.

8.3.1 Participation in skilled training

With sensitization from donor organizations and government of Cameroon, most indigenes are aware of protection and management of the rich forest and do agree that protection has a positive impact on forest. The call for the involvement of rural people in management issues has resulted to greater participation and cooperation among stakeholders.

The presence of NGOs like WWF in the KNPA which ended in 2003 had initiated a management system with the involvement of the local indigenes. Today, the management of the area is being coordinated by DED, an organ of GTZ that has instituted traditional councils for capacity building. ERuDeF found in the BFA is also concerned with coordinating the management activities in the villages located near the forest reserve. Forest users have carried out measures to enhance the skills of locals in areas related to forest management such as cane rat farming, bee-keeping, cassava production, domestication of livestock etc.

8.3.2 Participation in alternative income generating activities (IGAs)

As a result of restriction to forest and products, many locals have resorted to IGAs in order to generate cash for their families. Main income generating activities in KNPA and BFA are rat farming, bee-keeping, livestock rearing, food crops farming (cassava, maize, cocoyams etc). Out of all respondents, majority registered in high level with 13.9% in IGAs (13.89%), (50%) were involved at medium level, (23.14%) were involved at low level and (12.96%) of respondents were recorded as absent in IGAs activities.

8.3.3 Gender and decision making in management committees

Decision-making in forest management in these communities is of key importance as the decisions they take will have an impact on their livelihoods. From the group discussions and survey, it was realized that gender, education and class status influenced decision-making. The local population regarded the elites of a higher status and thus would easily vote or nominate them for positions.

The number of respondents for nominal level of participation is those who have participated in at least two of the meetings for the past year (Table 16). 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.

Table 16. Level of participation in decision-making

Level of participation	No. of Households		Total
	M	F	M+F
No. of households that attend meeting Attendance (Nominal)	30	15	45
No. of households that expressed opinions (Active)	22	09	31
No. of households that feel they influenced decisions (Interactive)	16	02	18
Total	68	26	94

F-Female

M- Male

According to results on the level of participation in decision-making by gender, it was realized that more men were involved in all aspects of decision-making than women with the percentages of 72.3% and 27.7% respectively. While fewer women would express their opinions (9.5%) in relation to men with 23.4%, even fewer women felt they actually influenced decisions (2.12%). On the other hand, 17% of male members did influence decisions in their meetings.

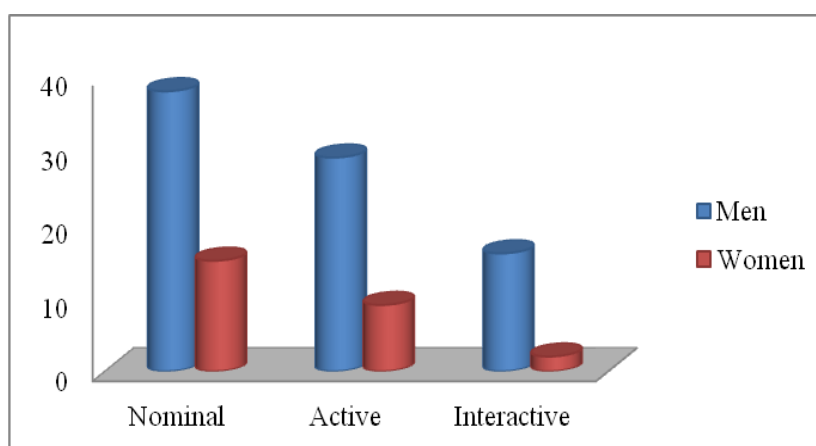


Fig. 37. Participation in meetings in the research communities

As illustrated in figure 37, there is a general trend in reduction in the level of participation of both men and women in decision-making. While a greater section of the research population is represented in meetings, they hardly participate in decision-making which has impact on the

entire community. However, according to conversations with informants, the situation is changing. Unlike in the past when women were prohibited from attending, 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 a result of migration and deaths has given them greater decision-making power. Trading as well as seeking employment in nearby markets and plantations have resulted in higher income to women thereby leading to greater autonomy and freedom. Women have the ability to travel to other villages and towns, control over income and are able to build relationships outside the home. Many studies have been carried out which link women's empowerment to property rights. 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 another study in 2003, married women claimed that they had 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, gifts etc. (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 Argawal's argument that an individual's economic situation, command over property, control over institutions and participation in collective action contributes to their bargaining power within and out of the household (Argawal, 1997).

8.3.4 Multiple roles in household

Rural women especially those whose husbands are out of the village in the research communities are concerned not only with forest activities and household daily chores but have taken up the responsibilities of their husbands. Their burdens are increased especially during the dry seasons as they move for kilometers in order to fetch water and other materials for the household. As a result, children are neglected and cared for by older women. In families with

no older women to take care, the children are either left with the neighbour or taken along increasing the burden of women.

With the out migration of men, women are forced to take up multiple responsibilities to improve on their standards of living in the household. They are solely responsible for the day to day survival of the family. For this purpose, they become more dependent on the already degrading forest for subsistence. They sell products from the forest to buy other food items like rice, salt, maggi etc.

8.3.5 Cultural changes

Forest degradation and the resulting consequences have impacted the cultural patterns of the research communities. The migration of some members of the communities coupled with pressure on especially women in order to meet up with household livelihoods together with restrictions of access to some areas in the forest has greatly affected their traditions. Not only are some members away from home but also women immersed in forest activities have little or no time or spirit for festivities. The culture of the people is gradually dying out.

On the other hand, some roles previously occupied by men are also being handed to elderly women in the local communities. For example, the traditional council meeting of Fabe village which in past was only for men now incorporates elderly women who are heads of households. Although active participation of these women was not seen, at least, they were represented

8.3.6 Commercialization of products

There has been a change in the roles of men and women in farming as a result of migration of especially the male members of the households. Unlike in the past where men would clear the bushes and forest for women to cultivate crops, their absence has resulted to the creation of women's groups as an alternative to meet the demands of family. Today, women undertake clearing and moulding, weeding of farms usually as groups. This is because as individual families, they are not able to meet family needs by having few farms.

In order to improve on living conditions of families, women have created common initiative groups where income is raised to cater for the family. They are more involved in petty trading, operation of restaurants and bars in addition to their numerous duties. Women in KNPA have established cassava women groups and noted in the BFA is also the women

“njangi” farm group. While the cassava women group cultivate cassava on a large scale, process and sell to local buyers, “njangi” farmers group of Bechati practiced rotational farming whereby a day is assigned to work on a member`s farm till all the members farms are visited. Through this approach, families whose male heads are out of the village are able to cultivate enough land to feed the families through “njangi” and the income from the sale of cassava from the cassava women`s group is able to sustain the family.

8.4 Involvement of men and women in forest management activities

In all research communities, participation in forest management activities is optional. Men and women participated in various activities related to the forest with extension workers from local and international NGOs. Table 17 presents the main activities carried out in the research communities:

Table 17. Representation of men and women in management activities (N=108)

SN	Activities	Sex	High	Medium	Low	Absent	Total No. of participants
1	Forest protection	M	9	32	17	2	58
		F	5	24	11	8	40
2	Skilled training	M	6	11	24	19	41
		F	2	2	4	40	8
3	Decision-making	M	16	22	30	3	68
		F	2	9	15	9	28
5	Resource utilization (NTFPs)	M	6	28	7	6	41
		F	10	37	10	4	57
6	IGAs	M	9	33	12	8	54
		F	6	21	13	6	40

High every time
 Medium most of the time
 Low sometimes
 Absent never

According to the respondents, more men participated in forest protection (53.7%), skilled training (37.96%), decision-making (62.96%), IGAs (51.92%) than women. The only activity where women have higher level participation than men was resource utilization (52.8%). While men were relatively involved in skilled training and decision-making, women rarely participated in such activities.

Chapter Nine

9 Conclusion and Recommendations

9.1 Conclusions

Based on research objectives, information in the field and data collected show that the research communities are not only dependent on forest resources for survival but that degradation or limitation to these resources has negative impacts on their livelihoods. It also reveals that men and women play different roles in forest management activities at different levels as seen in formal and traditional management systems that exist in the research communities.

Information from research communities has illustrated the importance of forest and its resources to the Korup National park and Bechati forest communities. Men and women depend on forest resources for their livelihoods. They play different roles and have different interests, needs and access to these resources. Limiting their activities in the forest therefore make them more vulnerable to shocks and stresses. As illustrated by the SLF (DFID1999), people are able to withstand or adapt to shocks and stresses when they have more choice and flexibility in their livelihoods strategies. Activities in the forest seen as normal in the past are now considered illegal with violators punished. In this context of vulnerability, men and women in both communities are not able to cope during shocks and stresses like landslides, floods and drought leading to unsustainable livelihoods. According to Ngong and Arrey (2003) in “Biodiversity Conservation and Sustainable Livelihoods in Central Africa”, restriction of local people in forest use is a major tool influencing rural poverty. It is therefore necessary to allow a certain level of access into the forest to local communities and also educate them on the importance of sustainability. Alternative income generating activities and measures on food storage and processing should be encouraged in the research communities so as to limit their activities in the forest and use food reserves in the outbreak of disasters.

Results from the study indicate that formal and traditional management systems exist in the research communities. Continuous deforestation and land degradation in rural areas in Cameroon resulted to the institution of regulations by Cameroon government to reduce human activities in the forest. However, before the institution of these regulations had existed traditional management systems by the indigenous people who have been living and using the

forest for centuries. The formal management system though recent as compared to the traditional management system has dominated the traditional management practices with repressive measures such as punishments, arrests, torture, prohibition etc. Stringent regulations on forest resources have resulted to negative impact on relations between conservationists and members of local communities and consequently increase illegal activities in the forest. In order to improve on forest management, it is imperative for the government and conservation agencies to incorporate traditional management practices in the management process. To avoid conflicts and illegal activities in the forest, there should be flexibility in regulations and mutual understanding between all parties involved in the management process.

Local perceptions on activities of conservation projects are received by the local communities with double standards. Although the research communities acknowledged reduction in forest resources and opted for conservation, they also raised uncertainty as to why the same conservation projects which aim at improving their lifestyles is preventing them from carrying out activities in the forest that can improve on their lifestyles. More so, the local people found it difficult to accept that their activities were posing threats to the forest when other actors like safari hunters and logging companies carried out activities which had more impact on the forest than theirs and were not considered as illegal.

The full potentials of men and women in participating in forest management activities have not been explored. Few men are involved in management activities and even fewer women participate in decision-making during forest management meetings. Results from the study show that more men compared to women in both communities participate at the decision making level in forest management meetings. Hence, the opinions and abilities of especially women are not fully utilized.

Information obtained on gender and forest management using gender analysis and sustainable livelihoods analysis in the research communities portrays how gender can be used to tailor programmes that could improve on forest management and rural livelihoods. The knowledge on the activities and experiences of men and women (at the individual, household and community level) can be used in gender mainstreaming and be accounted for at every level of project planning (project design, implementation, monitoring and evaluation). This would serve as a guide to policy makers to make proper policies which are gender sensitive.

Without the participation of women, rules and regulations on forest management might not achieve complete success because like men, women are primary users of the forest. It is therefore necessary to consider the needs of women when implementing policies in projects. Involving women in forest management would gain the knowledge they possess in nutrition and medicinal plants and animals as indicated by the results of this study. According to Agrawal (1995), involvement of women in forest management is necessary as “ active participation in forest and biodiversity conservation schemes not only improve family welfare, but also helps to ensure scheme success, promote greater equity, enlarge local knowledge systems, increase women’s decision making bodies, enhance women’s bargaining power within and outside the household and contribute to their overall empowerment”. Therefore the activities and opinions of women should not be ignored in forest management. Women could become agents of change if they are recognized and given an opportunity to voice out their opinions.

9.2 Recommendations

Proposed strategies for greater participation and improved forest management in the research communities

Greater participation and improved forest management would be realized if the government and private institutions are able to take into consideration information from research and address them in parliament and seminars respectively. The state could improve by linking with organizations and agencies working on gender equality around the world while developing new and innovative tools to address identified gender gaps in research. It is necessary for the government to accept and advocate for more responsive and effective policy development at the macro level and within ministries as research documents reveal critical gender gaps which helps to justify government initiative to fill the gaps. The decisions or policies taken are in turn implemented by national and local organizations to the rural communities through programmes and projects. Although it would take several years for change to be visible, the inclusion of all drivers of change from the civil society to the government and international agencies is necessary for effective and positive change to be realized.

Initiating development programmes according to the local people’s needs, subsidizing them and sharing proceeds from forest activities such as touristic activities, safari hunting and logging equitably would improve on forest management. For effectiveness to be ensured, the

community would form local associations to manage the funds for the benefit of all. Rather than strict sanctions on hunting, hunters associations can be formed in every community which oversee and control the rate of hunting. This association could share information on issues like endangered species, particular locations for hunting activities and quantity to be hunted. Through this, the control of extensive hunting can be achieved without compromising subsistence hunting of the local communities.

The local people should be used in monitoring activities of outsiders in the forest since it is usually difficult and costly for governments and conservation projects to employ forest guards. Local communities can easily identify poachers and can assist guards and conservationists by identifying and guiding them show tracks during evaluation of certain forest areas. Traditional knowledge of the indigenes should be seen as an opportunity to include them as partners in the management process. Traditional management systems are key pointers to SFM as it ensures that the needs of all the actors are considered in the management process and has existed over a long period. Gender analysis of this system would improve SFM as both men and women in the research communities are targeted. This way, it would be easier to identify and reduce tensions and conflicts among men and women and take up opportunities for improved forest management which are likely to be accepted by the entire community.

The conservation projects and government institutions should assist the local people to develop appropriate methods of information sharing and experiences that would help deal with rules and regulations that impact their rights and livelihoods. For success to be achieved, it is necessary to consider the power relations between ethnic groups and between men and women in the local communities. This is to avoid the already existing unequal power and social relations within the communities. The efforts of the conservation projects in involving the local people in conservation projects cannot be ignored but however, more effort is still needed to break barriers between the two actors.

Change in traditional attitudes on the roles of men and women and gender-bias rules on land tenure and property rights should be addressed by sensitizing of the local communities through workshops, seminars etc. The government through its divisional and sub divisional delegations for forestry should monitor the activities of its representatives and conservation agencies in the forest communities to make sure that they are gender sensitive. This would pave the way towards sustainable forest management.

Encouraging especially women to be active in management activities would mean raising their social status in relation to men. Assurance of equal rights and access to services like schools, forest management meetings and steps taken to ensure high participation of especially women in policy dialogue is necessary. This can be successful if the project takes into account the needs of the local people, educate men and women on the benefits and functions of conservation project in the area, develop alternative and sustainable income generating activities ensuring that all groups in the community benefit and encourage the involvement of other organizations working in the communities. From the results of this study, one can say that men and women of the same ethnic groups should not be considered as a homogenous group. Although they have similar activities, they also have different interests and needs in forest use, management and commercialization of forest products. Thus, a more holistic and participatory approach is needed for success to be achieved.

It is further recommended that the government and partner institutions should:

- Encourage social science research in forest management by providing scholarships and instituting school curricula which include topics like gender and forestry, gender and agriculture etc.
- The government should introduce alternative income generating activities and facilitate access to markets by providing good road networks.
- The government should implement extension programmes providing especially men and women of the forest communities appropriate production alternatives like improved livestock domestication, access to credits, fish farming and improved farming technologies.

9.3 Further Research

Although gender concerns have been integrated in almost all relevant policy commitments in Cameroon, translating these policy commitments into implementation remains a myth (is still to be realized). Little is known on the assessment of the implementation of the Cameroon forestry policy. Thus, studies of this nature would educate and create awareness in state agencies and the international community leading to appropriate changes and development of new strategies. This will be through publications in peer-reviewed journals for wider readership and copies handed to the appropriate ministries in the Cameroon government, for example, Ministry of Scientific Research, Ministry of Forestry and Wildlife, Ministry of

Women Empowerment among others which would then be disseminated to appropriate sectors.

This study has come out with some visible results but there is a need to carry out further research in these communities on socio-economic and ethno-botanical characteristics to have an in-depth knowledge and understanding of the traditional skills and knowledge of the local people on sustainable management. In order for collaborative forest management to succeed, there is a need to clearly understand the nature of forest use by men and women and their socio-economic attitudes towards management practices. An empirical study on forest products is also necessary to identify the species that are being exploited and to take necessary measures.

The creation of a data base to be able to store all information on the communities is necessary. It would facilitate the work of future researchers given the fact that not much has been written especially on the BFA and would also serve as a reservoir of knowledge for future generations.

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Appendices

Appendix 1: Questionnaire sample

Section A: Background Information

Name of the community.....

Respondent number.....

Date.....

Age: 16-30 31-45 years 46-60 years 60+

Gender: Male Female

Marital status: Single Married Widowed Divorced Separated

Number of Dependents: 1-4 5-8 9-12 13-16 17-20 21+

Occupation: Farmer Hunter Teacher conservationist fishing
 Logging Others

Level of Education: Informal Primary Secondary University
 Others

Section B: Forest Resource Use and Control

1. Why is the forest important to rural communities in Cameroon? (**You can tick more than one answer**)
 - a) because the people need the forest for hunting and gathering
 - b) they use the forest for subsistence and commercial farming
 - c) they use the forest for leisure activities
 - d) the forest is used for fuel wood collection
 - e) the forest is used for cultural activities
 - f) Other reasons...

2. What contributes greatly to deforestation in Cameroon? (**You can tick more than one**)
 - a) Shifting cultivation
 - b) Plantation agriculture
 - c) illegal logging
 - d) wild bush fires
 - e) over exploitation for fuel wood
 - f) construction of roads and dams
 - g) urbanisation
 - h) other reasons...

3. What are the consequences of deforestation in Cameroon? (**You can tick more than one answer**)
 - a) Continuous soil erosion
 - b) loss of biodiversity
 - c) loss of valuable forest products
 - d) poverty
 - e) local and global climate change
 - f) Other reasons

4. The creation of protected areas such as the Korup Park is important. **(Tick one answer)**
a) Totally agree b) Partially agree c) Neither agree nor disagree d) partially disagree e) totally disagree f) I don't know

Give reasons to justify your answer_____

5. How do you see the Korup forest area?
a) Very Positive b) Positive c) Average d) Very Negative
Why, give a reason(s)

-
6. How often do you go to the forest?
a) Daily b) four times a week c) Once a week d) Irregularly e) Never
7. What are you doing in the forest? List in order of importance
a) Farming b) Hunting c) Fishing d) Rituals e) Collecting of fuel wood f) collecting medicinal plants g) logging of timber h) Others (specify)

If farming, which type of crops_____?

8. Total area of agricultural Land used by your household (in hectare)
a) Less than 2
b) 3-6
c) 7-10
d) More than 10

9. What do you usually produce on your land? You may tick more than one box
a) Cassava b) coco yams
c) Cocoa d) Mushroom
e) Corn f) potatoes
f) Other: Please specify_____

10. What system or technique of farming do you practise on your land?
a) Organic market gardening b) Monoculture
c) Agro-Forestry d) Subsistence farming
e) Slash and burn farming
f) Other: please specify_____

11. How much of your household income is generated through the sale of Non Timber Forest Products (NTFPs) yearly in (CFA Francs)
a) >8000-10.000 b) 10.000-15000 c) 20.000-50.000 d) >50.000

12. Out of the members of your household, who is most involved in the collection of forest products (NTFPs) **(Tick one)**
a) Women b) Children c) Men d) others

13. Do you have any traditional methods of conservation? a) Yes b) No c) Do not know
If yes, which methods and how effective is it?

Section C: Policies in Forest Management in Korup

14. Existing forestry laws in Cameroon has an influence on the livelihood of the people of Korup.

- a) Totally agree b) Partially agree c) Neither agree nor disagree d) partially disagree
e) totally disagree f) I don't know

Give reasons to justify your answer _____

15. The communities around Korup are involved in activities contrary to forest laws

because: (You can tick more than one answer) a) poverty

- b) corruption
c) laws in favour of large scale operators or state agencies than local communities' interests
d) rural people are ignorant of the law
e) other reasons

16. Concentration of resource management in the hands of the government has resulted in: (

You can tick more than one answer)

- a) inequality in sharing benefits from forest resources
b) effective compliance with resource management laws
c) ineffective compliance with resource management laws
d) illegal exploitation of forest resources
e) alienation of the rural people in the management process

17. What are the main causes of degradation and loss of biodiversity in the Korup Park?

- a) poverty and limited job opportunities
b) failure by the law and park management to take into account the needs and rights of the communities
c) deliberate bad exploitation practices of local communities
d) gradual disappearance of traditional practices in forest exploitation control.
e) poor implementation and enforcement of the law
f) uncertainty about resettlement of villages within the Korup National Park
g) other causes.....

Section D: Participation in Conservation Organizations

18. Do you have any groups or associations that you belong to? a) Yes b) No
19. Do you hold any influential and decision-making position in this group? a) Yes b) No
If yes, which position _____
20. How many members does your organisation have? a) Men b) Women 21. How do you elect your leaders?
h) Election b) Nomination c) Appointment
22. What are the activities of your group?
23. Has your group contributed to the conservation of the forest? a) Yes b) No c) Do not know
24. How do you rate it? a) very effective b) effective c) not effective d) useless i) destructive
25. Are you aware of any community based management programmes?
26. Are there other groups concerned with natural resource management in your area?
a) Yes b) No If yes, which are they _____
27. How do you make decisions in your committee?

Subject	Who decides	Process	Level of success

Subject: a) Conservation issues, b) sharing of benefits, c) penalties to defaulters, d) conflicts, e) representation, f) Exploitation, g) Farm work, h) Community work, i) others (specify).

Who: Korup = 1, President = 2, V. President = 3, secretary = 4, group Member = 5 Chief =6, Trad. Council = 7, Community =8, other NGO = 9 other VNRMC = 10, Umbrella organisation = 11, external elites = 12, MINEF =13, others (specify).

Process: autocratic = 1, participatory = 2, laisser faire=3 election=4, others (specify)

Level of success on a scale between 0 and 10: unsuccessful = 0, Very successful = 10

28. What are your sources of funding?

Source of funds	Amount yearly	Donor	Who keeps it	Satisfaction	Documentation

Sources: Donations = 1, Levies = 2, Royalties = 3, Penalties = 4, Municipal council subventions,=5 Government Subvention = 6, Timber Exploitation = 7, NTFPs Exploitation = 8, Village council subvention = 9, Gifts = 10, Sand and Gravel extraction = 11, Korup project support = 12. Community work = 13. Others (specify)

Who organised them & who keeps them: Korup = 1, President = 2, V. President = 3, secretary = 4, VNRMC Member = 5 Chief = 6, Trad. Council = 7, Community = 8, other NGO = 9 other VNRMC = 10, Umbrella organisation = 11, external elites = 12, MINEF =13, Treasurer = 14. Others (specify)

Level of satisfaction on a scale between 0 and 10: Completely unsatisfied = 0, completely satisfied = 10.

39. Have you or your village benefitted from their activities? a) Yes b) No 30.

What is the main achievement of your work as a group?

- a) an increase in income and wealth.
- b) a reduction of natural resource utilization.
- c) sustainable management of wildlife outside the protected areas.
- b) sustainable management of natural resource outside the protected areas.
- c) cooperation in the management of protected forests.
- d) better infrastructure (roads, hospitals, offices).
- e) an increased agriculture.
- i) hunting has stopped.
- j) other (Specify) _____

31. How would you evaluate the impact of your group towards natural resource management?
Do not know.

0	1	2	3	4	5	6	7	8	9	10

Evaluation on a scale between 0 and 10: very destructive = 0, no impact = 5, very positive impact =10.

Appendix 2: Interview guide

Interviewer _____ / _____

Date _____

Village Name _____

- 1) What is the name of your committee? _____
- 2) When was it founded? _____
- 3) How long is your organization?
- 4) 4) How many members do you have?
Men
Women
- 5) How do you elect your leaders?
- 6) What are the activities of your organization?
- 7) How is the forest important to you?
- 8) Do you have easy access to the forest and its resources? If no, what are the difficulties?
- 9) What do you do in the forest? Give in order of importance?
- 10) What does your group do to protect the forest and its resources?
- 11) What problems do you encounter in the course of implementation of your activities?
- 12) What are the external factors that affect your group which you have little or no control?
- 13) How do government policies, institutions affect your activities?
- 14) Has there been any demographic change over the past decade? Has the population increased or decreased? Give reasons
- 15) Has there been changes in the availability of natural resources e.g land for farming, forest resources, water, fish stocks etc
- 16) Has increase in economic trends led to changes in economic activities in this area?
- 17) Have you experienced disasters like floods, drought, diseases, livestock pests etc.
- 18) Has seasonal changes affected yields, activities in the forest such as
 - production of crops
 - collection of NTFP
 - the prices of foods and other goods
 - the availability of labour

- the flow of household income

19) What are the challenges facing your organization and opportunities?

Guide on discussion with Men and Women on forest management

1. What are activities restricted to men and women in the forest?
2. Classify the products which you get from the forest on the basis of:
 - stocks of subsistence
 - cultural characteristics
 - socio-economic characteristics
 - socio-political characteristics
3. Are certain parts of the forest, animals and trees assigned to men and women as a result of cultural norms?
4. At present, do you harvest (do you go hunting) many products than how you made 10 years ago? If there was a change of quantity, why?
5. Is the amount of products harvested at present sufficient for your needs?
6. If these products ceased existing, would they be substituted by other products? If yes, which?
7. Do you harvest with other women (men), in groups or individually? Why?
8. Linked to the products which you harvest, do you think there is disaccord on the area of harvesting / hunt, between the men / women, the ethnic groups, etc. or with people coming out of the village?
9. What are the impacts of these involvements on the men and the women in the community?
10. What are the main threats in forested resources in your region?
11. Have you traditions, practices and local laws on management of the forested resources?
12. What are force, weaknesses, visions and reports between you (men and women) and the capacity to participate in the activities of resource management of the forest?
13. Do the women play a role in the decision-making about the use of resources?
14. Were you informed before the creation of the protected area? If yes, by whom?
15. Are there new regulations on the harvesting / hunting of forest resources linked to the creation of the conservation area?
16. Would you say that there is a change in usage and influence on the forest resources by the men at present compared 10 years ago? If yes, why?

17. Were there rules and regulations in the past concerning the use of the forest?
18. What are the advantages for women / men with the creation of the conservation area?
How?
19. Are there problems / pressures concerning the initiative which applies specifically to the women or to the men?
20. According to you, what works well in initiative and what not? Why?
21. Have you suggestions which would return better initiative?

Appendix 3: Commonly identified NTFPs in KNPA

Common name	Vernacular name	Scientific name	Local use	Local valorisation means	Timber exploitation effect
Sweet Bush Mango	Iyeke/Enyom	<i>Irvingia gabonensis</i>	Soup thickener	Smoking/sun dry	Reduce Quantity
Bitter Bush Mango	Iyeke/Enyom	<i>Irvingia wombolo</i>	Soup thickener	Smoking/sun dry	Reduce Quantity
Bush pepper	Kowohnimi/Yorbe,	<i>Piper guinesis</i>	Spice	smoking	Reduce Quantity
Njansang	Munkum/Njasanga	<i>Ricinodendron heudelotii</i>	Soup thickener	Smoking/sun dry	Increase Quantity
Eru	Afang	<i>Gnetum africana</i>	Vegetable	None	Increase Quantity
Bitter cola	Nya, Munchari	<i>Garcina kola</i>	Stimulant/medicinal	Sun dry	Reduce Quantity
Ibo Chewing stick	Esah, Risa, Imboi	<i>Garcina manni</i>	Dental hygiene/medicinal	None	Reduce Quantity
Contry Onion	Ngakanga, Oyim	<i>Afrostryrax kamerunensis</i>	Spice	Smoking	Reduce Quantity
Monkey kola	Mesa, Nyoseh, Okokata	<i>Kola lepidota</i>	Fruits	None	Increase Quantity
Yoruba Chewing stick	Ukok, Risa	<i>Massularia accuminata</i>	Dental hygiene/medicinal	None	Reduce Quantity
Kashew	Ikpany, kashew	<i>Tetracarpidium conophorum</i>	Food	Smoking	Increase Quantity
Alligator pepper	Mbongoro, Msum	<i>Afromomum melegueta</i>	Spice/medicinal	Sun dry	Increase Quantity
Shell nut	Njabe, Nforh	<i>Poga Oleosa</i>	Oil/food	Bottling	Reduce Quantity
Mushroom	Bomu, Okobioko	<i>Agaristus competris</i>	Food	Smoking	Increase Quantity
Cane	Ndongo, Ichori	?	Handicraft	None	Reduce Quantity
Rattan	Bunfong, Makor,Meka	<i>Rattan rattan</i>	Handicraft	None	Reduce Quantity
Ngongo Leave	Bukomgi, Dokonga, Ngongo	<i>Marantaceae sp</i>	Packaging	None	Increase Quantity
Cattle stick		<i>Carpolobia lutea</i>	Controlling cattle	None	Reduce Quantity
Bush plum	Masama moliki, Massama Ndiko, Uchesung	<i>Dacryodes edulis</i>	Fruits	None	Reduce Quantity

Appendix 4: Commonly harvested wildlife species -KNPA

Common name	Vernacular name	Scientific name	Local use	Local valorisation means
Bush pig	Inyeinyei, Tchad, Ngowa chamoriki	<i>Potamochoerus porcus</i>	Income source	Smoking
Porcupine	Ngomba, chob	<i>Anthermus africana</i>	Income source /Consumption	Smoking
Cutting grass	Moniyam	<i>Thryonomys swinderianus</i>	Income source/Consumption	Smoking
Mona Monkey	Kema, Ewoko	<i>Cercopithecus mona</i>	Income source/Consumption	Smoking
Deer (Bay duiker)	Mbindi, Enom	<i>Cephalophus dorsalis</i>	Income source	Smoking
Tree Pangolin	Ijah, Icha	<i>Manis tricuspis</i>	Income source/Consumption	Smoking
Antelop	Kabe, Enope	?	Income source	Smoking
Frotambo	Iseri, Inen	<i>Cephalophus monticolor</i>	Income source/Consumption	Smoking
Rat mole	Ko, Ewok	<i>Cicetomys emini</i>	Consumption	None
Alligator	Kawa, Mokombe	<i>Osteolaemus tetraspis</i>	Consumption	None
Black snake	Nyo, Esoko, Ekod	?	Consumption	None
Drill	Sombo, eton	<i>Mandrillus manni</i>	Income source/Consumption	Smoking
Bufallo	Nyaki, Nyateh, Ewoka	<i>Syncerus caffer</i>	Income source	Smoking
Bush Baby	Unam, Aranga, Mbah	?	Consumption	Smoking
Bush Dog	Keyin, Esobo	<i>Octocyon megalotis</i>	Consumption	Smoking
Company beef	Robuto, Imbit	<i>Crossarchus obscurus</i>	Consumption	Smoking
Water beef	Yud, Ijeh	<i>Hyemoscnus aquaticus</i>	Consumption	None
Chimpanzee	Ewake, Njeng, Konwo	<i>Pan troglodytes</i>	Traditional celebration	Smoking
Python		<i>Pythron sebae</i>	Consumption	None
Ngombe	Uran, Ngombe	<i>Varanus niloticus</i>	Consumption	None
Elephant	Njoku	<i>Loxodonta Africana</i>	Income source	Smoking
Bush pussi	Mbah, Unam	<i>Civettus civetta</i>	Income source/Consumption	Smoking

Appendix 5: Large mammals of the Lebialelem-Mone Forest Landscape

SN	Common Name	ScientificName
1	Cross River gorilla	<i>Gorilla gorilla diehli</i>
2	Ellioti chimpanzee	<i>Pan troglodytes ellioti</i>
3	Leopard	<i>Panthera leopardus</i>
4	Mona monkey	<i>Cercopithecus mona</i>
5	Bay duiker	<i>Cephalophus dorsalis</i>
6	Red River Hog	<i>Potamochoerus porcus</i>
7	Drills	<i>Mandrillus leucophaeus</i>
8	Bush baby	<i>Peridicticus pottos</i>
9	Putty-nosed monkey	<i>Cercopithecus nictitans</i>
10	Red-eared monkey	<i>Cercopithecus erythrotis</i>
11	Blue duiker	<i>Cephalophus monticola</i>
12	Yellow-backed duiker	<i>Cephalophus sylvicultor</i>
13	Red duiker	<i>Cephalophus natalensis</i>
14	Beecroft-flying squirrel	<i>Anomalurus beecrofti</i>
15	Water chevrotain	<i>Hyemoschus aquaticus</i>
16	Brush-tailed porcupine	<i>Atherurus africanus</i>
17	Giant-forest squirrel	<i>Protoxerus stangeri</i>
18	Cane rats	<i>Thryonomys spp.</i>
19	Common pangolin	<i>Manis temminckii</i>
20	Palm civet	<i>Nandinia binotata,</i>
21	Rock hyrax	<i>Procavia capensis</i>
22	Common genet	<i>Genetta genetta</i>
23	Bush dog	<i>Speothos venaticus</i>
24	Red fox	<i>Vulpes vulpes</i>

Source: Muh et al., 2010b

Appendix 6: List of wildlife species hunted in the B FA

Local Name		Common Name
Class A species²		
1	Njimageng	Gorilla
2	Bokob/Boa	Chimpanzee
3	Bush baby	Potto
4	Water beef	Water chevrotain
5	Shumbo	Drill
6	Flying squirrel	Flying squirrel
Class B species³		
7	Bush pig	African wild pig
8	Red deer	Red duiker
9	Mboma	African python
10	Bush cow	Buffalo
Class C species⁴		
11	Frutambo	Blue duiker
12	White-nose monkey	Putty-nose monkey
13	Red ear monkey	Red ear monkey
14	Bush dog	Fox
15	Catta beef	Pangolin

Appendix 7: List of some NTFPs in the BFA

SN	Local name (Mundane and M'mock dialect)	Scientific name
1	Bush mango	<i>Irvingia</i>
2	Njangsanga	<i>Ricinodendron heudelotii</i>
3	Bush onion	<i>Scorodophloeus zenkeri</i>
4	Bitter cola	<i>Cola spp</i>
5	Red colar	<i>Cola acuminata</i>
6	Prunus	<i>Prunus africana</i>
7	Bush pepper	<i>Piper guineensis</i>
8	Cane	<i>Calamos deerratus</i>
9	Eru	<i>Gnetum africanum</i>
10	Ngogo leaf	<i>Magaphrinum sp</i>
11	Mush room	<i>Mychorisae spp</i>
12	Alakata pepper	<i>Aframomum sp</i>
13	Chewing stick	<i>Garcinia mannii</i>
14	Monkey cola	<i>Cola lepidota</i>
15	Bush groundnut	-
16	Bush coin	-
17	Bush nginga	-
18	Nkohsi	-
19	Elap	-
20	Flat	-

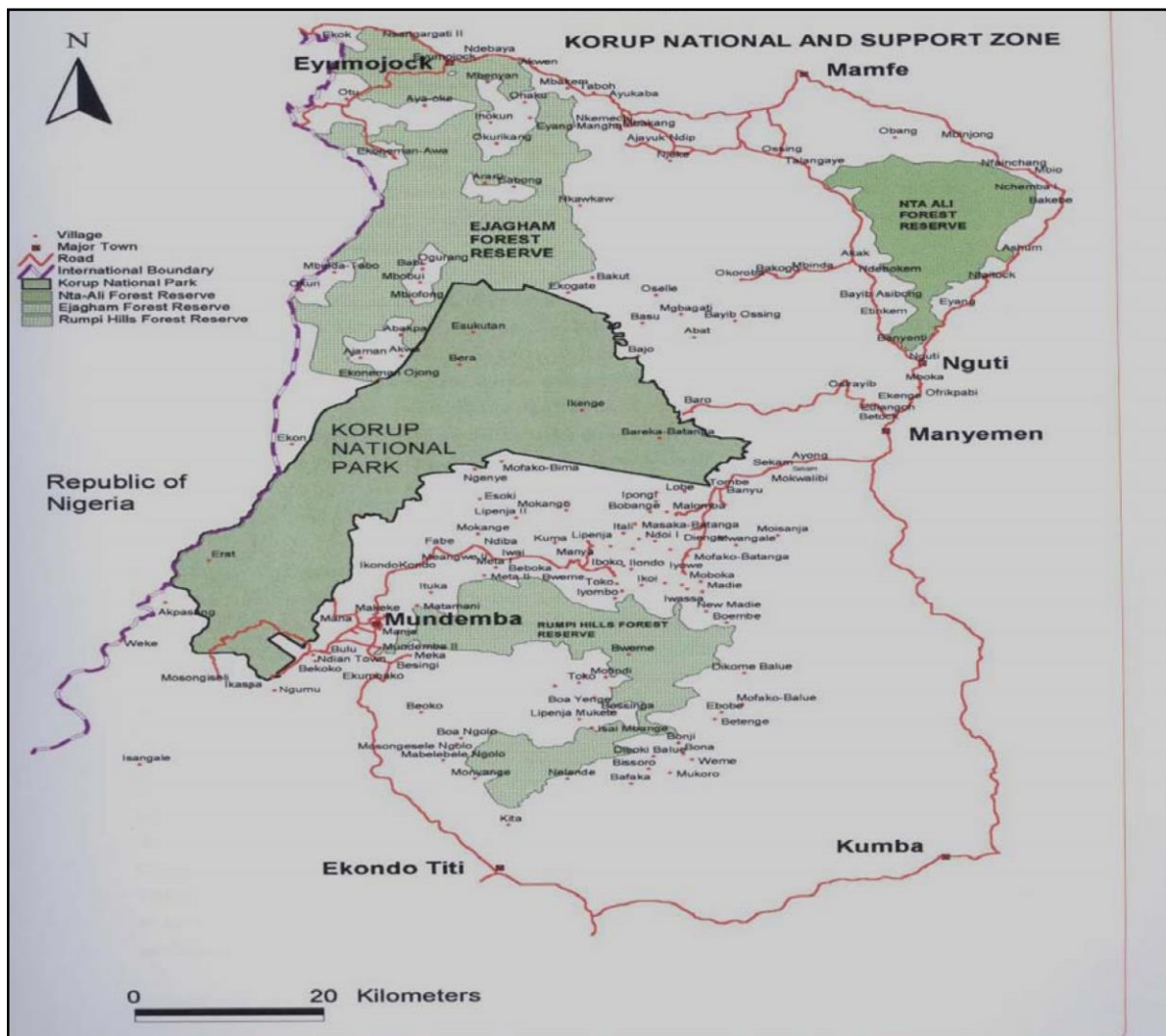
Appendix 8: Income distribution in households in KNPA

Village	sex	Rep	Estinc	Expin	Expout	Expend	Savings
Kondo-Kondo I	F	1	45000	40000	11000	51000	-6000
Kondo-Kondo I	F	2	34000	24350	4650	29000	5000
Kondo-Kondo I	F	3	51000	30000	25000	55000	-4000
Kondo-Kondo I	F	4	28000	20000	5500	25500	2500
Kondo-Kondo I	F	5	62000	23000	20000	43000	19000
Kondo-Kondo I	F	6	30000	24000	12300	36300	-6300
Kondo-Kondo I	F	7	110000	52000	29000	81000	29000
Kondo-Kondo I	M	1	89000	26900	29300	56200	32800
Kondo-Kondo I	M	2	49300	49700	40400	90100	-40800
Kondo-Kondo I	M	3	70000	24900	27100	52000	64800
Kondo-Kondo I	M	4	31000	19850	20150	40000	-9000
Kondo-Kondo I	M	5	65000	22350	17650	40000	25000
Kondo-Kondo I	M	6	52200	25000	35000	60000	-7800
Kondo-Kondo I	M	7	99000	30000	20000	50000	-40100
Kondo-Kondo I	M	8	85000	16250	57750	74000	11000
Kondo-Kondo I	M	9	53000	27000	23000	50000	3000
Kondo-Kondo I	M	10	355000	24550	45450	70000	285000
Kondo-Kondo I	M	11	74000	16400	54800	71200	2800
Fabe	F	1	73200	28500	26000	54500	18700
Fabe	F	2	51000	24750	38250	63000	-12000
Fabe	F	3	47000	40250	5000	45250	1750
Fabe	F	4	53500	50000	10000	60000	-6500
Fabe	F	5	40000	25000	18500	43500	3500
Fabe	F	6	31500	35000	5000	40000	-8500
Fabe	F	7	35100	29000	5150	34150	950
Fabe	F	8	62000	59900	11000	70000	-8000
Fabe	F	9	105000	53000	17840	70840	34160
Fabe	M	1	60150	38000	42000	60000	150
Fabe	M	2	90000	15000	35000	50000	40000
Fabe	M	3	211000	31950	43500	75450	135550
Fabe	M	4	87550	20000	20000	40000	47550
Fabe	M	5	72000	27650	37550	65200	6800
Fabe	M	6	95000	35500	36950	72450	22550
Fabe	M	7	43000	21100	18900	40000	3000
Fabe	M	8	64500	30000	40000	70000	-5500
Fabe	M	9	58660	23000	37000	60000	-1340
Fabe	M	10	85000	30000	41100	71100	13900
Fabe	M	11	65000	44450	50000	84450	-19450

Appendix 9: Income distribution in households in BFA

Village	sex	Rep	Estinc	Expi n	Expout	Expend	Savings
Lower Fossi-Mondi	F	1	53300	64000	11000	75000	-21700
Lower Fossi-Mondi	F	2	55700	51000	3650	54650	1050
LowerFossi-Mondi	F	3	52000	47500	11400	58900	-6900
LowerFossi-Mondi	F	4	70000	34000	30150	64150	5850
LowerFossi-Mondi	F	5	65850	50000	19500	69500	-3650
LowerFossi-Mondi	F	6	59000	53500	11500	65000	-6000
LowerFossi-Mondi	F	7	96000	63450	18050	81500	14500
LowerFossi-Mondi	F	8	67900	70000	34000	94000	-26100
LowerFossi-Mondi	F	9	49000	48850	14450	63300	-14300
LowerFossi-Mondi	F	10	36700	39550	12700	52250	-15550
LowerFossi-Mondi	M	1	79000	37000	38100	75100	3900
LowerFossi-Mondi	M	2	67000	30000	30000	60000	7000
Lower Fossi-Mondi	M	3	76000	27000	33000	60000	16000
Lower Fossi-Mondi	M	4	80000	50000	70000	120000	-40000
Lower Fossi-Mondi	M	5	68000	40000	31200	71200	-3200
Lower Fossi-Mondi	M	6	86000	44000	39000	83000	3000
Lower Fossi-Mondi	M	7	80000	32500	43500	76000	4000
Lower Fossi-Mondi	M	8	78800	40000	50000	90000	-11200
Bechati	F	1	80000	50000	30000	70000	10000
Bechati	F	2	54650	38700	11300	50000	4650
Bechati	F	3	63500	60000	10000	70000	-6500
Bechati	F	4	87600	52000	23000	75000	12600
Bechati	F	5	58900	47650	18050	65700	-6800
Bechati	F	6	52500	41250	5050	46300	6200
Bechati	F	7	69250	26000	31000	57000	12250
Bechati	F	8	109000	40000	29800	69800	39200
Bechati	F	9	54500	28500	38500	67000	-12500
Bechati	M	1	54000	20000	25900	45900	8100
Bechati	M	2	87500	34500	33500	68000	19500
Bechati	M	3	95450	16500	60000	76500	18950
Bechati	M	4	65000	18500	21500	40000	25000
Bechati	M	5	70000	30000	47800	77800	-7800
Bechati	M	6	67000	30700	34300	65000	2000
Bechati	M	7	95000	25000	25000	50000	45000
Bechati	M	8	78700	25000	57000	82000	-3300
Bechati	M	9	64000	26000	29400	55400	8600
Bechati	M	10	80500	41000	53000	94000	-13500

Appendix 10: Korup National Park and Support Zone (MP, 2003)



Appendix 11: Ethnic groups in the Korup park area (MP, 2003)

