

**THE EFFECTIVENESS OF COMMUNITY INVOLVEMENT IN THE
MANAGEMENT AND CONSERVATION OF FOREST RESOURCES IN UGANDA
"A CASE STUDY OF LENDU FOREST"**

BY

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DECLARATION

I hereby declare that the content of this dissertation is my original work and has not been published and/or submitted to any other university or institution for the award of a degree. Where work of other researchers have been cited, acknowledgements have dully been made.

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Date: 6th / 09 / 2017

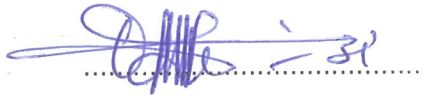
APPROVAL

This research Dissertation by Ocida Evalyne Entitled the Effectiveness of Community Involvement in the Management and Conservation of Forest Resources in Uganda, Lendu Forest in particular" has been carried out under my supervision and is now ready for submission to the Department of Biological and Environmental Sciences with my approval.

Supervisor

Signature

MR. MUSINGUZI DANSON



Date:

6/9/2017

DEDICATION

I **Evalyne** do dedicate this piece of work wholeheartedly to the Lord God Almighty my King, my master, protector provider all in all. I also extend my dedication to my Sponsor HON. Eng Simon Dujjang (state minister for energy, Uganda).

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LIST OF ABBREVIATION

BWIND	Bwindi Impenetrable National Park
CBD	Convention on Biological Diversity
CBD	The Convention on Biological Diversity
CBNRM	Community Based Natural Resource Management
CBOs	Community Based Organizations
CFM	Community Involvement in Forest Management
CFRs	Central Forest Reserves
CIFOR	Center for International Forest Research
CSD	Commission on Sustainable Development
DFS	District Forestry Services
DRC	Democratic Republic Of Congo
FAO	Forest Authority Organization
FLD	Forest Local Developments
FSC	Forestry Stewardship Council
IPF	Intergovernmental Plan on Forest
JFM	Joint Forest Management
LCs	Local Councils
LFM	Collaborative Forest Management
LFRs	Local Forest Reserves
MDGs	Millennium Development Goals
NGOs	Non-Governmental Organizations
PFE	Participatory Forest Estate
PFM	Participatory Forestry Management
PFs	Private Forest
TFAP	Tropical Forest Action Plan
UFD	Uganda Forest Development
UN	United Nations
UNNCED	United Nations Conference on Environment and Development
UWA	Uganda Wildlife Authority
VLFRs	Village Forest Reserves
WCFS	World Commission on Forest and Sustainable Development

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ABSTRACT

This research dealt with the Effectiveness of Community involvement in Forest resource Management and Conservation. The research was carried out with the objective of finding out the impact of involving the Community in Forest resource Management Conservation.

The research study used both qualitative and quantitative in nature where by descriptive cross sectional methods were used, data was Collected using questionnaires, face to face interviews, direct assessments (observation) reviewing of literature and was later analyzed using Microsoft Excel. The results of the study indicate that the involvement of communities in forest management and conservation (lendu forest) could help in the direct influence of the livelihood of the people.

The total percentage of respondents as per questionnaires

Gender	number	percentage
Male	30	60%
Female	20	40%
Total	1	100%

None of the respondent could say no to being physically in the management of the forest resource because they said may be that would help as even protect it more. Our participation and commitment in the forest management and conservation would encourage regulated legal access to social-economic benefits of the peoples living near and around the forest reserve.

Therefore, I do recommend communities surrounding the forest should be involved in the forest resource management and conservation.

CHAPTER ONE

1.0 Introduction

This chapter presents the background to the study, statement of the problem, general objective of the study, specific objectives, research questions, scope, the significance of the study, definition of terms, and conceptual framework.

1.1 Background to the study

Covering 36 million square kilometers, or roughly 30 percent of the globe, the world's forests are among its most important natural resources. However, forests are disappearing at an alarming rate. The World Resources Institute reports that 46 percent of the world's old-growth forests have been destroyed. Competition for these resources can trigger, exacerbate and finance numerous crises and conflicts in developing countries (Renner, 2002).

Forest management has been a difficult task for most governments in Africa, more so in areas where land tenure systems are ill defined. This has resulted into the essence of developing enabling institutional environments to arrest the cropping problems of natural resource management. The new colonial governments set up management systems that mainly favored the white man and after the advent of colonialism, the new African-led governments maintained similar policies as were installed by the former regime. Hence the government inherited problems that were soon to be the demise of conservation cycles. For instance, communal land was put under the trusteeship of the government without minding or solving the problem of resource use and this has on many occasions caused unending conflict between the government and local people. (Kunga Ngece et al, 2002).

Uganda's forests are an essential foundation for the country's current and future livelihood and growth. Sustainable management of these forests, however, is a great challenge not only to forest managers but also to policy makers given that the population is heavily dependent on them for timber, agriculture, and energy production (Hamilton, 1987), resulting in deforestation.

At the beginning of the nineteenth century, forests and woodlands covered approximately 45% of the total land area of Uganda. At present, forest cover has been reduced to approximately 4.9 million hectares or about 20% of the total land area (MWLE, 2001). About 30% of the tropical high forest is degraded and the degradation trend continues.

The current context of natural resources management is characterized by an increasing involvement of local communities in managing the commons (McCray and Acheson 1987; Ostrom 1990a; Bromley et al. 1992; Berkes et al. 2003).

Status of forest resources in Uganda

Currently, there are about 4.9 million hectares of forest in Uganda (24% of the present total land area) (National Biomass Study, 2003). The forest resources comprise areas classified as savannah woodland (80.5%), natural forest (tropical high forest, 18.7%) and less than 1% of forest plantations. The existing natural forests on private land and in government reserves, together with the on-farm tree resources are the major focus of the National Forest Plan (NFP), with particular reference to decentralization of forest management (MWLE, 2002).

In terms of land ownership, 70% of the forest area is on private and customary land, while 30% is in the permanent forest estate (PFE), such as Forest Reserves (central and local), National Parks and Wildlife Reserves. Of the PFE's 1,881,000 ha, 1,145,000 ha (60.9%), is managed by the National Forestry Authority (NFA) as Central Forest Reserves (CFRs), 5,000 ha (0.3%) is controlled by District Forestry Services (DFS) of local governments as Local Forest Reserves (LFRs) and 731,000 ha (38.8%) is managed by the Uganda Wildlife Authority (UWA). The majorities of private forests are woodlands, and are being depleted rapidly due to restrictions on harvesting of wood and wood products from gazette protected areas (Jacovelli & Carvalho, 1999). A huge dependency (>90%) on fuel wood from the rapidly increasing population is clearly accelerating the problem.

1.2 Problem Statement

According to Brwings (1995) inclusion of local people in the planning and management of conservation areas made them more acceptable to poor rural communities. Diverse forces have supported the move towards community-based forest management including current global trends of democratization and devolution of authority. In Uganda, a large diversity of community initiated forest management systems have evolved recently in response to severe degradation of forests and grazing land and biomass shortages (Businga and Mulugo, L.2008). Following the centralization of management of forest Resources, in Uganda 1997 institution that local people had devised to limit entry and harvesting forest resources lost their legal standing (Banana gombya-ssembajjwe, 2000).

Limited capacity in terms of the qualified staff, funds, facilities and equipment and inadequate decision making powers over fiscal resources from forestry, inequitable distribution of forest revenue and unclear forest and tree tenure have hindered decentralized forest management and are hindrances to management and use of forest resources. The need to increase community participation in forest management has been a near universal conclusion of national and international policy initiatives in the tropical forestry over the last two decades (Brown et al.2000). Community involvement through collaborative forest management (CFM) and other participatory processes of managing forest resources in Uganda have had mixed results. Success has been recorded in some cases but in most cases it has resulted in ^{failure} future. Therefore, there is need to investigate the effectiveness of community involvement in the management ^{and} conservation of forest resource in Uganda and Lendu central forest reserve in particular.

1.3 Objective of the study

Main objective

The general objective of the study is to determine the effectiveness of community involvement in the management and conservation of forest resources in Uganda and Lendu in particular.

The study used the following specific objectives:-

- i. To examine whether the local people are involved in the management conservation of lendu forest reserve.
- ii. To assess the participatory approach or approaches being used in the management and conservation of lendu forest reserve.
- iii. To ascertain the strength or capacity that the local people or local organization (CBOs) around lendu forest have to manage and conserve forest resources in their locality.
- iv. To examine the current challenges or hindrances to effective community participation in the management and conservation of forest resource in lendu forest reserve.

1.4 Research questions

- i. How does the community involve itself in the management and conservation of forest resources in Uganda and lendu in particular?
- ii. Are the local people involved in the management and conservation of lendu forest reserve?
- iii. What participatory approach or approaches is/are being used in the management and conservation of lendu forest?
- iv. What strength or capacity do local people or local organization (CBOs) around lendu forest have to manage and conserve forest resources in their locality?
- v. What are the current challenges or hindrances to effective community participation in the management and conservation of forest resources in lendu forest reserve?

1.5 Hypotheses

HO₁: There is no variation in the abundance and diversity of indigenous tree species with distance from Zombo district headquarters to lendu forest reserve.

HO₂: Socio-demographic characteristic of the respondents does not influence their attitude s towards conservation of indigenous tree species in the lendu forest reserve.

1.6 Scope of the study

The study described the geographical scope and the time scope of the study

This study was conducted in zeu sub-county zombo district located 27kms away from Nebbi and it would cover the effectiveness of community involvement in forest resource management and conservation in zeu.

1.7 Significance of the study

This research would help academicians to be able to get bench mark information in forestry conservation, for example climate change prevention, were there is extraordinary climate change and research is needed to help look for solutions.

It would inform policy at national level like forest operation on policies formed years ago to improve (NFA).

Conceptual frame

-Theoretical framework

1.8 Justification

Considering the potential and actual benefit that the utilization and conservation of the indigenous tree species in the lendu forest reserve can provide both to the local population and to the nation. it was important to carry out a study that can provide relevant authorities with data, information for use by the local communities in the conservation to facilitate decision making and implementation of conservation strategies by the community.

This research has to provide future researchers with bench mark information that can be used for designation of appropriate police in accordance with the current post war programmer

The vital information provided in the study can also be used both national and local planners to create awareness among the local community more resource conservation.

The outcome of the research would inform academicians in forestry conservation for example one can identify a specific area in claimant change; there is extraordinary claimant change that needs more effort involvement.

CHAPTER TWO

LITERATURE REVIEW

2.1 An overview of forest man

Van den (2000) acknowledged that sustainable forest management involves a large number of stakeholders with disparate interests, hopes, expectations and rights. Many years of efforts to halt deforestation and forest degradation have not been successful, jeopardizing the livelihoods for large populations that depend on it and this is caused by disagreement between stakeholders on how to manage the forest and for what, and how to share the benefits and costs of forest management. In response to that situation, Governments have been responding in recent years to n overview of forest management world-wide

For a long time, the management of natural resources in general land and forests in particular have been characterized by extensive state control popularly known as Territorial Forest Reserves without involvement of local community (Gombya-Ssembajjwe., 1999). Due to the state's poor management and law enforcement, forest resources have been degraded through unsustainable exploitation and encroachment. Public confidence in governments to own and manage forest resources through National forest reserve approach has consequently diminished.

However, forest resources under National Parks and Wildlife Reserves (For example, Udzungwa and Mahale Mountains in Tanzania; and North East Budongo, Maramagamabo and Kibale in Uganda) still retain their ecological integrity apart from their protectionist management approaches. In turn, local people throughout the world are now demanding some stake in the management of forest resources and share of the accruing benefits (Gombya - Ssembajjwe., et al 2000).

2.2 Concepts of forest resources and conservation

Different conservation strategies and practices have been developed. **In situ** ('in place') conservation implies the continuing maintenance of genetic variation in planted gene or seed banks. (FAO, FLD, IPGRI, 2004).

Although the goal of conserving forest genetic resources can be simply stated, its implementation can be very complex and expensive. With thousands of tree species distributed among several local populations (interbreeding groups of individuals), each with thousands of variable genetic loci, priorities should be set first at the species level; only then can we assign priorities among populations. It is important that data on species that are of significance to conserve, and the levels of threat to them, be collated with in situ and ex situ management approaches in mind (Namkoong, 1998).

2.2.1 In- situ conservation

In the case of non-domesticated species, in situ conservation is probably the most important strategy and sometimes the only viable approach. In the tropics, where extinction rates of species are high because of land-use changes, setting conservation priorities is critical. This is particularly evident in developing countries, where resources allocated for conservation are scarce and baseline information on species distribution and richness data are lacking. In a world of scarce resources, one approach to priority-setting is through networking activities, with initiatives involving multiple countries and stakeholders (James, 1999).

In situ conservation is usually the preferred conservation strategy for most, wild plant species, including some of the wild relatives of crop species, because, as mentioned previously, it allows the populations of interest to continue to be exposed to evolutionary processes. Alternatively, for many domesticated species (crop and livestock), on-farm conservation of traditional varieties is now widely supported as an important practice for conservation of genetic diversity (Hodgkin 1996; Jarvis et al. 2000).

2.2.2 Ex-situ conservation

Ex situ conservation is considered to be the foundation that ultimately allows the use of genetic diversity in plant breeding and conservation. The essential elements of ex situ conservation are related to the need to identify, then conserve and manage the range of variability within the species, primarily through the development and management of regeneration, in various forms, in the field. Molecular genetic

techniques, primarily with genetic markers, can also help in some of the management tasks for ex situ populations, by confirming the identity of accessions and monitoring genetic changes in collections. However, the allocation of resources in genetic conservation should be need-driven rather than technology-driven (Withers, 1993).

In poor countries, forested areas are utilized by different groups. In addition, the more likely to become areas of majority of forest-dwelling and forest-conflict because they tend to be dependent households suffer from remote and inaccessible, located on poverty, lack public services, are disputed land, inhabited by multiple excluded from national democratic ethnic groups and minority populations, inadequately governed institutions, and resent outsiders who often reap most of the benefits from forest resources (Kaimowitz et al, 2001).

According to Browings (1995), inclusion of local people in the planning and management of conservation areas will make them more acceptable to poor rural communities. The objective is to empower communities and resource users who have been marginalized from decision-making, so that they develop and manage their resources.

Local communities living adjacent to conservation areas view them as a source of agricultural land, building poles and fuel wood as well as a refuge for crop eating pests. As noted by King and Lee (1987), interventions in the name of conservation often generate considerable resentment and hostility in local communities. Establishment of Protected Areas is a major form of government intervention that may lead to conflicts because designation of a protected area implies some restricted use of its resource.

Diverse forces have supported the move towards community-based forest management, including current global trends of democratization and devolution of authority. These trends are fueled by growing recognition of: the limits to existing centralized decision-making systems; the necessary link between the provision of basic human rights and all sectors of development. Repeatedly, conflicts resulting

from the shortcomings and failures of past forest management experiences have taught this lesson King and Lee (1987).

According to Chevalier and Buckles (1999), the basic premise of community-based natural resource management is that access to relevant knowledge about resource management options combined with more inclusive decision-making processes can contribute to more equitable and more sustainable natural resource management.

2.2.3 A perspective of community Forest Management in Uganda

In Uganda, a large diversity of community initiated forest management systems have evolved recently in response to severe degradation of forests and grazing land and biomass shortages (Buyinza, M. & Mulugo, L. 2008). Following the centralization of the management of forest resources in Uganda in 1967, institutions that local people had devised to limit entry and harvesting forest resources lost their legal standing (Banana and Gombya - Ssembajjwe, 2000). The result, subsequently, has been largely unimpressive forest management in Uganda over the past thirty years.

The need to increase community participation in forest management has been a near universal conclusion of national and international policy initiatives in tropical forestry over the last two decades (Brown et al. 2002).

It is the absence of effective institutions to regulate resource use that allows deterioration of the condition of the forest (Agrawal, 1994, 1995, 1996; Varghese, 2000; Gibson, 2001). A forest with enforced rules that limit forest exploitation is most likely to be in better condition than that forest where rules are not enforced. Proponents of decentralized forest policy argue that rules and regulations made by elected local actors are more effective because they are considered to be more relevant to local situations and are considered as legitimate by the local communities. On the other hand, the implementation of a centralized forestry policy fails because of the high cost of rule enforcement. Under such policy, individuals or communities consider the rules governing the use of the resource to be illegitimate since the desires of the government often do not match the desire of the community.

In an attempt to reduce cost, many contemporary forestry policies in both developed and developing countries are seeking to shift control of forest resources to the community level (Gibson et al 2001) through the decentralization process. This is because when compared to central government institutions, local institutional arrangements are considered better at providing, inter alia, rules related to access, harvesting, and management. Local institutions may also provide a forum that can respond to conflicts quickly and cheaply. Furthermore, local institutions often provide monitoring and sanctioning methods that are efficient (Ascher, 1995; Ostrom, 1990; Bromley et al., 1992). In Uganda, the current five-tiered local administrative system of elected Local councils (LCs) and executive committees provide such a forum that can respond to conflicts quickly and cheaply.

2.3 Community in natural resource conservation and management

Since the 1980's many conservation and development agencies have attempted to reconcile social, ecological and economic goals, by promoting the involvement of local people in conservation initiatives. One of the underlying ideas of so-called participatory conservation approaches has been that because the "local community" is close to the forest or wildlife, it has, or at least should have, the most incentive for and knowledge about managing it in a sustainable way (Brosius et al. 1998). However, the results of these projects and strategies in terms of socio-political and ecological outcomes seem to vary greatly (Newmark and Hough 2000, Hughes and Flintan 2001).

The debates on the role of "community" in conservation and the compatibility of conservation and development goals have not been settled (Attwell and Cotterill 2000, Berkes 2004). These contestations are partly linked to the tensions between different conservation ideologies or "paradigms" (Elliott 1996). According to (Adams and Mulligan 2003, p. 9-10), the dominant view in Western conservation thinking has remained preservationist, separating "humans" and "nature" even though many conservation organizations have moved towards "sustainable use" ideology. Conservationists fear that community-based approaches dilute the conservation agenda, whereas proponents of community-based approaches suggest that the failures are due to improper implementation of the concept (Berkes 2004).

Forest conservation has also been subject to similar contestations. Proponents of stronger community involvement in forest control stress that participatory approaches too often see local people just as "beneficiaries" and not as actual decision makers over forest use (Wily 2002). Alternatively, the communities can be considered as "custodians" of the forests. Wily and Dewees (2001) suggest that the forest-adjacent communities hold enough custodial interests to manage forests well and they could at least be given decision-making powers if not full tenure rights.

The poor conservation outcomes that followed decades of intrusive resource management strategies and planned development have forced policy makers and scholars to reconsider the role of community in resource use and conservation. In a break from previous work on development which considered communities to hinder progressive social change, current writing champions the role of community in bringing about decentralization, meaningful participation, cultural autonomy, and conservation (Chambers and McBeth, 1992; Chitere, 1994; Etzioni, 1996). But despite its recent popularity, the concept of community rarely receives the attention or analysis it needs from those concerned with resource use and management.

2.4 Participatory forest management approaches

In many countries including Uganda, management of forest resources has moved away from command and control system to a more participatory approach that require involvement of a broad spectrum of stakeholders. The introduction of Participatory Forest Management (PFM) was sparked by several factors: both international and local. At the international level, treaties and accords such as the Tropical Forest Action Plan (TFAP), an outgrowth of the agenda 21 framework initiated in Rio-de-Janeiro in 1992, sought to reverse the loss of forests through the involvement of stakeholders, especially adjacent communities. The Convention on Biological Diversity (CBD) (1992) highlights the importance of sustainable use and equitable sharing of benefits that arise from biodiversity resources. At the local level, the original argument for increasing community participation in the maintenance of rural conservation projects stemmed from the need to better target people's needs, incorporate local knowledge, ensure that benefits were equitably distributed and lower management costs (Wily, 1998).

The inclusion of communities in the management of state-owned or formerly state-owned forest resources has become increasingly common in the last 25 years. Almost all countries in Africa, and many in Asia, are promoting the participation of rural communities in the management and utilization of natural forests and woodlands through some form of Participatory Forest Management (PFM) (Wily & Dewees, 2001).

Many countries have now developed, or are in the process of developing, changes to national policies and legislation that institutionalize PFM. PFM encompasses a wide range of different co-management arrangements with different levels of control from relatively conservative "benefit sharing" to genuine "community-based natural resource management" where local communities have full control over management of the resource and the allocation of costs and benefits (Wily, 2002).

Participatory forest management encompass processes and mechanisms that enable people who have a direct stake in forest resources to be part of decision-making in all aspects of forest management, from managing resources to formulating and implementing institutional frameworks. Notable among the participatory forestry management approaches are Joint Forest Management (JFM), Community Based Forest Management (CBFM) and Collaborative Forest Management (CFM). All these approaches tend to emphasize decentralization or devolution of forest management rights and responsibilities to forest adjacent communities with the aim of producing positive social, economic and ecological outcomes (Carter & Grownow, 2005).

Joint forest management is the type of participatory approach that allows forest adjacent communities to enter into agreements with government and other forest owners to share the costs and benefits of forest management by signing joint management agreements (Wily, 1998).

In Uganda, the form of Participatory Forest Management approaches adopted for managing forest resources include Collaborative Forest Management (CFM), Community Forests (CFs) and Private Forests (PFs) (Strengthening and Empowering Civil Society For Participatory Forest Management in East Africa [EMPAFORM], 2008). CFs is the forest management approach where communities register as legal

entities for purpose of seeking gazettement of a forested communal land as a Community Forest and henceforth manage it for the common good of the community. PFs is the forest management approach where local community members manage own trees on private land or participate in the management of private natural forests, private plantations, forests owned by cultural and traditional institutions.

CFM is the most widely used and adopted form of participatory forest approach in Uganda today. It is a forest management approach where communities enter into agreement with the National Forestry Authority (NFA) in case of Central Forest Reserves and District Forestry Services (DFS) local governments in case of Local Forest Reserves to manage part or the whole of gazette forest reserve. CFM is defined as a structured collaboration between governments, interested organizations and community groups, and other stakeholders to achieve sustainable forest use. It defines a local community's rights to use and/or participate in forest management and focuses on improving the livelihoods of the forest adjacent communities through mutually enforceable plans but the government does not surrender ownership of the forest to partner stakeholders (National Forestry Authority [NFA], 2003) and is the most widely used form of PFM in Uganda.

CFM is a co-management arrangement widely practiced in India, Nepal, Philippines and Latin America (Ghate, 2003; Malla, 2000) as government forest agencies and other actors recognize its potential in supporting local well-being and sustainable forest management. CFM has also gained recognition as a means of flow benefits to local people and is widely practiced in many African countries like Tanzania, Sudan, Ethiopia, Kenya, Uganda, Zimbabwe, Malawi, Cameroon, Niger, Nigeria, Gambia, Ghana, Mali and South Africa (Willy, 2002).

Many Scholars (Borrini-Feyerabend, 1997; Ghate, 2003; Malla 2000; Victor, 1996) believe that CFM provides local incentives for conservation of forest resources by sharing the costs and benefits of conservation. They further note that the implementation of CFM may result into ecological, socio-economic, institutional, and infrastructural and policy impacts to both the communities and forestry sub-sector. The ecological impacts may include stabilized and/or forest resource use patterns

and improved quality and or condition of forests. The economic impacts include improved livelihoods through sale of forest products, increased skills, employment and exclusion of non-CFM actors from accessing forest resources.

Other authors (Becker et al., 2000; Campbell et al., 1996) note that the impact of CFM on community livelihoods directly influences people's participation or involvement. They argue that participation and commitment of communities under CFM encourages regulated legal access to socio-economic benefits. The more the community are involved in CFM, the fewer the number of illegal activities in the forest managed under CFM and the higher diameter at breast height, the basal area and density of trees.

In contrast, lack of community involvement may result in high occurrence of illegal activities and lower basal area and density of trees. It is thus argued that providing socio-economic benefits to communities under CFM results into sustainable utilization of forest resources by local communities and hence improved conditions of the forest. Improvement in the condition of the forest may also lead to increased socio-economic benefits derived by the communities and increased community participation in CFM (Ghate, 2003).

If CFM provides no socio-economic benefits to communities, illegal activities may increase leading to forest degradation. Degradation of the forest may lead to loss of socioeconomic benefits to communities leading to loss of community participation in CFM. Building on experiences from India (Kothari et al., 1996; Poffenberger & McGean, 1996), collaborative forest management (CFM) was adopted in Uganda in 1993 around Bwindi Impenetrable National Park, BINP (Wild & Mutebi, 1996), and by 1996, collaborative initiatives had spread to other protected areas (national parks) such as Mt Elgon, Kibale, Mgahinga, and Murchison falls (UWA, 2001).

2.5 Legal framework for the effective involvement of communities in forest management

2.5.1 The Earth Summit and Post-Rio

1992 UN Conference on Environment and Development (UNCED) in Rio de Janeiro addresses global environmental problems. Commission on Sustainable Development

(CSD) created to implement Agenda 21, including the Forest Principles in Chapter 11 endorsing the role of local communities, indigenous peoples, and other stakeholders.

1993 The Convention on Biological Diversity (CBD) becomes effective as a legal treaty, encouraging conservation, equitable benefit-sharing, and sustainable forest use.

1993 ITTO adopts Guidelines on the Conservation of Biological Diversity in Tropical Production Forests, calling for national policy is requiring consultation with forest dwellers.

1993 Forest Stewardship Council (FSC) established. Principles and Criteria adopted in 1995 recognizing legal and customary rights of indigenous peoples to own and manage their forests.

1993 Center for International Forestry Research (CIFOR) created making community forestry policy and field research a core thematic area.

1994 World Commission on Forests and Sustainable Development (WCFSD) launched to develop a global vision for forests in the twenty-first century. Policy dialogue intends to involve local communities.

1995 Intergovernmental Panel on Forests (IPF) initiated by CSD to seek a global consensus for action supportive of participatory and sustainable forest management.

Based on Agenda 21, which emerged from the United Nations Conference on Environment and Development (UNCED) at Rio de Janeiro, The Commission on Sustainable Development (CSD) was mandated to monitor implementation of the UNCED commitments. The CSD was charged with seeking ways to implement a "non-legally binding authoritative statement of principles for a global consensus on the management, conservation and sustainable development of all types of forests." In April 1995, during the CSD's third session, it was decided that an Intergovernmental Panel on Forests (IPF), would be formed to address the international policy and political debate on forests, including implementation of the Forest Principles.

The current (2001) Uganda Forestry Policy envisages that government will promote innovative approaches to community participation in forest management on both government and private forestlands and this is intended to provide a balance between "the protectionist approach to forest management and open access to forest resources" that may be destructive.

The (2001) Uganda Forestry Policy emphasizes government commitment to "promote innovative approaches to community participation in forest management on both government and private forest land". The Policy puts a strong emphasis on public involvement especially, forest adjacent communities, and benefit from sustainable forest management, including the application of Collaborative Forest Management (CFM).

Section 15 of the National Forestry and Tree Planting Act (2003) is in support of Collaborative Forest Management (CFM) and it states that "a responsible body may enter into a collaborative forest management arrangement with a forest user group for the purpose of managing a central or local forest reserve or part of it in accordance with regulations or guidelines issued by the Minister".

Section 28 of the National Forestry and Tree Planting Act (2003) commits the Responsible Bodies to prepare management plans for all forest reserves and further guides that this "shall be in consultation with the local community". This further emphasizes the spirit of Uganda's collaborative forest management approaches.

The 1967 Republican constitution abolished all kingdoms in Uganda. All forest reserves owned and managed by local traditional institutions were taken over by the central government. This was not based on the failure of local institutions to manage forest resources; rather, it was part of a general political move towards centralization based on the belief that it would be more rational and efficient.

Following the enactment of the Resistance Councils and Committees Statute of 1987 and the Local Government Act of 1997, the delivery of services including the

management of natural resources was once again decentralized to the Districts and Local Councils. All forest reserves owned and managed by local traditional institutions prior to 1967 were returned to them for management. Thus the Local Government Act of 1997 involved the transfer of natural resources management decision-making and benefits from the central government to local actors.

The broad objectives for the decentralization of forest resources were to: enhance the role of local government with more devolved responsibility for forest management and withdraw of the central state from activities that could be carried out more effectively by the local councils and the private sector; and to encourage more active participation of local communities and farmers in the management of the country's forests.

The assumptions underlying decentralization of forest resources in Uganda are that forests are threatened with degradation and that negative environmental change can be reversed by introducing new, 'participatory' focused in situations at the local level to engage local resource managers in sustainable use practices (Lind and Cappon 2001). The Resistance Councils and Committees Statute of 1987 and the Local Government Act of 1997 introduced a five-tiered system of elected Local councils (LCs) and executive committees - LC1 (village), LC2 (parish), LC3 (sub-county), LC4 (municipality), and LC5 (district). Each local council at every level includes an executive committee of nine members who have specific responsibilities. The secretary for environment is in charge of the management of forestry resources. These committees formulate by-laws for management of natural resources. The District Council is also empowered to hire staff to manage and enforce the by-laws.

2.6 Community involvement in Natural resource management, understanding the concept

Current conservation debates place high emphasis on the need to integrate the views and needs of local communities in conservation processes. Understanding local community perceptions of forest management and the factors that influence these perceptions is important for designing management policies that are sensitive to their needs. However, more often than not local communities' perceptions do not

receive as much attention as they deserve (Paul M. Guthiga¹ 2008).

Positive attitudes of local communities towards forest management practices are an essential prerequisite for local participation in forest management (Obua Joseph et al. 1998) In their study of 200 households, findings showed the associations between socio-economic features of people living close to the forest and their use of forest resources and demonstrated the basis of attitudes towards those managing the forest. Since Uganda is going through the process of democratic reform and decentralization of public administration, it is felt that local communities could be empowered to co-manage and benefit from forest resources in their vicinity.

People will undertake forestry resource management activities only when: They see clear tangible benefits (products, services or income), have necessary competency (knowledge, technology, is based on local indigenous knowledge, there is a guarantee of using products and services, there are unobstructed access and property rights over resources, individuals' interests are backed by strong local organizations, increase people's claim is making capacities towards GOs and NGOs (Laban, 1993).

Turyahabwe, N. et al. (2008) in their study of linking forest tenure and anthropogenic factors with institutions and the effectiveness of management in Mpigi forests, central Uganda, they established that the stand structure characteristics (i.e. tree density, mean dbh and basal area of trees) were higher in private forests than in Central Forest Reserves (CFRs) and Local Forest Reserves (LFRs) due to effective regulation and monitoring measures by private forest owners. Forests in close proximity to a dense human settlement and far from roads were heavily used, suggesting a high likelihood of population pressure on forest resources and limited capacity of forest owners and managers to effectively control and halt degradation in forests far away from agencies. Tenure alone did not ensure that forest condition is maintained but other factors such as distance to maintained roads and human pressure on the resource were also important.

Buyinza & Nabalegwa (2007) investigated the role played by women in conservation of plant resources in Kamuli district, Uganda and the findings revealed that women tree farmers were constrained by insecure tenure to tree resource, inequitable benefit sharing, male dominance in decision making, low education and lack of planting materials. The extension media use varied according to gender. One of their recommendations for effective forest management was that the information targeting rural women in Uganda should be in their native languages. Local programs should be integrated into tree resource management programs for the benefit of the grassroots populations, many of whom have low education levels.

2.7 Challenges to effective community involvement in forest management

Natural resources play a special role in the life of the poor (Scherr, White, and Kaimowitz, 2004). More than 1.3 billion people depend on fisheries, forests, and agriculture for employment close to half of all jobs worldwide. According to the World Bank, in 2002, 90 percent of the world's 1.1 billion poor; those living on less than \$1 per day depended on forests for at least some part of their income. The development agenda is being driven by a few key approaches and policies. These include the United Nations (UN) Millennium Development Goals (MDGs) and the World Bank Poverty Reduction Strategy Papers (PRSPs). Yet these approaches may not fully account for the links between resource management and poverty reduction, and subsequently fail to realize the full potential of natural resources (goods and services) as wealth-generating assets for the poor.

Without effective institutions to limit and regulate harvesting levels and management practices, forest resources can be over harvested and even irreversibly destroyed, as is often the case in "open access" forests (Hardin, 1968; Ascher, 1995; Ostrom, 1998, 2000, 2001; Tucker 1999; Gibson, McKean, and Ostrom, 2000). In such a situation, resource use would be predicted by the optimal foraging theory of maximizing economic returns while minimizing costs (Schweik, 2000; Gibson, 2001; Stephens and Krebs, 1986).

A study by Agea and Obua conducted from 2005-2007 in areas around Mabira Forest Reserve, Central Uganda emphasized the need for campaigns in order to realign

policies that allows for full participation of not only the government but also the local communities in forest conservation and management (Agea et.al 2009).

Turyahabwe N, (2006) argues that the role of forestry in livelihoods of people, the desire to control forest degradation and access to forest revenue donor and central government fiscal support were the most important incentives in the decentralized forests management. However, the limited capacity in terms of the qualified staff, funds facilities and equipment and inadequate decision making powers over fiscal resources from forestry, inequitable distribution of forest revenue and unclear forest and tree tenure hindered decentralized forest management.

In Uganda, a large diversity of community initiated forest management systems have evolved recently in response to severe degradation of forests, grazing land, and biomass shortages. However, Buyinza, M. & Mulugo, L. (2008) assert that equitable benefit sharing by the community forest users serves as an indicator of better access to forest products. Socio-economic changes such as women's participation in forest related decision-makings, income generated from community forests and equity of benefits from community forests also reflect the program's success.

Nevertheless, though there are still a number of challenges, the phenomenon of Community-Based Natural Resource Management (CBNRM) has already gained a unique position world over (World Resources Institute 2001; Nayak 2004). Community-based natural resource management is based on the premises that local populations have a greater interest in the sustainable use of resources than does the state; and that they are more cognizant of the intricacies of local ecological processes and practices; and that they are more able to effectively manage those resources through local or "traditional" forms of access (Brosius et al. 1998).

CHAPTER THREE

RESEARCH MATERIALS AND METHODS

3.0 Introduction

This chapter describes the methods the researcher is going to use during his/her research work and data collection process it contains methods used, research design, area of study population of the study sample size and sampling techniques data collection methods and instruments, quality control methods data analysis techniques, ethical considerations, limitations of the study /anticipated constraints, references, bibliography appendices, budget, instruments.

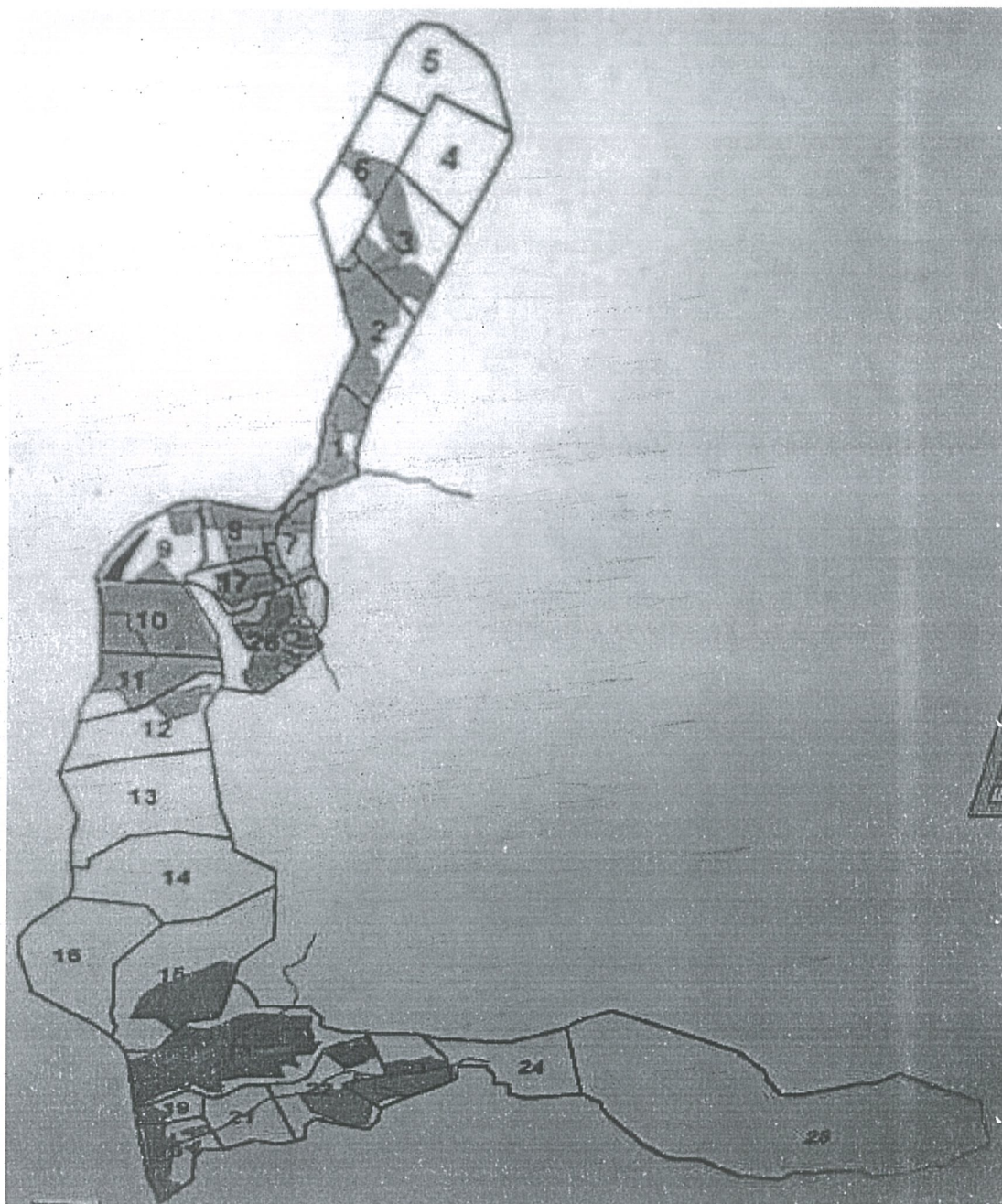
3.1 Research design

This study used descriptive research designs. This has enabled the researcher to describe the state of the effectiveness of community involvement in forest resources in Lendu Forest, Zeu sub-county, Zombo District. She has also determined the social-economic challenges and constraints faced by the community of Zeu sub-county on forest resources and management and conservation. She has also identified whether the community was involved in the management and conservation of Lendu Forests and has established the effective measures to solve the challenges faced by the community. The study has been carried out basing on the research objectives and research questions have used descriptive research methods.

3.2 Area of the study Zeu sub-county is found in zombo district formerly nebbi district, created by act of the parliament of Uganda in the 2009 July. In the west Nile region of Uganda bordering democratic republic of Congo (DRC) zombo district, west Nile sub region Northern Uganda. Zombo lies approximately 27 kilometers the nearest large town. This location is approximately 70 kilometers (43mi) by road south of arua the largest city in the sub region. The population of the district is not publicly known as of June 2014. The next national population census will have considered. This is also approximately 382 kilometers(237mi) by road north west of Kampala the capital and largest city of Uganda the coordinates of the district are 02 30N 3054E. Lendu plantation management area consist of four reserves lendu usi, Awan and okavu-reru lendu forest reserve falls within Uganda's central forest

reserves wile usi, awing and okavu-reru are local reserve.

Figure 1: A map showing the location and boundaries of the Lendu forest reserve falls



Map lacks so many key features
eg - legends:
- names of places
- direction/compass
- scale.

22
6/9/2017

3.2 Sample size and sampling Techniques:

Sample size: The intends to use a total of 50 respondents in which 10 respondents will include the local community leaders, government officials like district officers, district Environment officers religious leaders, teachers and NGOs representative, The rest of 40 respondents will be community residents.

Gender of respondents

Gender	Number of respondents	Percentage of respondents
Male	30	60%
Female	20	40%
Total		100%

The number of respondents from the questionnaire

3.2.1 Sampling Technique

The study will use both random and non-random sampling technique in selecting the sample size 9respondents) simple random sampling will be used to select 40 respondents among the community members in which sampling frame will be prepared and 40 respondents will be randomly selected from the community . Simple random sampling will be used to biasness and give respondents an equal chance to be in the sample, such as use of lottery method each member of the population is assign. Each member is placed in a bowl and mixed thoroughly.

The blind folded researcher then picks numbered tags from the bowl all individuals bearing the number picked by the researcher are the subject of the study.

RESPONDENTS AND THEIR MARITAL STATUS

Married's	30	60%
Single	5	10%
Widows	5	10%
Separated	8	16%
Divorced	2	4%

Interviews and questions where used to get the information, because most of the population could not answer the questionnaire themselves.

3.3 Data collection methods and instruments:

Primary data will be acquired through interviews, questionnaires, focus group discussions and participatory observations. Whereas secondary data will be obtained from documentary review. Focus group discussion with small respondents will be used.

3.3.1 Questionnaire

These will be composed of both closed and open ended questions. This will look at some of the challenges like lack of community involvement in Lendu forest management, lack of proper sensitization (creating awareness) about the advantages of sustainable forest resource use and also will help answer the research objectives.

3.3.2 Interviews

Interview will be conducted to collect information from key respondents like district forest officer, district authority workers, station forest officers, LC1, among others and interview guide will help the researcher to collect information through interacting and hence gather detailed data.

3.3.3 Focus group discussion

Discussions will be held in groups of about eight participants of three women and five men, which will help the researcher to obtain relevant information on how best forest resources can be managed and conserved in Zeu sub county.

3.3.4 Participatory observations

It will be used to obtain firsthand information in which the researcher will observe the forest resource management and conservation and the conditions and challenges faced by the community accessing them. This will be done by the help of an observation checklist.

3.4 Quality control methods

3.4.1 Data analysis and presentation

Descriptive analysis was used to analyses the data obtained from the field by the relating them to study objectives, tables, charts was used to present the field

results.

3.5 Ethical issue

The permissions to conduct the research on the socio-economic factors that contribute to the poor community forest management and conservation in Zetu sub-county were obtained from the district forest officer, Zombo district. Questionnaires were administered to selected community members as scheduled. Required data, which was obtained through in-depth interviews and documentary review and focus group discussion with the help of the community leaders, I selected the respondents to include in my study and also help the respondents answer the questionnaire. I interviewed the key respondents observing the forest resource, reviewed the literature materials. I would like to thank the community members and other stakeholders for their cooperation as it was a successful one.

CHAPTER FOUR

FINDINGS AND DISCUSSIONS OF THE STUDY

Table 1: Population management area

Reverse	Total area	Area plant
Lendu	2.378 ha	536.5 ha
Usi	433 ha	112.6 ha
Awing	162.6 ha	150 ha
Okavu-reru	422 ha	95.8 ha
Total	3395.6 ha	853.5 ha

Form the figures presented in table 1 it's apparent that the planted area in Lendu is disproportionately small relative to the total area and in comparison to the same ratio in other sub-countries. This suggests that the rate of forestation in Lendu may be insufficient to replenish the existing areas which are subject to severe consumptive demands.

The indigenous tribes of living in the area bordering the forest are Alur, Lendu and Kebu. As in the majority of Uganda rural communities most of Zombo districts. Local community depends on forest resources to meet their subsistence energy and related needs (Kasimbazi 2009) electricity supply and distribution is still very limited and tariffs' beyond the reach of most rural people

Subsistence agriculture is the main economic activity carried out in zeu sub-county. Small scale trade. People cultivate crops like beans, maize and others like tomatoes and coffee grown for selling. Animal rearing is also practiced. Animals kept are goats, cattle and pigs hence provide farmers with manure hence they earn some income through selling their products on market days like Monday and Friday other activities like local brewing is also being carried out by some community members as a way of earning their living

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4.1 Results and Discussions of the study

Demographic characteristics of respondents

This section presents the socio-demographic information of all respondents. This includes gender, age and level of education, occupation and marital status. The findings are shown in the figures and tables below.

Gender

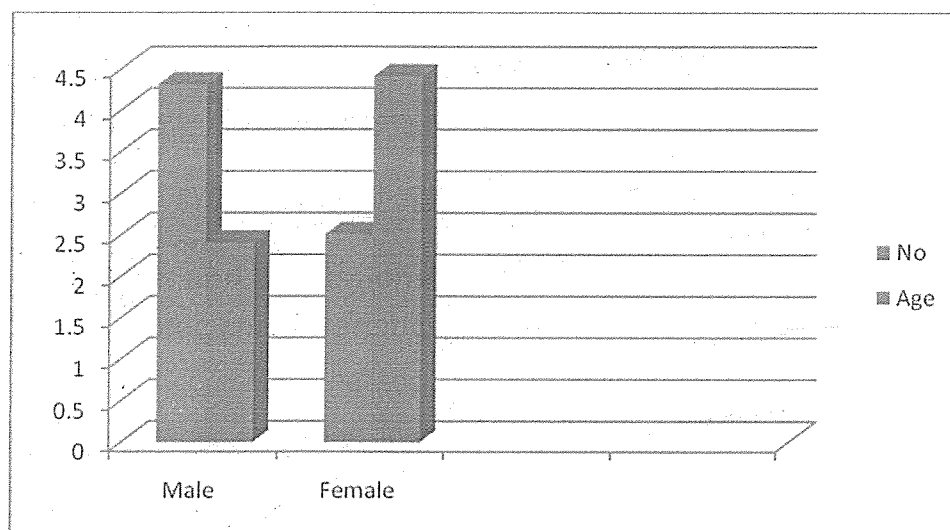


Figure 2: Shows gender of the respondents

GENDER OF RESPONDENCE.

The results in the table 1 are presented on figure 1 above of male and female.

The research from table 1 above used 50 respondents, 60% male and 40% female.

The researcher interviewed more males because men are more involved in co-work while females are for house work

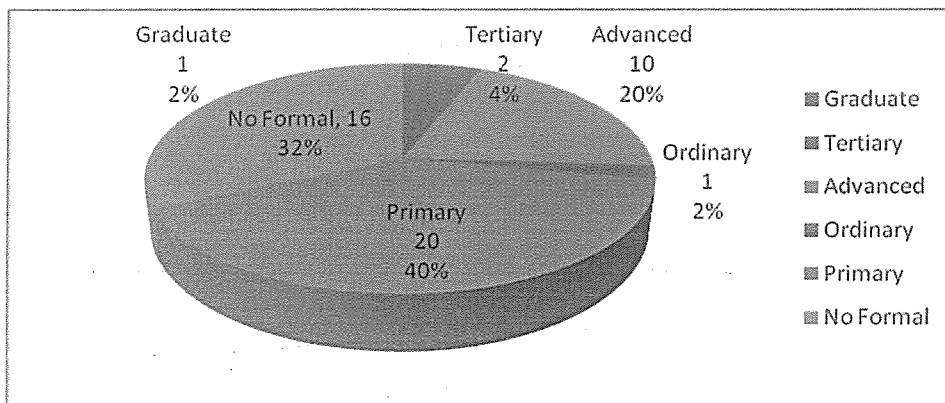


Figure 3: The results in the table 2 are presented on figure 3 above

This chart above represents the number of respondents with the different educational levels with the majority being primary level due to mostly poverty level and marriage among the young boys and girls. However, they both use the forest resources with girls or women being the most forest resource

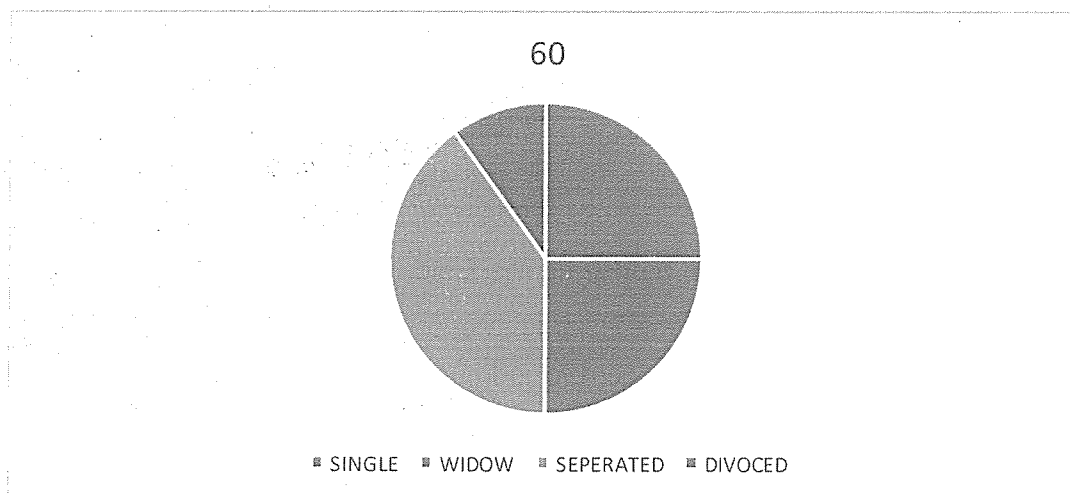


Figure 4: Shows Marital status of respondents

MARITAL STATUS

The chart above represents marital status of the people in Lendu forest reserve area showing 60% married and 40% single and this implies the biggest percentage of respondents being married who are the most forests users and 4% single moderate forest.

4.2 Research question

Some local authorities establish and manage local forest reserves for local benefits.

Private farmers also grow and manage trees or forests on either private land or hired public lands for future use.

Communities managing small local forests of historical or cultural value this help maintain the local forests or trees.

Sharing of revenue obtained from the forest resources within the community members makes them have the interest of protecting the forest reserve.

Discuss forest policies with the community and find out their views so that one is caught in wrong can be punished with them being negative.

Employing the community members for example in Lendu as for those who are employed there like one said I must make sure I keep the trees from fire, if they are burnt I will have no job, no food and this makes me unable to support my family.

The forest department has initiated schemes to involve local communities in forest management; these schemes have been labeled collaborative forest management. This involves the formation of local forests committees that are involved the management of natural forest reserves.

In addition individual groups of individuals and companies are encouraged to lease government forests land reserved for afforestation. For the purpose of establishing forest plantation and wood lots.

It's always important to bear in mind that peoples' interests in a particular species of forest area are often more than financial gains, their specific tress or forests with cultural, spiritual, recreational and aesthetic value depends on how they flee towards conservation activities they may be involved in different ways they understand it.

Same participatory approaches being used in the management and conservation of Lendu forest

There has been replacement of degraded areas by planting modern breads of tress like pine trees and (calatusi) to occupy the cut down ones.

Employment to some local members for example fire preventers, soldier's (security men) those who slash under the trees, nursery bed maintainers.

Given out tree seedlings to the community to plant. This does not only make the community participate in the forest management but also improve on their financial status and building material plus source wood fuel.

Sometime the nearby people are put together for sensitization or train them of the use; advantages and the management of the forests including its advantages to them, their children and the entire country. Forest Station Officer (FSO).

When the community are called to help in putting off the fire, though they are paid after, if not they do not participate.

The strength or capacity of the local people or local organization (CBOs) around Lendu forest use to manage and conserve forest resources in their locality

Its effects (Climate change) Dresses 2010 and 2011². Kasimbazi (2007:199) observes that biomass (ie. Fire wood, charcoal and crop residues) accounts for over 90% of Uganda's total energy consumption. The reliance on forests-based resources for energy consumption at the local level is therefore clearly evident.

What are the current challenges or hindrances to effective community participation in the management and conservation of forest resource in Lendu forest reserve?

Growing population lead to an increase in the conversion of forests for other land users for example clearing of forest for agriculture (the food and agriculture also estimates that each year 13 million hectares of forest land are permanently converted to Agriculture due to poor policies in other sectors can also contribute to rapid rates of deforestation.

Forest law enforcement and governance have occurred at the expense not only of national economies, but also of the rural people who depend on forest resources for their livelihoods. This mismanagement translates in to enormous national or district costs, for example failure to collect appropriate royalties and taxes from legal forest operations has a global, and district costs to government of about US\$ 5billionannually. Legal logging results in additional losses of forest resources from public lands of at least US\$ 10 billion to US\$ 15 billion a year. Improvement in law enforcement and governance are critical to capturing the full economic potential of forests in a sustainable manner.

Because of the forest significant, commercial value; the private sector is the principal source of finance in forest production in most countries (Zombo Zeu Lendu forest in particular) indeed the level of activity and influence of the private sector in forests dwarfs that of the international community and sometimes of the national government. Private investment in the forest (Lendu forest) is so high (the community) all our mature trees are sold off to private investors the forests no longer have measure trees with acceptance of those ones you are seeing of poor quality there were some 20 trees of exotic breads around.

Private sector has transitioned close to US\$ 15 billion per year in developing countries.

Community owned and administered forests are to a low level for example on the world scale millions of hectares may be owned but to a smaller extend are they administered by those very local community.

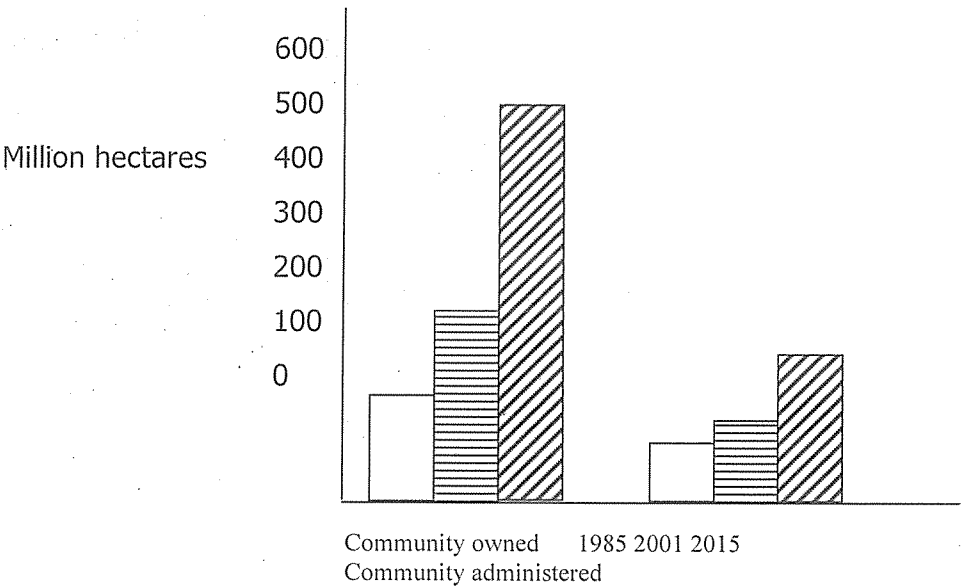


Figure 5: Showing hectares of Lendu forest

Use of forests for poverty reduction is so common (it's not of that forests that our grandparents use to get help and not for us we have to snick ourselves in at night

this does not work (the community members) forests poverty, reduction requires a strong institutional frame work and an effective legal and regulatory environment in which the right of specific groups among the poor are recognized and protected the indigenous people and forests and the opportunities to develop sustainable forests businesses must be provided to the forest dependent poor and other groups.

Create investment in the development of plantations contributes to economic growth and poverty reduction while reducing pressure on natural forests and protecting some ecosystem services. Integration of forests conservation into productive landscape can help achieve conservation objective, enhance the benefits of conservation and broaden the ownership of conservation initiative

CHAPTER FIVE

RECOMMENDATIONS AND CONCLUSIONS

5.1 Conclusion

The involvement of communities in forest management helps in the direct influence of the livelihood of people, and their participation and commitment of communities under CFM encourages regulated legal access to socio-economic benefits. As (Willy 2002) and "Becket at el, 2000; say CFM is a co-management widely practiced in India Nepal, Philippines and Latin America as government agencies and other sectors recognize its potential in supporting local well-being and sustainable forest management.

Sustainable use and equitable sharing of benefits that arises from biodiversity resources with the community leads participatory management and conservation practices. As this convention also recommend (The convention of Biological Diversity (CBD) (1992).

Lack of participatory forest management with the local people has greatly affected Lendu forest and forest resources in general worldwide. Community Based Forest Management (CFBM) and collaborative Forest management will help produce positive social, economic, and ecological outcomes (Carter & Grownow, 2005).

Key challenges facing forests reserves in the locality are legal logging, charcoals burning and legal farming practices there is also encroachment and climate changes. Community involvement in natural forest resources management has not been a common practice in the study area. And this has led to the lost of natural forest resource which in the long time term lead to adverse environmental challenges such as climate change. As I write I have been in Zeu where we find Lendu forest, there is rampant fire out breaks because the area is so dry, there is a lot of water insecurity, land and soil degradation. Community forests management (IFM) can be carried out in phases for example community identification of suitable forests areas and forming community forest committees, demarcation of the community forest

and developing a management plan being granted ownership, exclusive commercial rights based on annual plans through signing of community forest management agreements.

5.2 Recommendation

The involvement of communities in forest management helps in the direct influence of the livelihood of people, and their participation and commitment of communities under CFM encourages regulated legal access to socio-economic benefits. As (Willy 2002,) and (Becker et al, 2000;) say CFM is a co-management widely practiced in India Nepal, Philippines and Latin America as government agencies and other sectors recognize its potential in supporting and sustainable forest management. I am also recommending that the local authorities to practically involve the local communities forest resource management and sustainability, Lendu community around Lendu forest in particular;

Need to sensitize the community and educate members on the usage and importance of local forests Lendu in particular to the area and Uganda at large. Its rainfall contribution to their community, soil fertility formation and the financial improvement of our local government in terms of improving out their communication network, commercial improvement that is better transport quick and first.

Need to increase water accessibility in areas experiencing water scarcity, borehole digging in areas with scarce water and introducing ways of water maintenance and protection of the available sources. Cooperating with existing programmes working on water accessibility for example by providing water harvesting tanks.

Local farmers association and savings groups could play a role in providing loans for interested farmers. Most of these people depend on forests resources in order to survive and farming within the forest areas even inside. The loan would help some people begin small hold businesses that would reduce on over dependant on forest resources. The NGOs if possible that would give financial assistance to the farmers in order to improve on their livelihoods and stop over depending on forests resources.

REFERENCES

- Adams W. and Hulme D (2010) conservation and community changing nonnative's, policies and practices in D Hulme and M. Murphree (eds) African wild life and livelihoods. The promises and performance of community conservation oxford: Heineman and James curry.
- Ageaand, O.(2005-2007) Aea et al (2009) The need for complain dertorealign policies that allows full participation of only government but also the local community in forest community forestry management unit protest creation of community forestry committees as contact point for consultation in forest reserve planning in Ghana.
- Brown et al (2002) the need to increase community participation in forest management.
- Buyinza & Nabalegwa (2007) Roles played by women on plant Rwsorce Kamuli district Uganda
- Ibo & Leonard, 1997, Lorn 2000 Conservation Mabira central Uganda.
- Isager, L.I. Theilade and L. Thomsen 2002 people's participation and the role of government in conservation of forest genetic resource guidelines and Technical notes No. 62 Danida forest seed centre Humlebaek Denmark.
- Kasimbazi 2009, Zombo district locals depend on the forests resource for their subsitance energy and related needs.
- Kayak 2004, Resource management (CBNRM) hasal ready gained aunige position world over./World Resource institute 2001.
- Kerkhaf 2000: Vogt and Vogt 2000: Montagne and Manoudou 2000 Community based management of woodlands.
- Montagne and Mamoudou, 2000 co management of Gusselbodi Forest in Niger kerkhof, 2000, Vogt and vgt

Muhereza .F. (2006) Decentralizing Natural Resource Management in Uganda's Forest Sub-Sector Africa Development 31 (2) 67-101)

Mulugo,L.(2008) Following the centralization of management of forest Resources in Uganda.

Nana, Dorlochter.S, et al.2000 in Burkina Faso a form of co-management of kaboreTambi Park

National and international policies initiatives on tropical forests.

NEMA National Environmental Management Authority (2006/07) state of environment report for Uganda Kampala.

Nepal, malla et al (2003) report on the scale of success of community forestry in the hills of Nepal.

Oleitiein/Nepenthes 2001; involvement of local communities in management of forest often leads to more effective forest conservation.

Omier, B.Gunya, N. Kyalubanga Lendu Nawandigi oct.23 2014

Oyiro D. NFA Presentation at a community dialogue Zombo District August 2011

Schavbreuck, T. (2014) including man-Nature relationships in Environmental sustainability assessment of forests based production systems PHD thesis Ghent University Belgium 225p

Scottt, Hinchley et al, 2000 UFD co-management has been advanced in two forest reserves.

Tadesse D. (2010). The impact of climate change in Africa. Iss paper 220: 1-17 pretoriaIss.

The office of Auditor general of Uganda (2010) Environmental Audit report on forestry activities in Uganda July 2010 Accessed 30th July 2012 <http://wwwenviornmrntalauditing.org> (portals 10/Audit files/Uganda f.eng

forestry activities in Ug. Pdf.

Tryahabwe, N. et al. (2008) forest tenure and anthropogenic factors with in the institution and the effectiveness of management of Mpigi forest. Central Uganda.

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APPENDICES

APPENDIX I: QUESTIONNAIRES

Dear respondent,

This study entitled "The effectiveness of Community involvement in the management and conservation of forest resources in Uganda: A case of Lendu Forest Reserve" aims at determining the effectiveness community involvement in Forest reserves management of this country. The study specifically examines whether the local communities are involved in the management and conservation of the forest reserve; examining the participatory approaches being used in the management and conservation of the reserve; ascertaining the strength or capacity that the local people or organizations (CBOs) around the reserve have to manage the reserve; and to examine the current challenges to effective community participation in the management and conservation of the forest reserve resources. The information you will provide here will be treated with high confidentiality and it will be used for academic purposes only. Thank you in advance for your participation in this study.

Study Area

District....., sub county.....,

Parish.....

Village/ward.....

PART 1: Respondent's Information

Name (Optional): Tribe

Q 1. What is your Gender? (Please tick)

(1) Male

(2) Female

Q 2 What is your age bracket? (Please tick)

- (1) 13-18 years
- (2) 19-24 years
- (3) 25-30 years
- (4) 31-36 years
- (5) 37-42 years
- (6) 43-49 years
- (7) 50+ years

Q 3. What is your level of Education? (Please tick)

- (1) No formal Education
- (2) Primary Education
- (3) Ordinary level
- (4) Advanced Level
- (5) Tertiary Institution/Diploma
- (6) Graduate level

Q 4. What is your main Occupation?

.....

Q 5. What is your marital status?

- (1) Married
- (2) Single
- (3) Widowed
- (4) Separated
- (5) Divorced

Q 7. For how long have you been residing in this area? (Please tick)

- (1) 1 month
- (2) 1 year
- (3) 2-4 years
- (4) 5-7 years

(5) 8-10 years

(6) 10+ years

PART 2: Knowledge of Conservation and Involvement in Management and Conservation of Forest Reserves

Q.8 Do you know of Lendu Forest reserve in Zombo?

(1) Yes

(2) No

Q.8 (b) Do you have any idea on what conservation and management of forest reserve means?

(1) Yes

(2) No

Q.8 (c) If yes, please briefly elaborate what management and conservation of forest reserve means to you

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Q.9 Are you or any of your family involved in management or conservation of Lendu Forest reserve?

(1) Yes

(2) No

Q 10(a). If yes, what type of management and conservation activity are you or your family member is involved in

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Q10 (b) If No, why not?

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Q.11. What type of participatory approaches are used by the Forest management authorities to manage lendu forest reserve?

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Q.12 How have the above approaches helped in managing and conserving Lendu Forest reserve? Rate the different approaches on a scale of 1-5, with 1 being very poor, 2- poor, 3-good, 4- very good and 5- excellent. Please tick

Sn.	Approaches	1(Very poor)	2 (poor)	3 (Good)	4 (Very Good)	Excellent

Q13. What are the challenges faced in the effective community participation in the management and conservation of Forest resources in Lendu Forest reserve?

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Q.14. How have you addressed these constraints over the years?

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Q15. If you have not tried to address the constraint, what do you intend to do to curb down theses constraints?

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Q16. In your opinion, is there any other information you would wish to make us know about Lendu Forest reserve conservation and management? Please outline them

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APPENDIX II: RAW DATA EXTRACT

QN1. GENDER OF RESPONDENTS

GENDER	Number of respondents	Percentage of respondents
MALE	30	60%
FEMALE	20	40%
Total	1	100%

Out of the 50 respondents 60% where male and 40% where female

$$30/50 \times 100 = 60$$

Adding to 100%

$$20/50 \times 100 = 40$$

QN2. EDUCATION LEVEL OF THE RESPONDENTS

Level of education	Number of respondents	Percentage of respondents
Graduate	1	2%
Tertiary	2	4%
Advanced	10	20%
Ordinary	1	2%
Primary	20	40%
No formal	16	32%

The number of respondents with the different levels of education

$$1/50 \times 100 = 2$$

$$2/50 \times 100 = 4$$

Adding to 100%

$$10/50 = 20$$

$$1/50 = 2$$

$$20/50 = 40$$

$$16/50 = 32$$

QN3: MARITAL STATUS

Marrieds	30	60%
Single	5	10%
Widows	5	10%
separated	8	16%
Divorced	2	4%
Total		100%

Marital status of the respondents

$$30/50=60$$

$$5/50=10$$

Adding to 100%

$$5/50=10$$

$$8/50=16$$

$$2/50=4$$

QN4:.....

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QN5:.....

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