COMMUNITY PARTICIPATION IN FOREST RESOURCES MANAGEMENT IN MT. ELGON FOREST AND ITS ENVIRONS

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CHAPTER ONE

BACKGROUND TO THE STUDY

1.1 The Problem

Community participation is now globally recognised as an effective strategy in the management of forest resources (IUCN, 1992; WRI, 1996). However, in developing countries and particularly Africa, forest management policies have in the past, largely failed to recognise the important role that Forest Adjacent Communities (FAC) can play in the management of forest resources. In Kenya, efforts to incorporate local communities in forest resource management policies have not adequately recognised the variable nature of the forest adjacent communities. This has resulted in conflicts over the use and management of these forest resources (Odhiambo, 1998). This study focused on how the forest adjacent community of the Mt. Elgon Forest Reserve could be best involved in policy formulation for the management of the forest resources.

Management of forests world-over have for a long time adopted the Yellowstone model of protected area approach (IUCN, 1994). This approach was used by most colonial governments in Africa and other parts of the world to establish national parks, forest reserves and other categories of resource conservation areas to ward-off human interference. Experience with this model has shown that forest management policies, centred on legal regimes, increasingly exclude the interests of rural people. Consequently, resources which were once utilised and regulated through traditional practices were removed from communal control and instead central control was instituted through enacting elusive laws, insensitive policies, and centralised institutions like the Kenya Wildlife Service and Kenya Forestry Department (Waas, 1995).

In this new arrangement, traditionally held tenure rights of use and indigenous knowledge and management techniques of local people have been ignored.

As a result of this approach, forest resources in most parts of the world are threatened by many problems including deforestation to create new land for agriculture, commercial ranching, settlement schemes, transport network and other major development projects. Forest fires, encroachment of forest reserves, live-stock grazing, timber and firewood collection by the local people have also contributed significantly to deforestation. Lack of involvement of the forest-adjacent community (FAC) through consultations in the policy formulation processes exacerbates these threats, as the community does not feel as part of the management team.

At the same time, the local communities have often perceived government's forest management policies negatively, as being against their interests, and have therefore been indifferent to government-led conservation initiatives (Castro, 1995). This has given clear indication that without local support, implementation of these state-based forest conservation initiatives, regulations and policies, is deemed to fail (Waas, 1995: 78-89).

In Kenya, legislation concerning forests is fairly comprehensive. It is spread over various Acts (e.g. Forest Act Cap 385, Wildlife Conservation and Management Act Cap 376, Plant Protection Act 324) but administered without central co-ordination, by a wide range of public bodies and individuals (Baraza, 1999; Bragdon, 1990; Odhiambo, 1998; Waas, 1994;). The government, through its institutions (Kenya Wildlife Service and Forest Department) has not been able to adequately enforce law related to the protection of forests. In Mt. Elgon, this is evidenced by the illegal activities that still take place in the forest such as collection of firewood and logging

of indigenous trees without permit. While consumptive activities are not allowed by the KWS in the National Park, firewood and poles are harvested in large amounts.

Timber and wildlife poaching is common as huge parts of the forest are not patrolled. Ongugo & Njuguna (1999) recognised the problem of overgrazing in the forest. They noted that over 300 heads of cattle and a similar number of goats and sheep grazed daily in the forest and caused damage to vegetation and ground cover. The result has been conflicts between the community on one hand and the forest management bodies - Forest Department and KWS on the other.

Penalties for infringing forest related Acts are usually very mild in comparison to the potential gains from illegal forest activities. At the same time, traditional rights of local communities to use forest resources are inadequately addressed in the legislation. The presidential decrees, which have been intended to stop fragrant breaches of the forest policy, are often not backed up by legislation, and are thus, in practice, difficult to enforce (Baraza, 1999).

The need to share the responsibility of forest management with local communities has however, gained momentum in the recent past. Only by sharing power with local communities can over-burdened national forest departments ensure the health and equitable development of national forest resources. As KIFCON (1994) noted, there is fear on the side of the government that it might lose control over forests. This would mean loss of the revenue they generate and the more rapid loss of water catchment potential that accompanies deforestation.

Although community-based control system operated successfully in many forests in Kenya before colonial times, revival of the concept has not yet been officially explored and piloted as an alternative to the exclusive government management,

except in the coastal Kaya forests (Waas, 1994). However, the newly formulated forest policy supports the principle of community participation thus opening the way for trying it out in practice soon (Ministry of Environment and Natural Resources, 1994).

Evolving procedures that enable all actors to participate in the development, implementation and appraisal of natural resource policies, particularly forest-dependent communities, is critical for sustainable forest management and rural livelihoods. Without such effective mechanisms and strategies to ensure local-level participation in forest policy dialogue, development and implementation, there cannot be long-term commitment for survival of forest resources. While new approaches and tools for participatory forest management have been developed, genuine participation with real benefits for local populations is yet to be realised (Desloges, 1998).

Forests are sources of timber, fuelwood, pulp for paper, and medicine besides hosting activities such as mining, grazing, recreation, hunting and gathering. They also protect watersheds, thus regulating the flow of water from highlands into rivers and streams and help in controlling soil erosion, flooding as well as the amount of sediment washed into streams, reservoirs and lakes. Forests influence local, regional and global climates and constitute important habitats for wildlife. Hence, they are major reservoirs of biodiversity. They provide buffer zones against noise, absorb air pollutants and nourish the human spirit through their aesthetic value.

More than two million indigenous people (4 percent of world's population) representing 5,000 of the world's 6000 cultures live in environments ranging from the polar to tropical forests and rain forests (Banuri, 1993; Cunninghum, 1992; IUCN, 1992; Matter, 1990; Miller, 1994; Park, 1992; WRI, 1996). Long-term survival of

forests and their roles therein is thus dependent on carefully formulated policies that take into consideration the views, needs and aspirations of the forest-adjacent communities.

This study therefore, aimed at identifying mechanisms through which the forest-adjacent community can be involved in policy formulation for the management of forest resources in general and Mt Elgon forest in particular. The question which this study tried to answer then, was "How can the local communities living adjacent to the Mt. Elgon forest be involved in the formulation and implementation of policies guiding management of the resources of the forest?

1.2 Research Goals and Objectives

The overall goal of the study was to suggest ways to institutionalise community participation in sustainable management of forest resources in Kenya. The study aimed at establishing mechanisms for integration of local communities in policy formulation and management of forest resources in Mt. Elgon. In this regard, the study concentrated on the following specific objectives:

1.2.1 To establish the level of community awareness of the forest resource management policies, laws and regulations

1.2.2 To establish the nature and extent to which the community is involved in forest resources management policies formulation

1.2.3 To evaluate the role of the various actors involved in the implementation of Mt. Elgon forest management policies

1.2.4 To suggest mechanisms through which local communities living adjacent to the Mt. Elgon forest can best be involved in the formulation and implementation of forest resource management policies.

1.3 Study Hypotheses

1.3.1 There is low community awareness of government policies governing forest resource use and management

1.3.2 There is low level of community involvement in forest resources management. Consequently, the roles of the other stakeholders have been incompatible with those of the community, giving rise to minimal conservational success.

1.3.3 Existing forest resource policies and regulations do not adequately address the needs and aspirations of the local communities in Mt. Elgon area as evidenced by the conflicting relationship and lack of trust between the law enforcement and policy implementation agents and the local community.

1.4 Significance of Study

Effective forestry policy development and implementation requires concerted, transparent and on-going communication among all actors. The local communities constitute the core of these actors. Where the local communities depend heavily on forest resources, their involvement in forest management is essential if compromise solutions to conflicting needs are to be found.

Again, without effective mechanisms and strategies to ensure local-level participation in forest policy dialogue, development and implementation, there cannot be long-term commitment to survival of forest resources. This study hoped to identify such mechanisms.

Integrated natural resource planning and management is now recognised internationally as a prerequisite for sustainability of resource use. Agenda 21, (UNCED, 1992) recognizing this need, reiterates that "natural resources are used for a variety of purposes which interact and may compete with one another therefore it is desirable to plan and manage all uses in an integrated manner." Community participation is part and parcel of integrated natural resource planning and management. Community awareness of policies guiding natural resource use and recognition of its contribution is essential to their effective participation in integrated natural resource planning and management.

There are three principal actors in the management of Mt. Elgon Forest - the Forest Department, the Kenya Wildlife Service and the Community. While the role of KFD and KWS are legally defined, that of the community is not (Baraza, 1999).

Mt. Elgon harbours numerous indigenous trees most of which are under threat. Knowledge of policy formulation involvement of the forest-adjacent communities as well as policy awareness levels will contribute to a better integrated planning, policy formulation as well as management. The study was important because little was known of the operations of Kenya Forest Department and Kenya Wildlife Service especially in Mt. Elgon Forest particularly with regard to interaction with the forest-adjacent community. The study also aimed to provide information consumable by a large number of interested partners.

Waas (1994) notes that there is no single recipe for successful forest conservation. Emphasizing this, KIFCON (1994) recognises that individual forests have different conditions and value, and suitability for increased community involvement varies accordingly. This study's results are therefore of paramount importance in formulation of site-specific (forest-specific) management plan.

The results of the study will contribute to strategies and methodologies for achieving sustainable participatory conservation. This will enable policy makers and managers better understand the stand of local communities and adequately accommodate their aspirations during policy formulation process.

1.5 Scope and Limitation of the Study

The research focused on forest-adjacent community's participation in the management of forest resources in Mt Elgon District. Specifically, the community awareness levels of forest policies and regulations as well as the nature and extent of community involvement in policy formulation was evaluated. The roles of Kenya Wildlife Service and the Kenya Forest Department (Government Institutions), Mt. Elgon Integrated Conservation and Development Project and Action Aid-Kenya (Non-Governmental Organizations) were assessed in relation to the management of forest resources and their linkage with the community in this management. The study also looked at Community-based organizations (CBOs) and their role in forest management.

The study was limited to Kapsokwany Division. The other divisions were excluded because of their inaccessibility and insecurity (road network and cattle rustling). It was however, hoped that the information obtained could be generalised not only on all forest-adjacent areas of the district but also in other parts of the country.

1.6 Study Area

1.6.1 Location

The study was based in Kapsokwony Division of Mt. Elgon District. Mt. Elgon District is one of the seven districts in Western Province of Kenya, which comprise of Bungoma, Teso, Busia, Vihiga, Lugaris and Kakamega. The district borders the

Republic of Uganda to the North and West, Trans Nzoia district to the East and Bungoma District to the South. It lies between latitude $0^0$48' and $1^0$30' North and longitudes $34^0$22' and $35^0$10' East.

The district occupies an area of 936.75 square kilometres with Mt. Elgon forest occupying 645.05 square kilometres. It has four (4) divisions namely Kapsokwany, Kaptama, Kopsiro and Cheptais. Table 1.1 shows the district area by divisions while Map 1.1 shows these divisions and the study area, which is in Kapsokwany Division.

Table 1.1: Area of Mt. Elgon District by Divisions

Division	Total area (Sq. Km)	Forested area (Sq. Km)	Arable Land (Sq. Km)
Kapsokwany*	**255.66**	**198.99**	**56.67**
Kaptama	209.95	142.81	67.14
Kopsiro	248.78	160.90	87.88
Cheptais	222.36	143.34	79.02
Total	**936.75**	**646.04**	**290.71**

***** Area of study *Source: Republic of Kenya, 1996*

Map 1.1: Mt. Elgon District and the Study Area *Source: Republic of Kenya, 1996*

1.6.2 Topography and Soils

The terrain of the district rises from 1800 metres above sea level (m.a.s.l) in the south to about 4310 m.a.s.l to the north. The main land form, Mt Elgon, slopes gently though some areas around the southern part of the district and central parts rise abruptly in undulating characteristics to form cliffs rising up to 70 metres in height and are dissected by deep river gorges with frequent water falls.

The soils of the study area can be grouped into three categories namely: mountain soils, soils on volcanic footridges and soils on footslopes. The mountain soils are developed on olivine basalts and ashes of volcanoes mostly found in the forest zones. These are of two forms – grey brown, very friable, peaty and quite acidic soils which are poorly drained and shallow occupying about 10% of the district; and deep dark-clay to reddish brown with rocks and fairly well drained soils occupying 14% of the district.

The soils on volcanic footridges are developed on tertiary basic igneous rocks. They are of two forms – well drained, dark to reddish loams, very fertile soils with humic endosols which occupy about 45% of the district; and well drained, dark to brown friable clay soils with acidic humic top soil occupying about 25% of the district. The category of soils on footslopes is developed on colluvium from basic igneous rocks. The soils are well drained, dark brown firm calcareous clay, found in the lower regions of the district and occupying about 6% of the district's total area (GoK, 1996).

1.6.3 Climate and Drainage

The district receives a bimodal type of rainfall. Long rains come in March-June and short rains from September to November. However, there is no clear distinction between the two rain seasons. The area receives high rainfall, which ranges between 1400 mm to 1800 mm per annum and is evenly distributed in the district. Temperatures in the area decrease with increase in altitude and ranges between 14^0 C and 24^0 C.

The water resources in the district are abundant as numerous springs collect to form streams feeding the main rivers. These rivers include Kamukuywa, Sosio, Kimilili, Kibusi, Kuywa, Malakisi, Sit and Lwakhakha. Their distribution is generally even.

1.6.4 Population and Settlement

The total population for Mt Elgon District in 1989 was 107,705 (Republic of Kenya, 1996) while the 1999 national census show a count of 135,150 (District Statistics Office, 2000), indicating a growth rate of 2.3%. The predominant inhabitants of the district are the Sabaot, the Bukusu and the Teso. There are only two urban centres in the District – Cheptais and Kapsokwany, and both are under the jurisdiction of Kapsokwany Town council. The growth of these centres has been affected by the poor conditions of roads. Other market centres in the district include Kapkateny, Chemoge, Kaptama, and Kopsiro. In the rural areas, homesteads are sparsely distributed.

1.6.5 Socio-economic Activities

The district is predominantly under agriculture whereby the rural economy is characterised by small-scale mixed farming, which includes subsistence and cash

crops. The main crops grown include cereals, pulses and horticultural crops like onions. It is estimated that over 60 % of the total land area is under crops while 10% is left for grazing and 30% is occupied by human settlement. The main livestock production activities in the district are dairy, poultry and beekeeping. Most of the livestock products are sold to neighbouring districts particularly Bungoma and Trans Nzoia.

1.6.6 Mt. Elgon Forest Ecosystem

Mount Elgon is located north of Lake Victoria on the border between Kenya and Uganda. It is volcanic by origin and has the highest altitude at 4,320 metres (a.s.l). The Mt. Elgon ecosystem, covers an area of 220,000 hectares both in Kenya and Uganda, out of which 108,300 hectares is in Kenya.

On the Kenyan side, Mt Elgon ecosystem lies within Mt Elgon and Trans Nzoia Districts, which essentially share the same ecological zone. The mountain has vegetation transition from moorland at the top, changing downwards through zones of alpine forest, bamboo forest, tropical moist forest and mixed open woodland and grassland. The mountain landscape consists of deep valleys, some with cliffs, waterfalls and some caves, which are home to large numbers of bats and salt licks for elephants and other animals including livestock.

Most of the mountain forest is gazetted as a Forest Reserve (73,705 hectares) and is managed by the Forest Department of the Ministry of Environmental and Natural Resources. The forest reserve consists of plantations and indigenous trees.

A transect of forest of about 16,774 ha. on the north-eastern slopes falls within Mt. Elgon National Park under the jurisdiction of the Kenya Wildlife Service. The

National Park, established in 1968, extends from the lower mountain forest to the caldera edge, covering a large area of the moorland. The remaining moorland (of approximately 17,819 ha) is part of Mt. Elgon Trust Land (under legal notice No. 88 of June, 2000) and is managed by the Mt. Elgon county council. This zone was initially under the National Park as demonstrated in map 1.2. Adjacent to the lower fringes of the mountain are agricultural activities and human settlements.

Map 1.2: Mt. Elgon management zones ***Source: MEICDP, 2001***

1.7 Organization of the Thesis

The thesis is divided into five chapters. Chapter one, the background to the study, outlines the study problem, research goals and objectives as well as significance, scope and limitations of the study. It also provides information on the study area. Chapter two reviews literature on the concept of community participation and community-based forest management rights. Emphasis is put on the policy formulation, dimensions of participation and stakeholders in natural resource management. The chapter ends by providing theoretical frameworks within which the study may be explained. Chapter three discusses the research methodology while chapter four gives an in-depth analysis of collected data objective by objective. Finally, chapter 5 provides a discussion and conclusions of the findings and ends with recommendations to these findings.

CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Literature Review

There is increasing evidence to suggest that for sustainable management of forests, adjacent communities must be fully involved in both decision making processes and concrete actions concerning the land they inhabit and use (IUCN, 1992; UNCED, 1992; WCED, 1987). This means that sustainable forest development will not be achieved if it fails to consider the needs and aspirations of rural and forest dependent communities and to acknowledge and deal in an appropriate and timely way, with the conflicting situations created by competition for the use of forest resources (Desloges, 1998). Participatory forest resource management is crucial as it creates an environment in which all interested actors collaboratively plan and act together on how the resources should be used for the benefits of all partners, including future generations (*Ibid*). A systematic review of related research and literature can be undertaken under the following sub-headings.

2.1.1 The Concept of Community Participation

2.1.1.1 A Community

The concept of a "community" has no clarity of meaning. Midgley (1986) observes that the concept is poorly defined in the literature and many authorities do not seek to define it but instead use the term loosely to denote a socio-spatial entity. Kiamba (1992) gives a rather detailed account of the concept. He argues that a community can be described as any group of people who are having something in common such as lawyers, doctors, students, teachers or land owners.

He further observes that it can also be seen as an aggregate of people who have living conditions in common or people who live in the same locality and are subjected to the same laws or have same interests. Midgley (1986:24) sums it all by saying that the community has quality of duration, represents an accumulation of group experiences which comes out of the past and extends through time, even though the individuals making the community are forever coming and going. It should be noted however, that a community is not a uniform mass of people, but a heterogeneous collection of individuals and groups among whom multiple social ties have developed. Also important to note is that distinctive community groups have different, sometimes opposing interests (Kiamba, 1992). Kiamba's and Midgley's definitions of a community closely describes the people regarded as the community in Mt. Elgon.

2.1.1.2 Participation

Traditionally, participation has been identified with political behaviour: voting, campaigning, lobbying etc (Gebre, 1990). From the 1960's, participation is mainly emphasised in the social development discourse. Mlenge (1991:5-6) talks about participation at two levels: at individual and at family or household level. At individual, he narrates that participation is the inherent enthusiasm or self-disciplined determination to take part in an activity. Seen in this way, participation is an attitude of mind and a way of life. To a family or household, he sees participation as an internalised or deep feeling of obligation to take part in an activity for the welfare of the family, the family or household here being perceived as a single entity. In a community, participation is the spirit of togetherness, solidarity and coherence, which encourages taking part in an activity. Reiterating this, Onibon (2000:4-10) adds that people participate in activities that seek to meet their particular basic felt and/or

subsistence needs, activities that are immediate, personal, family-based or community-based.

Davis-Case (1990:27-32) discusses participation in terms of power relations. She argues that having power can be characterised by one's ability to have either ultimate decision-making or at very least, a voice in the decisions that directly affect one's life.

She particularly emphases on shared decision-making which she refers to as 'power within'. In her argument, she sees this as the basis of what she refers to as 'partnership participation'.

Different authors have different views about what participation entails. Midgley (1986:25) notes however, that many of the authors quote the United Nations Economic and Social Council resolution 1929 (LVIII) when discussing the issue of participation. This resolution states that participation requires the voluntary and democratic involvement of people in contributing to development effort; sharing equitably in the benefits derived therefrom; and decision-making in respect of setting goals, formulating policies and planning and implementing economic and social development programmes.

2.1.1.3 Community Participation

Community participation means different things to different people. For instance to a chief, it might mean calling a 'baraza' and telling the people what is good for them while to a headmaster, it might mean telling the community that more schools are needed. There is consensus however, that community participation has connections with levels of conscious involvement in the types of actions and duties that have been taken and the degree of responsibility (Kiamba, 1992:3).

Among communities in developed countries, community participation is mainly defined in terms of citizen participation and it is conceptualised as an end in itself.

In developing countries, community participation is more often understood in terms of "involvement of the people" in planning and other government processes with the view of increasing trust and confidence in the government so that people can accept plans and decisions made by the government for them in solving their problems (Midgley, 1986: 13-44).

Community participation is also seen and evaluated in terms of "granting individuals or groups of people a voice" in planning, decisions and service delivery (Egziabher, 1990). A comprehensive conceptualisation of community participation can be extended to also refer to the process through which members of a community express their feelings about an issue or articulate their needs among themselves (*Ibid).*

Mary (1986:126) observes that community participation serves immediate instrumental goals such as the identification of felt needs as well as the mobilization of local resources. In a summary, community participation means readiness of both the government and the community to accept certain responsibilities and activities. It also means that value of each group contribution is seen, appreciated and used (Yeung & McGee, 1986:97).

2.1.2 Community-Based Forest Management Rights

Community-based tenurial rights have along history worldwide. Recent global conventions have affirmed these rights.

In the United Nations Convention on Civil and Political Rights document, one article obligates signatories to ensure that the rights enumerated therein are "upheld without

regard to colour, language, social origin, property or other status". The Covenant's article 27, which mandates that ethnic, religious and linguistic "minorities .....shall not be denied the right, in community with the other members of their group, to enjoy their own culture" may have the most potential for promoting community-based forest management.

Another important international codification of human rights of many people living in or dependent on the forest areas is the International Labour Organization's (ILO) 1989 Convention Number 169 concerning indigenous and tribal peoples. It provides that:

1. The rights of ownership and possession of the people concerned over the lands which they traditionally occupied shall be recognised. In addition, measures shall be taken in appropriate cases to safeguard the rights of the people concerned to use lands not exclusively occupied by them but to which they have traditionally had access for their subsistence and traditional activities. Particular attention shall be paid to the situation of nomadic peoples and shifting cultivators in this respect.

2. Governments shall take steps as necessary to identify the lands which the people concerned occupy and to guarantee effective protection of the rights of ownership and possession.

3. Adequate procedures shall be established within the national legal systems to resolve land claims by the peoples concerned.

The convention adds "the rights of the peoples concerned to the natural resources pertaining to their lands shall be specially safeguarded. These rights include the rights of these people to participate in the use management and conservation of these resources". ILO members are legally obligated by its founding charter to implement the convention. However, no country is in full compliance.

At the 1992 United Nations Conference on Environment and Development (UNCED), the role of traditional and other local communities in management of natural resources

was mentioned in several conference documents. Principle 22 of the Rio Declaration affirms the 'vital role' of these communities "in environmental management and development". However it provides no guidance on how to ensure effective participation. This study attempts to fill such a gap.

Article 8(j) of the Convention on Biodiversity, requires parties to "respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biodiversity". This language appears to provide a framework for international legal protection for certain types of local community forest management systems. However, this sector is made "subject to legislation", a qualification which potentially vitiates its effectiveness.

Chapter 32 of Agenda 21 guidelines for realising sustainable development at the international, national and local levels is directed at the interests of "farmers" which the document identifies as "all people who derive their livelihood from activities such as farming, fishing, and forest harvesting". It calls upon national governments to give effective land tenure to these groups and notes that the absence of legislation to indicate land rights "has been an obstacle in taking action against land degradation in many farming communities". However Agenda 21 is not a legally binding document

The Desertification Convention recognises the rights and interests of community-based resource users as well as participation of these groups as essential for sustainable natural resource management and development. Article 10 of this convention calls for national action programmes that delineate the respective roles of governments, local communities and other land-users and which "provide for effective participation at the local, national and regional levels" in policy planning and implementation.

2.1.3 Policy Formulation

The rationale for promoting community participation in natural resource management is based on the assumption that effective management is more likely when local resource users have shared or exclusive rights to make decisions and benefit from resource use. An important feature of participation can be seen as its potential to enhance the power of resource users to influence things, (Nelson and Wright, 1995: 125), herein viewed as the policy formulation process.

A policy is a framework, which guides decision making in an organisation or government. It is a statement of intended action. In general terms, policies deal with matters of daily life as well as major societal issues (AIDSCAP, 1998: 7) and can take various forms. They may be general statements about national or organisational priorities, written regulations: guidelines, procedures and/or standards to be achieved or even informal (unwritten) but widely recognised practices.

Policy formulation involves steps or processes which tend to blend together in real life:

1. Identifying problems: - problems on the issue are collected from a variety of people and interest groups in order to get a variety of perspectives. From a list, the problems are sorted and prioritised.
2. Issues and solutions: - Prioritised problems are then expressed to issues. Forming an issue statement helps to focus on the reasons for the problem and thereby the search for solutions
3. Gathering and analysing data: - Adequate information that clearly indicates the problem and supports the solutions must be provided. Common tools used to

gather such data include surveys, questionnaire, interviews and policy assessment tools.

4. Developing policy recommendations:- This entails preparation of background information report and, development and writing of policy recommendations. A policy recommendation is a formal statement, expressed in clear, concise and objective language. This report is then distributed to the policy makers and their staff for perusal and subsequently advocacy

5. Advocacy for policy adoption:- Advocacy helps to achieve policy results. Advocacy becomes part of the policy development process when there is a need to inform policy makers and generate interest within thegeneral public. Policy makers will generate the problem and agree with the proposed solution

6. Policy language:- Policies are often written in legal language by people with extensive experience in that area, including lawyers and civil servants familiar with the language of government or other institutions. Examples include parliamentary policy papers, ministerial or government declarations, decrees and statutory instruments.

Policies usually go through several drafts and revisions within a national or organisational bureaucracy. (This may explain the delay to revise the Forest Act after the 1994 forest policy recommendations of the Kenya Forestry Master Plan).

The public presentation of the policy may be very quiet or may receive a lot of publicity. News conferences, public seminars, rallies, opinion columns in newspapers, participation on television or radio news and interview programs can also be used to help inform the public about the new policy and to demonstrate support for its implementation.

7. Implementation and oversight:- A policy may exist just as it was adopted, or some clarifying rules and regulations may be added. The rules and regulations define how the policy will be implemented and enforced.

Policies can be very general or detailed. Implementation of general policies requires extensive preparation to describe how people will have access information, what forms of information, the responsibilities and rights of groups that provide information.

As a policy is being implemented, assessments need to be done, to evaluate how useful and effective the policy is. This feedback is very important in assuring that the problem that originally stimulated the policy development is being addressed. Occasional contacts with the people affected by the policy may be sufficient to assure that the intent of the policy is being applied.

Organisations, which adopt policies, have a responsibility to regularly monitor how the policy is being applied and implemented. In the case of government, outside groups often find it useful to monitor implementation and to regularly remind government of its commitments. Policy development does not stop with the adoption of one policy or a set of policies. Action on problems that were postponed (or over-sighted) while focusing on the priority issue can be reconsidered. In other words, policy development is an on-going process.

The foregoing discourse on policy formulation represents an ideal process. In Kenya generally, the policy formulation process is the initiative of the government's line ministries and departments, sometimes with some donor influence. Communities are only consulted during data collection through methods such as rapid appraisal as well

us during the policy advocacy stage. The discontentment of mishap of not proactively involving the community in the policy formulation process is reflected in arising conflicts in forest resources management.

2.1.4 Dimensions of Participation.

There are many ways for people to participate in decisions about the use of natural resources. There are extreme approaches, such as going to war, or to court and various passive and active approaches provided in specific decision-making. The figure 2.1 summarises various dimensions/nature of participation as given by Ingles *et al.* (1995:4).

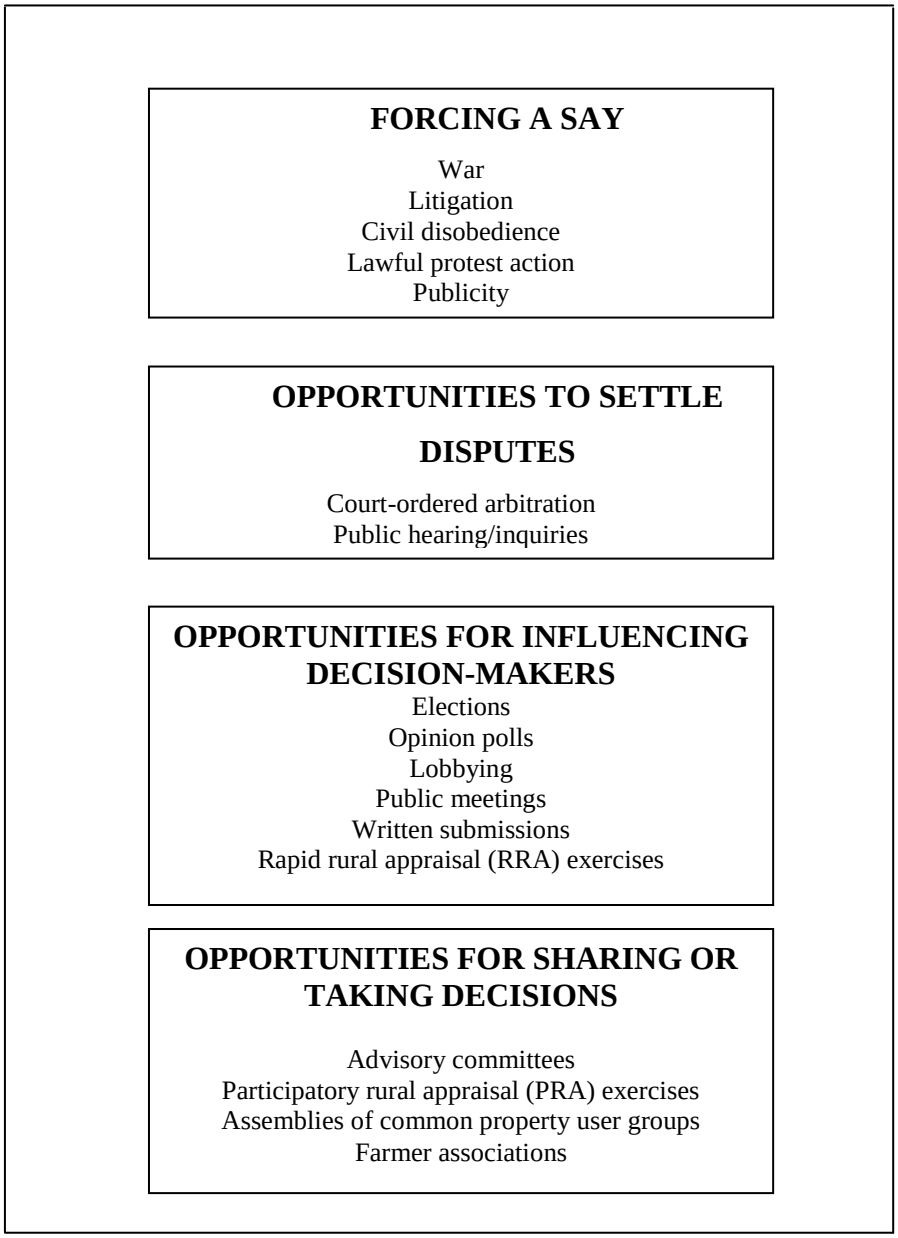

Figure 2.1: Some dimensions of participation in decision-making
Source: Ingles et al. (1999:4)

The types of approaches used to solicit participation then determine the levels of participation. Arstein (1969) in Ingles *et al.* (1995:5) summarises levels of participation into two: high and low levels of participation. Though he does not put a

clear-cut division between the two levels, he goes ahead to give six types of participatory approaches based on their main objectives as illustrated in the figure 2.2.

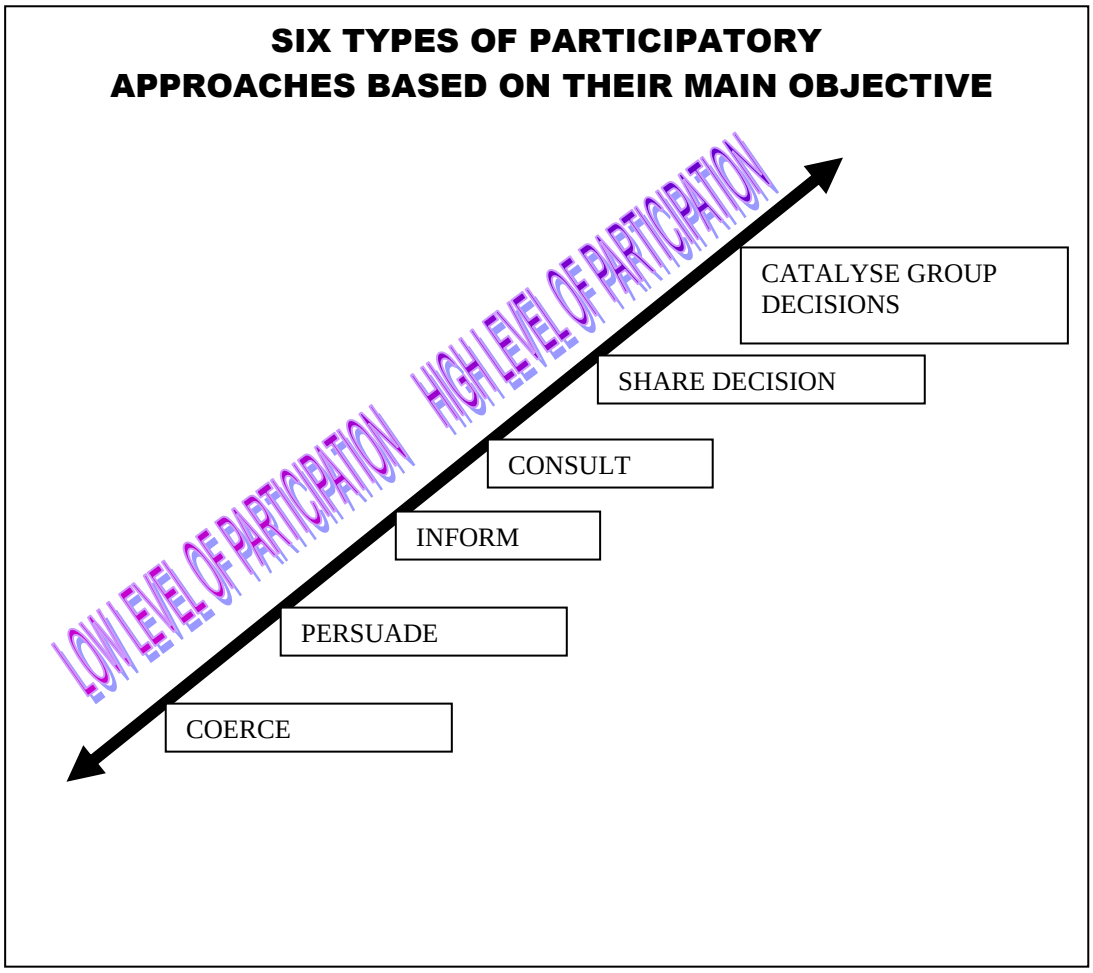

Figure 2.2: Levels of participation based on the main participation objective

Source: Arnstein (1969), In *Ingles et al, 1999:5)*

While focussing on the processes and practical aspects of promoting participatory natural resource management, Ingles *et al.* (1999), came up with four types of programmes concerned with natural resources management, based on the type of participatory approach predominantly used for making decisions about management interventions:

1. **Top-down intervention**: This intervention is based on informing and persuading. It is characterised by a composition of a small set of powerful stakeholders such as governments, international donor projects or private enterprise, which forms the main decision-making team.

   Decisions are made according to their own agendas, knowledge and value systems. There is little or no participation from other stakeholders hence planning is top-down.

2. **Modified top-down interventions**: The main mode of interaction is through consultation. This approach has characteristics of top-down intervention, except that there is an attempt to obtain information from other stakeholders about their interests and knowledge before decisions are taken. There is some participation as a result of this information gathering, but planning is still top-down.

3. **Participatory intervention**: The main mode of interaction is that of sharing decision-making. A programme is designed and owned by a small set of powerful stakeholders, but is implemented by a small bottom-up planning. Stakeholder groups are engaged in assessments and joint decisions are taken about programme activities at specific locations. These activities are co-managed by the programme and beneficiaries and they are evaluated jointly.

4. **Catalytic agents**: Interaction is based on catalysis of group discussions. Here the programme is designed and owned by local stakeholders with help from outside facilitators. The interests and judgements of local stakeholders are given primacy in decision-making and management of activities shift rapidly to local institutions.

The foregoing discussion presents the nature and extent of participation of stakeholders in development intervention programmes in general terms. The discussion forms an important reference point in analysing the participation levels by the forest-adjacent community in management of Mt. Elgon.

2.1.5 Stakeholders in Natural Resource Management

Ingles *et al.* (1999:37) recognises four major groups of stakeholders namely: the users; governments; development agents; and other private groups. The users, herein seen as the forest-adjacent community of Mt. Elgon, represent the most complex group, as they are the ones most affected by the resource management decisions. They also rarely form a homogenous group because of the diverse range of interests and characteristics that may exist among them (Kiamba, 1992:2). Differentiation in their participation can be based on age, gender, education as well as residential location.

The governments may include both the government with sovereignty over specific natural resources and other external governments that have various regional or international interests in this resource and wants to influence what happens to it. The government is an important stakeholder because everybody else concerned with resource management has to work with it or through it to some degree. Government officials in different line ministries, local government and other government bodies direct efforts for implementing policy and have substantial impact over what is, or can be done by the government in particular locations. These people can influence policy and the way it is interpreted and implemented. Government's field personnel provide a direct link between the government's requirements from above, the needs and

interests of stakeholders absent from the local scene and the needs and priorities of local stakeholders.

Development agents on the other hand provide funds and other services to national development programmes. These may include international donor organisations that grant or lend money; consultants hired to formulate, review, study and evaluate development program and non-governmental personnel of projects funded by international donors. The non-profit private organizations' interests is to execute policies, remain competitive and use resources effectively; promote human or ecosystem well-being and capacity for self-help; enhance reputation and image and improve membership or funding base.

Other private stakeholders include groups not covered by any of the characteristics provided in the three discussed earlier. They may be private enterprises and entrepreneurs that do not use a natural resource directly but are otherwise dependent on the flow of products from it. Their interest is mainly to secure better access to raw materials or products from users, to sell goods and services to other stakeholders and to gain comparative advantage for business.

For the purpose of this study, two government bodies, The Forest Department and the Kenya Wildlife Service and two Non-Governmental Organisations (development/conservation agents) namely the Mt. Elgon Integrated Conservation and Development Project and Action Aid-Kenya were evaluated in terms of their role in Mt. Elgon forest resources management and how they linked with the forest-adjacent community in their roles.

2.2 Theoretical and Conceptual Considerations

This study utilises the theory of the "Tragedy of the Commons" (Hardin, 1968) and the "People's Participation in Planning" model by FAO (1989) and "Functionalism Theory" by Malinowski (1960) and Radcliffe-Brown (1948) (Levinson & Ember, 1996). These will serve as underlying reference points to understanding community participation in the management of natural resources.

2.2.1 The Tragedy of the Commons

Garret Hardin's challenging article in *Science* (1968), 'the tragedy of the commons' has been used to symbolise degradation of the environment to be expected whenever many individuals use a scarce resource in common. To illustrate the logical structure of his model, Hardin asks the reader to envision a pasture "open to all". He then examines the structure of this situation from the perspective of a rational herder. Each herder receives a direct benefit from his own animals and suffers delayed costs from the deterioration of the commons when his and others' cattle overgraze. Each herder is motivated to add more and more animals because he receives the direct benefit of his own animals and bears only a share of the costs resulting from overgrazing. Hardin concludes: "therein is the tragedy. Each man is locked into a system that compels him to increase his herd without limit – in a world that is limited. Ruin is the destination towards which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons" (Hardin, 1968:1,244).

The forest resources in this case are regarded as "public goods" and hence can be seen as commons because they are meant for all, but not for anyone in particular. This

means that they can be used by all people neighbouring the forest and even those from far off the forest.

The local community (the people who are the users) would want to maximise benefits from the forest resources such as timber, firewood, poles, grass etc. but would not want to invest in these resources as is illustrated by evasion of permit payments for resource extraction. In an attempt to exploit as much as possible from the forest for oneself, forest degradation results. This degradation is an example of the tragedy of the commons. While the benefits from the use of forest resources are enjoyed by individuals, the forest degradation costs are borne by all users.

Biologist Garret Hardin described the conflict between individual self-interests and the good of the community as the "tragedy of the commons". Each individual uses forest resources at will without caring about the effects on the environment. The community however shares the dire consequences of a deteriorating environment. The tragedy is that society at large pays for environmental degradation but there is little or no incentive for individuals to curb their activities unless the government (e.g. Kenya Forest Department, Kenya Wildlife Service) steps in to represent the broader public interest.

However, people must be sought for their interests and contributions. If sustainable use of forest resources is to be achieved, there is need for partnership with the local communities in the use and management of these resources. The goal of community participation is to check the "tragedy". Participation depends on the people's willingness to co-operate and this in turn depends on how they perceive both their particular interests as rational actors exploiting the resources, and the general interest of sustainable environment (Ostrom, 1990).

The commons problem is the social dilemma. Moral commitment to any government's initiative, environmental protection being the main one in this case, derives from the way the community perceives it. Commitment to participation requires perception that measures reflect the people's needs and aspirations. The question of needs and aspirations in Mt. Elgon's forest adjacent community can be approached by reconciling the tenets of the tragedy of the commons with community development by involving the community in problem identification, planning, resource mobilisation, implementation, monitoring and sharing of benefits that accrue from such efforts.

2.2.2 "People's Participation in Planning" Model

This is an analytical research model adopted from "People in Planning" in land use. FAO elaborates that planning is more than a logical sequence of technical steps, that planning involves getting people to work together towards common goals (FAO, 1989:17-19).

In this model, FAO identifies three broad categories of people involved in planning. The first category is that of the land users. These are the people using and living in the planning area. They may constitute farmers, herdsmen, state organisations and other people directly using the land and the people who depend on the products and who are affected by the use of the land.

The second category is that of the planning team. An essential feature in land-use planning is the treatment of land and land-use as a whole. This involves crossing boundaries between several established disciplines (natural resources, engineering, agriculture, environmental and social sciences).

The third category is that of decision makers. The decision-maker may be one person e.g. a village head, district officer or minister; or a board. The decision-maker's overall responsibility is to guide the planning team on key issues and goals, and finally choose the best land-use from amongst the available options.

In Kenya, the government, through its institutions performs the dual role of planning and decision-making. It is charged with policy formulation. The policy formulation process on the other hand requires involvement of all those affected by such policy. In practice this does not happen. In Mt. Elgon forest, the main resource users are the forest adjacent communities as is illustrated by the diversity of forest resources they exploit.

The "People in Planning" model emphasises the need for involvement of local communities affected by the plan. The model stipulates that the experience and determination of local people in dealing with their environment is often neglected yet it is an important resource; that people will grasp development opportunities they themselves have helped to plan more readily than any that are imposed on them. The People in Planning approach would avoid the tragedy of the commons which would lead to the what Ogoro (1999) refers to as the 'tragedy of the Commoners'. A modified schematic presentation of the model is shown in the Figure 2.3.

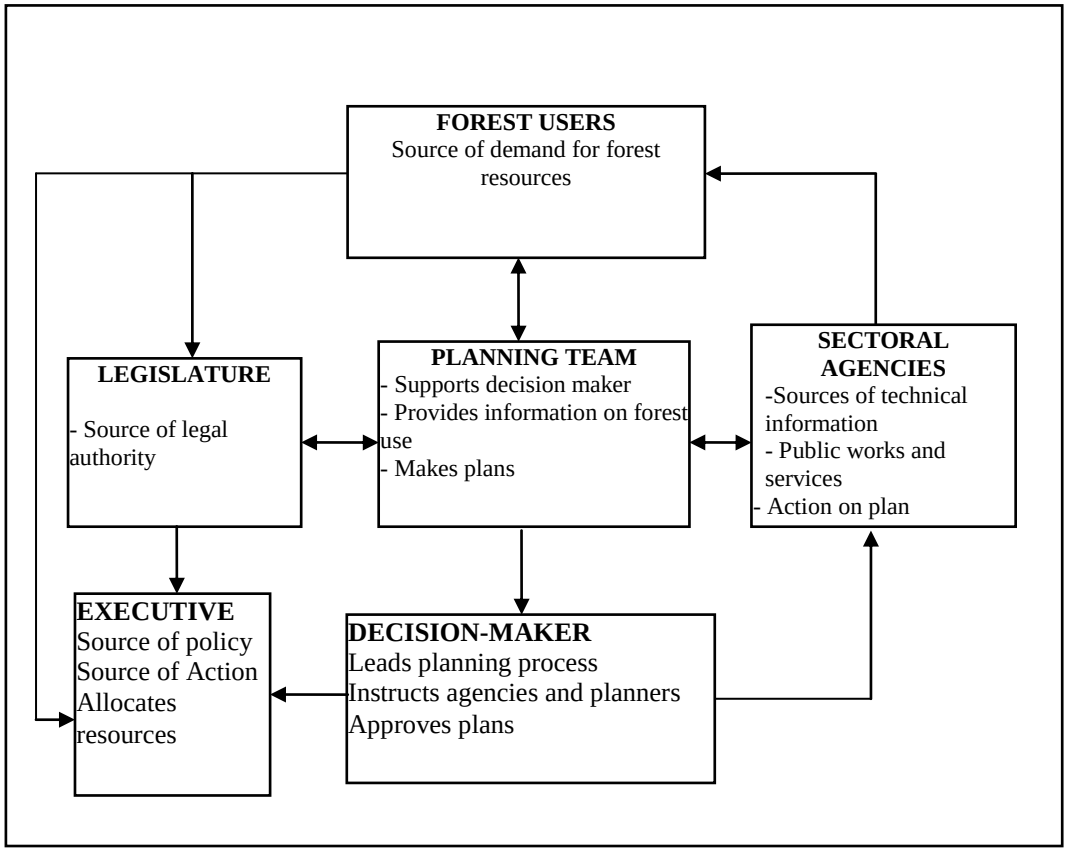

Figure 2.3: People in Planning Model *Source: Researcher, 2000 (Modified from FAO, 1989)*

2.2.3 Functionalism Theory

Functionalism theory states that institutions of society exist to perform certain functions to meet the various needs of its members or to maintain the social system. The recognition of function as a school of thought was promulgated by two prominent anthropologists in Great Britain, namely: Bronislaw Malinowski (1960) and Radcliffe-Brown (1948)(Levinson & Ember, 1996).

Malinowski's functionalism begins with the idea of needs – the psychological needs of man as an animal – and has a table of "impulses" (eg. hunger, thirst) for which "acts" (eating, drinking) can lead to "satisfaction".

To meet these needs, humans create social institutions, which are "the real isolate of cultural analysis". Each institution has personnel, a charter, a set of norms or rules, activities, material apparatus (technology) and a function. There are also culturally derived needs and finally four basic "instrumental needs" – economics, social control, education and political organisation for which institutional devices are necessary. The focus of Radcliff-Brown's attention was on social structure. A society is a system of relationships maintaining itself through cybernetics feed-back. Institutions are orderly sets of relationships whose function is to maintain the society as a system.

As is evident, both the "tragedy of the commons" and the "people in planning" model, pursue functionality. This is from the point of view that every individual or institution has a role in the conservation of forest resources if equity in the entitlements to forest resources is to be realised and desired forest resources sustained in the present and in the future. The functionality can only be best captured at the policy formulation and implementation stage.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The sections that follow outline the population under the study, sampling procedure and the various data collection methods.

3.2 The Population of the Study

Various studies carried out by KIFCON (Kenya Indigenous Forests Conservation programme) indicate that greatest impact on forests is exerted by forest-adjacent communities living within a range of 5 km from the forest borders. Meffe and Carroll (1994) further assert that this impact decreases with distance from the forest border. They further contend that beyond the 10-km radius, the impact is less significant. It was therefore hypothesised that the people living within the 10-km radius from the forest boundary have the highest dependency level on the forest and therefore a high impact on the forest resource. This community would therefore be important when formulating integrated strategies for the forest's sustainable management. This community, together with the officials of Kenya Forest Department, the Kenya Wildlife Service, local NGOs and CBOs formed the research population in this study.

3.3 Sampling Frame

After defining the population, some elements were selected to provide the required information, which included both primary and secondary data. In order to collect this data, purposive sampling technique was used to select Kapsokwany Division of Mt

Elgon District. Kapsokwany Division was selected since it has the largest forest area (198.99 km^2). It is easily accessible by road network, a factor that facilitates increased interaction of the local community with the forest ecosystem.

After the selection, the division was divided into four zones in accordance with the administrative boundaries of the four locations namely Kamuneru, Namoria, Elgon and Kapsokwany.

3.4 Methods of Data Collection

The study required both secondary and primary data. Various methods were used to collect the required data. Primary data was gathered through interviews, key informants and focus group discussions of the studied population(s). Secondary data was extracted from various published and unpublished materials.

3.4.1 Primary Data

Research techniques for primary data collection depended upon a household survey, Key informant as well as focused group interviews.

3.4.1.1 Survey Instrument.

A survey was conducted by means of a personal interview. Frankfort-Nachmias *et al* (1996:232-242) explain the personal interview as a face-to-face inter-personal role situation in which an interviewer asks respondents questions designed to elicit answers pertinent to the research hypothesis. The unit of response (respondent) was a household member of 21 years and above.

The researcher used a schedule-structured interview in which the questions, their wording, and their sequence were fixed and were identical for every respondent. This

was done to make sure that any variations between responses could be attributed to the actual differences between the respondents and not the variations in the interview. While using this method, it is recommended that the researcher attempts to reduce risk that changes in the way questions are worded, for example, might elicit differences in responses. The schedule–structured interview was based on the crucial assumptions:

- That for any research objective, "the respondents have a sufficiently common vocabulary so that it is possible to formulate questions which have the same meaning for each of them".

- That it is possible to phrase all questions in a form that is equally meaningful to each respondent

- That if the "meaning of each question is to be identical for each respondent, its context, must be identical and, since all preceding questions constitute part of the contexts, the sequence of questions must be identical" (Richardon *et al*. (1965:40) (In Frankfort-Nachmias *et al.* 1996).

During the 1999 national census preparation, it was estimated that Kapsokwany Division had 4512 households. This figure (4512) was used as the population "N", and a sample "n" of 112 households were selected disproportionately from every smallest administrative spatial locations – sub-locations- as shown in table 3.1. Map 3.1 also shows these administrative boundaries up to the sub-location level.

Sampling was thus evenly done in the whole division. The sample size (n) was arrived at after putting into consideration, representativeness to the whole population (N), available time and financial resources.

Table 3.1: Disproportionate samples drawn from each sub-location of Kapsokwany Division

Location	Sub-location	No. of households	**Sample**
1. Kapsokwany	1. Bugaa	290	7
	2. Chemweisus	408	10
	3. Kapsokwany	690	17
		1,388	**34**
2. Kamuneru	1. Kamuneru	411	10
	2. Sacho	354	9
		765	**19**
3. Elgon	1. Kamtiong'	236	6
	2. Kibuk	437	11
	3. Kimombo	277	7
		950	**24**
4. Namorio	1. Kipyeto	212	6
	2. Koshok	253	6
	3. Namorio	654	16
	4. Sambocho	290	7
		1,409	**35**
TOTAL		**4,512**	**112**

Map 3.1: Administrative units of Kapsokwany Division. *Source: MEICDP, 2001*

Systematic sampling was used to identify sample units from sub-locations. Systematic sampling involved selecting a sample unit at random, then selecting every K^{th} unit systematically. The K^{th} unit was calculated as the 40^{th} household in every sub-location. Footpath transects were followed in the identification of the sample units, where an interviewer would pick a household at random at one end of a path, then skip 39 households along the path and pick on the 40^{th}. In households where there were no mature representative member of the household (taken to be over 21 years of age), the household was skipped and the next one was considered.

The questionnaire was pre-tested before embarking on the main survey. A pilot study using ten (10) questionnaires was done. Following the pre-testing, questionnaires were further discussed and necessary adjustments made. Throughout the field-work, the survey instrument was made flexible to meet different kinds of respondents.

The questionnaire schedule was used to elicit information on awareness of laws and regulations governing forest management as well as opinions and attitudes of the community towards the government's forest management initiatives through its institutions (FD and KWS). The questionnaire also helped in the assessment of the nature and extent of community involvement in forest resources policies formulation.

The interview was conducted in an informal and relaxed atmosphere, and the interviewer avoided creating the impression of a cross-examination or a quiz. Each question was read slowly and asked exactly as worded in the questionnaire. This was because even slight changes in the way the questions are presented may change the responses.

The questions were asked in the same order as in the questionnaire to provide continuity and to ensure that either the respondent's answers would not be influenced by their responses to previous questions or that each respondent was subject to the same influence. Every question specified in the questionnaire and applicable to the respondent was asked. Sometimes, respondents provided answers to questions before they were asked. When this occurred, the interviewer still asked the question at the appropriate time while acknowledging the respondent's earlier answer.

The very oral administration of the questionnaire gave the researcher an opportunity for direct interaction with the community members. The researcher interacted directly with the respondents and questions were asked and answers recorded on a person-to-person level.

This method of administration provided the researcher with some measure of control over the research setting. This implied that the questions could be modified or rephrased, if the respondent misunderstood them. The probe method was used to get detailed information.

A major disadvantage of this method is the situation whereby the respondent guesses the motives of the researcher and consequently modifies the answers accordingly. Being aware of this, the researcher tried to minimise scenarios that could detract her from the goal of obtaining reliable, accurate and detailed information.

The survey technique proved quite expensive in terms of time and money. The researcher had to hire two research assistants from the local community to assist in the questionnaire administration. The questionnaire forms had to be duplicated for the number of the respondents.

Due to the general hilly topography of the study area, the interviewers could hardly complete more than five interviews per day. No vehicular transport was available and the interviewers had to walk or cycle for long distances. They had to rest in between days due to fatigue.

In spite of these shortcomings, the method proved quite resourceful, as it was possible for the interviewer to secure "deep" and detailed information by way of probing and gathering supplementary information through observation.

In general, the survey was conducted under very conducive environment whereby respondents gave full co-operation and were willing to provide any necessary information. The survey was enhanced by proper rapport with respondents and this facilitated free and frank responses.

3.4.1.2 Key Informant Interviews.

Key informants were identified from the Kenya's Forestry Department, the Kenya Wildlife Service, relevant Non-Governmental Organisations and Community-Based Organisations' heads. They included the District Forest Officer, the Kaberwa station Forest Officer, Kaberwa Game Warden, forest guards and game rangers, forest extension officer – Kapsokwany, MEICPD (Mt. Elgon Integrated Conservation and Development Project) district Co-ordinator, Action Aid-Kenya Kapsokwany co-ordinator, AA-K ground staff, Community Conservation Team members and leaders of Chepsoikei Women Group and Mt. Elgon Beekeeping CBO. Interview schedules were used to obtain information on the roles of these groups in forest management.

When interviewed alone, it was expected that they would feel free to express themselves fully and trustfully, than when they were in a group or when answering a

mailed questionnaire. This allowed for quality interviewing and thus saved time and costs.

3.4.1.3 Focus Group Interview

A focused interview takes place with respondents known to have been involved in a particular experience, and refers to situations that have been analysed prior to the interview. The technique proceeds on the basis of an interview guide specifying topics related to the research hypothesis. It is focused in the subjects' experience regarding the situations under study.

Although the encounter between the interviewer and the respondents is structured and the major aspects of the study are explained, respondents are given considerable liberty in expressing their definition of a situation that is presented to them. The focused interview permits the researcher to obtain details of personal reactions, specific emotions etc. The interviewer having previously studied the situation is alert and sensitive to inconsistencies and omissions of data that may be needed to clarify the problem. Four focused group discussions with small groups of between 4-6 persons each, from different households were held. These discussions were restricted to run between one to one-and-a-half hours time period. The researcher formulated a set of themes, which guided the discussion. These themes were derived from the preceding survey.

Some of the advantages of the technique were that it reduced the amount of time and personnel needed in conducting and analysing in-depth interviews.

It also served to reveal cleavages of opinion and this increased the validity of the information gathered. The focus group discussions encouraged dialogue among

respondents. By controlling the direction of the discussion, the researcher was able to gather a wide range of information and varied viewpoints. The respondents also helped one another recall, verify or rectify items of information. The interviewer had the freedom to decide the manner and sequence in which the questions were asked and thus had the freedom to explore reasons and motives.

This technique, however, was not without some disadvantages. The social interaction enhanced by the group brought in controversies over issues among interviewees and their subsequent reports would be more neatly related to the interplay of personalities and status claims in the group than to the subject matter on which the interview was centred.

This problem of irrelevancies generated by interaction among members of the group was particularly acute where the focused interview aimed to search out responses to designated stimulus situation rather than the enduring sentiments and opinions of interviewees. In case of such occurrences, it was not enough that the interviewer served as a moderator regulating the tension developed in the group. She also helped the group maintain its focus on the pertinent situation and, without acting the disciplinarian, redirected this tension to that situation.

The focused group interviews were time consuming. To overcome this problem, the researcher restricted herself to asking relevant questions to direct discussions so as to reduce irrelevancies in the discussion.

3.4.2 Secondary Data

Prior to carrying out fieldwork (September – December 2000), library research was done at Moi University library and other libraries (Chepkoilel Campus library, Forest Department library- Karura, UNEP library, National Environmental Secretariat

Library among others). The secondary data was gathered from documented and published literature. These included textbooks, government publications- Acts, Development Plans, Sessional Papers, National Forestry Master Plan, Reports, Journals etc. Secondary data provided information on policy formulation processes, existing forest resource management policies and roles of relevant stakeholders.

It also supplemented the interviews in gathering information on the roles of the FD (Forest Department), KWS (Kenya Wildlife Service), NGOs (Non-Governmental organisations) and CBOs (Community-Based organisations) and the contradictions and gaps in their policies and management strategies.

Secondary data collection continued throughout the fieldwork period. The main sources included Mt Elgon District Information and Documentation Centre and NGO Records.

3.5 Ethical Considerations

Carrying out a social research where study population is composed of people may trigger suspicion and subsequent withdrawal of responses. To prove authenticity, ethical considerations were taken into account and in this regard a research permit was obtained from the Ministry of Education.

The researcher subsequently reported to the District Officer (DO) in the Division and introduced herself. The DO drafted a letter, introducing the researcher to Chiefs and Sub-chiefs of the Division. During one of his meetings with these administrative officers, the DO also physically introduced the researcher to them.

3.6 Problems Encountered in the Field

In the course of the field research, language barrier was a limiting factor, considering that the sample population was a rural community, which was not very conversant with the national languages. However, research assistants who were fluent in local dialects, English and Kiswahili, from the local communities were recruited by the researcher to overcome this barrier. Kiswahili language, which is more popular, was used to ease interaction and communication where necessary.

There was also suspicion by the local community over a stranger asking them questions. This was based on the then national-wide scare about devil worship and child abduction. The local chiefs mobilised the assistant chiefs and village elders to create awareness among the people over the researcher's work in order to restore the local people's confidence.

3.7 Data Analysis

All the completed questionnaires were collated before being subjected to analysis. Responses to questions were coded and entered into an SPSS (Statistical Package for Social Scientists) spreadsheet to facilitate creation of statistics. Descriptive statistical analysis techniques were used to analyse the data. Qualitative and quantitative data was analysed by use of frequencies, tables, percentages and cross tabulations. The analysed data is presented in form of tables, graphs, pie-charts and other appropriate presentation techniques.

CHAPTER FOUR

RESULTS AND DATA ANALYSIS

4.1 Introduction

The previous chapters have presented background information to the study. This chapter focuses on results of the study. The chapter is organised into five sections. In the first section, the characteristics of respondents interviewed during the survey are presented as these form benchmarks to relationships between measured variables. The first objective of the study, to establish the level of community awareness of the forest resources management policies, laws and regulations, is presented in section two. Section three presents the nature and extent to which the community is involved in the forest resource management policies formulation while, section four focuses on the role of Forest Department, KWS, NGOs and CBOs in the implementation of forest management policies. The final section gives highlights of existing potential mechanisms through which local communities living adjacent to the Mt. Elgon Forest can be involved in the formulation and implementation of forest resource management policies.

4.2 General Characteristics of Survey Respondents.

During the administration of the questionnaire, respondents were required to give some general information about their demographic and socio-economic backgrounds. This information was on gender, marital status, age, distance from the forest, level of education, year of settlement in the area and the nature of tenure of land they occupied. These variables are important as they play an important role in the way the community adjacent to the forest interacts with the forest, the level of awareness of forest policies and the extent and nature of their participation in forest management.

The survey sample consisted of 112 respondents. By gender 57.1% (64) were males while 42.9% (48) were females (see summary in table 4.1). The indication that there were more men interviewed was not mere coincidence. This state may have been influenced by conditions whereby the interviewer would get the man and woman of the household, and culturally, the man would often head the talk. In such circumstances, it was only logical to administer the questionnaire to the man. Women were also a bit timid to talk when their husbands were around, again due to cultural inhibitions.

The respondents were also asked to give details about their marital status. Majority of them, 81.2% said they were married, 13.4% were single, 4.5% were widowed and 0.9% (one respondent) divorced. The variable of age also was assessed by classifying the respondents into three categories of age: those between 18 and 30, those between 31 and 45 and those above 45 years of age. It was found that 21.5% were between 18-30 years, 45.5% were in the 31-45 years category while 33% were above 45 years.

Respondents were asked to indicate the level of education attained. Levels of education were categorised into four: 'never been to school', 'primary', 'secondary' and 'post-secondary/tertiary'. Those who had never been to school consisted of 12.5 % of the respondents while those who had only primary level education constituted the majority with a representation of 50.9%. Secondary level category was represented by 24.1% while post-secondary/tertiary level category had 12.5% of respondents.

The pie chart in figure 4.1 illustrates the distribution of respondents according to age while the graph in figure 4.2 depicts the distribution of respondents according to the level of education.

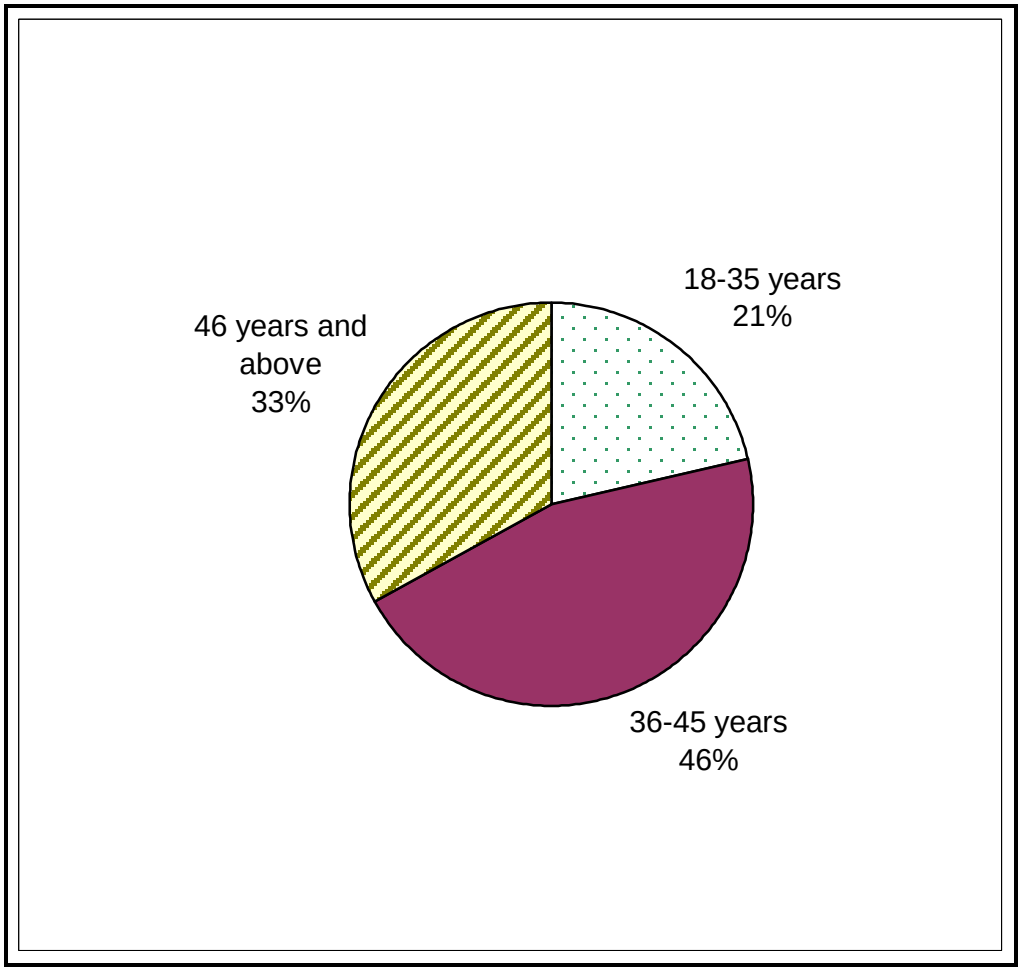

Figure 4.1: Distribution of respondents according to age groups

Researcher, 2001

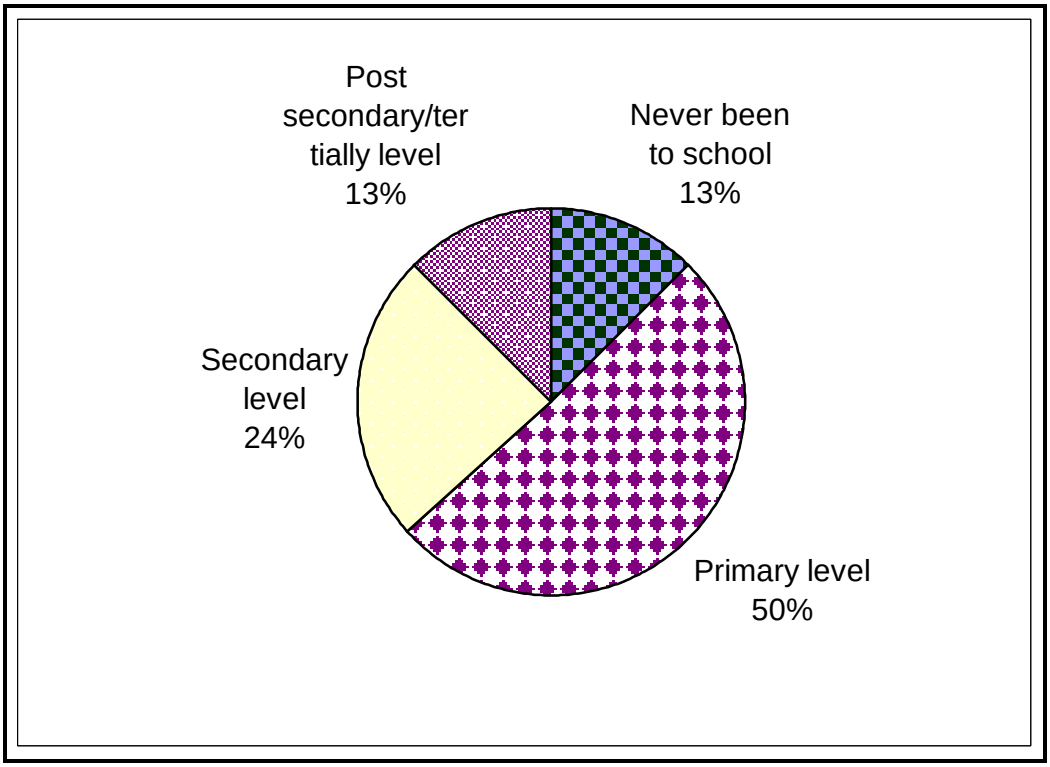

Figure 4.2: Level of education of respondents

Researcher, 2001

Respondents were identified within a ten kilometres radius from the forest boundary. They were then classified into two categories: those within five kilometres radius and those between six and ten kilometres from the forest boundary. This was based on the assertion by Meffe and Carroll (1994) that impact and interaction of the community with the forest decreases with distance from the forest. KIFCON studies (1994) also indicate that the greatest interaction of the community with the forest is by those living within a radius of five kilometres from the forest.

About 58.9% of respondents were found to live within a radius of five kilometres and less while 41.1% said they lived between six and ten kilometres from the forest boundary. This was an indication that the population is not evenly distributed in the

division. The lower parts of the division are characterised by steep hills and cliffs hence a less dense settlement pattern.

The respondents were requested to give information on length of period that they had lived in the study area. Majority (92%) stated that they had been living in the area for over five years while 8% were relatively new settlers, having stayed in the area for five years or less. When asked about the form of land tenure, 96.4% said they owned the land they occupied while 3.6 % stated that they had rented the parcel of land they occupied. Table 4.1 summarises the general information about the survey respondents.

Table 4.1: Summary of general information of the survey respondents

Variable name	Variable description	No. of respondents	Percentage of respondents
Gender	Male	64	57.1%
	Female	48	42.9%
Marital status	Married	91	81.2%
	Single	15	13.4%
	Windowed	5	4.5%
	Divorced	1	0.9%
Age	18-35	24	21.5%
	36-45	51	45.5%
	45 and above	37	33%
Level of education	Never been to school	14	12.5%
	Primary level	57	50.9%
	Secondary level	27	24.1%
	Post-sec / tertiary level	14	12.5%
Distance from the forest	5 km or less	66	58.9%
	6-10 km	46	41.1%
Years of settlement in the area	Five years or less	9	8%
	Over five years	103	92%
Type of land tenure	Owner occupied land	108	96.4%
	Rented land	4	3.6%

N=112

Researcher, 2001

4.2.1 Relationships in the Characteristics of Survey Respondents.

A bi-variate analysis by cross tabulation was done on three specific variables: gender, level of education and age to assess relationships.

4.2.1.1 Gender and Level of Education:

It was observed that there were more women (20.8%) than men (6.3%) who had no formal education. At primary level, the two genders seemed at par educationally (women = 52%: men = 50%) but at secondary and post-secondary levels, there were more men than women representation. Only 18.4% and 8.3 % of women had secondary and post-secondary education respectively, compared to men with 28.1% and 15.6% secondary and post-secondary education respectively.

Table 4.2 shows the cross-tabulation of gender and level of education while figure 4.3 graphically depicts this scenario.

Table: 4.2: A cross-tabulation of gender and level of education.

Level of Education	**Gender of respondents**					
	Males		Females		Total	%
	No. of respondents	%	No. of respondents	%	14	12.5%
Never been to school	4	6.3 %	10	20.8%	57	50.9%
Primary level	32	50%	25	52.1%	27	24.1%
Secondary level	18	28.1%	9	18.4%	14	12.5%
Post-secondary/ tertiary level	10	15.6%	4	8.3%	112	100%
	64	100%	48	100%		

Researcher, 2001

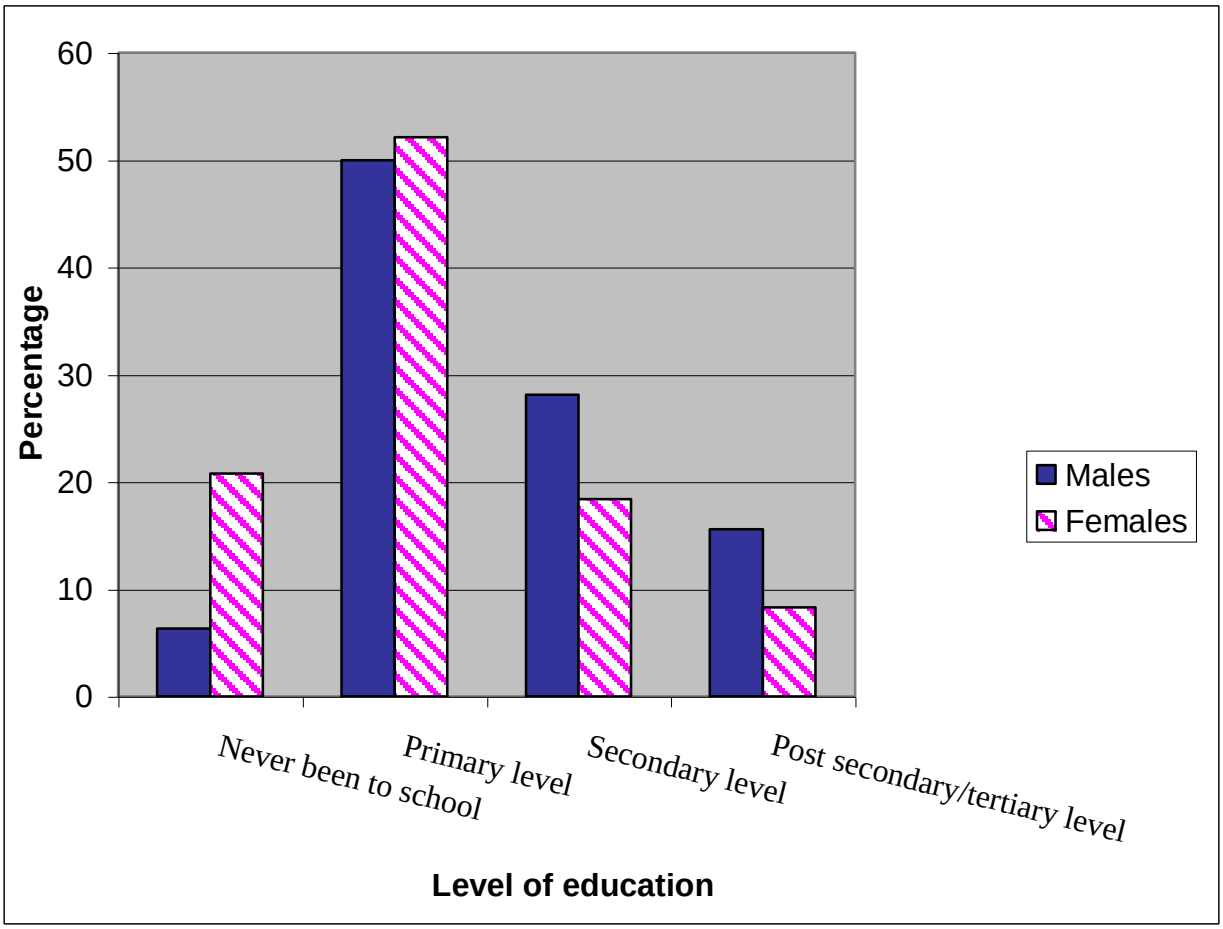

Figure 4.3: Level of education by gender

Researcher, 2001

4.2.1.1 Age and Level of Education:

There were more elderly people, above 45 years, (21.6%) who had no formal education compared to 9.8% respondents of ages 36-45 years. The younger lot in the community are educationally better off as they form the majority that has received primary education (58.3%) compared to those between 36-45 years (43.1%) and those above 45 years (56.7%).

The category of 18-35 years was more represented in the secondary level category of education with 33.3% followed by 36-45 category with 27.5%. At post-secondary,

there was more representation by respondents of 36-45 years whereas those of 15-35 years were least represented.

This was due to the fact that 18-35 years category of people are still young and in the process of acquiring education. The general low level of education among the older members of the community, those above 45 years, may be due to the high impetus given to education after independence in the country. A summary of this relationship is given in table 4.3 and figure 4.4.

Table 4.3: A cross tabulation of level of education and age of respondents

		Age of Respondents						
		18-35 years	%	36-45 years	%	Above 45 years	%	Total
Level of Education	Never been to school	1	4.2%	5	9.8%	8	21.6%	14
	Primary level	14	58.3 %	22	43.1%	21	56.7%	57
	Secondary level	8	33.3 %	14	27.5%	5	13.5%	27
	Post-secondary level	1	4.2%	10	19.6%	3	8.1%	14
		24	100%	51	100%	37	100%	112

Researcher, 2001

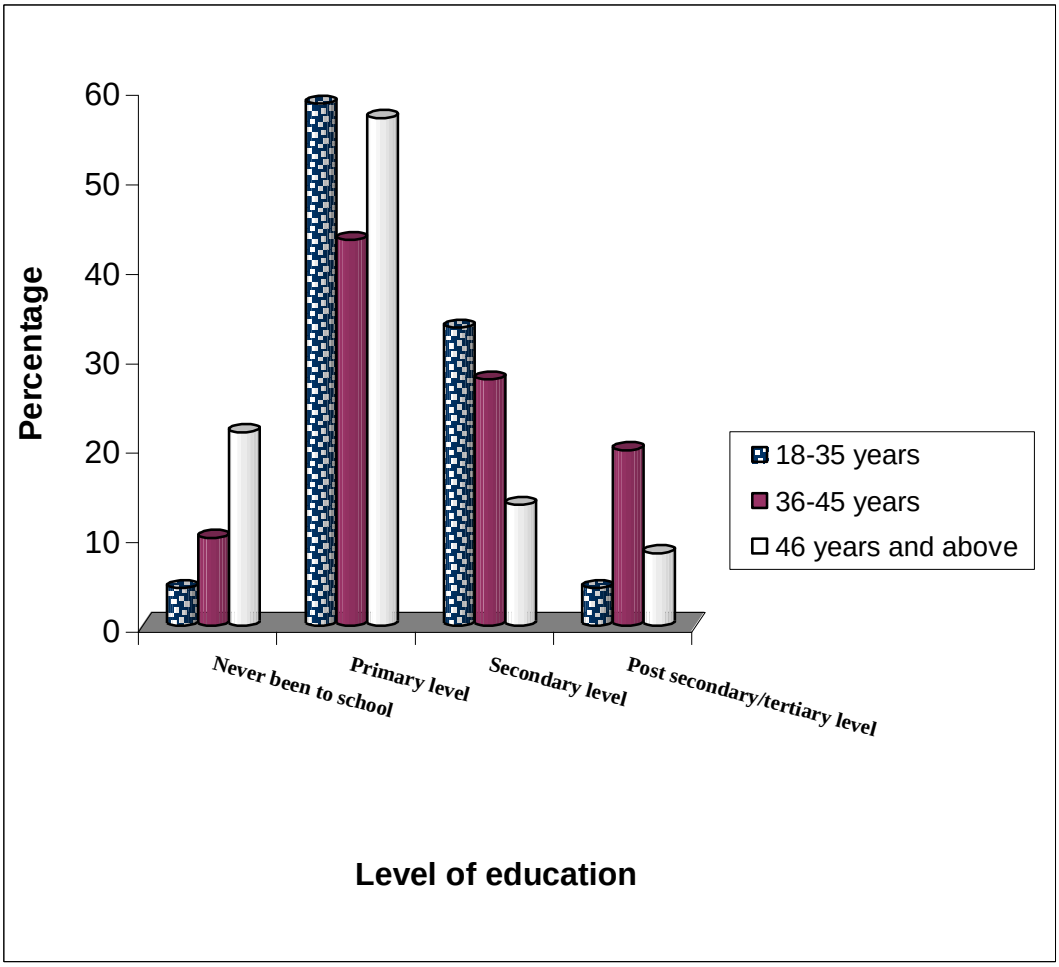

Figure 4.4: Level of education vs age of respondents

Researcher, 2001

4.3 Community Awareness of the Forest Resource Management Polices, Laws and Regulations

4.3.1 Knowledge of Laws and Regulations

The respondents were asked whether they were aware of any forest rules or regulations, and surprisingly, they all said they did. To ascertain this response, they were asked to list the regulations they knew. Various rules that emanated from the listing include: no cutting of trees without permit, no timber sawing, no residence in

the forest, no firewood collection without permit, no starting of fires in the forest and no grazing without permit. The frequencies in which these rules were mentioned were tallied and a summary of results is given in table 4.4.

From the analysis, the ban on charcoal burning was the most frequently mentioned rule, followed by cutting of trees and timber sawing. This was a clear reflection of the peoples needs from the forest. They tended to know more of the regulations regarding what they extracted from the forest. The three ranked high in the frequency, as they are a major source of income to the people around the forest. Charcoal is sold in the market centres where there is very high demand by hotels, schools, and individual consumers. The demand for timber for construction is high both within the community and outside. Cutting of trees was mentioned to be for multiple purposes such as fencing poles, house construction posts and rafters etc.

Mt Elgon forest had forest dwellers in the recent past, mainly the Dorobo. The Government strictly forbids living in the forest. When the shamba system of establishing plantations by aid of forest resident communities was abolished by the government in 1985, all the forest dwellers were flashed out of the forest.

They were resettled in a portion of the forest that was excised for this purpose. This explains the popularity of this law to the forest adjacent people.

Firewood collection regulation ranked lower. Being a preserve job of women, it may not have occurred fast in the minds of men who formed a majority of the respondents. In fact, analysis of women responses showed that 62.5% of them mentioned this regulation compared to 37.5% of the men.

Grazing constitutes an important socio-economic activity in the area, second to cultivation, hence the knowledge of the grazing regulation. Fewer respondents mentioned restrictions on use of fire in the forest much as fires are quite a common phenomenon in the mountain. The category of others included responses such as cultivation in the forest, alteration of forest boundaries, hunting etc. Since these responses were few in frequency, they were lumped together.

Table: 4.4: Rules pertaining to forest management

Rules mentioned	Frequency of responses	% of respondents
No charcoal burning	89	79.5%
No cutting of trees without permit	77	68.8%
No timber sawing	76	67.9%
No residence in the forest	54	48.2%
No firewood collection without permit	43	38.2%
No grazing in the forest without permit	37	33%
No starting fires in the forest	22	19.6%
Others	20	17.9%

Researcher, 2001

4.3.2 Compliance with Laws and Regulations

After establishing what the community knew about forest rules, they were asked whether they observed these rules in their endeavours to acquire any forest products. Majority of respondents, 92% (103) said they always complied with the regulations while 8 % (9) said they did not always comply. The impression created here is that majority of the people observe the rules religiously. However, this impression was disapproved during group discussions, the reason being in group discussions the

group members talked to represent the community and hence there was no fear of exposure whereas in the personal interview respondents may have feared to expose themselves that they do not obey the laid down regulations. A key informant from forest department also confirmed that very few people went for permits in order to collect forest produce. Most people simply sneaked into the forest to collect what they wanted.

The respondents who admitted compliance with the rules were asked to give reasons for compliance. Five pertinent issues arose from the interview on this issue. First, there was the fear of arrest if caught without a permit or collecting products that have been banned from collection. They would therefore go for the permit in order to secure freedom to be in the forest. Secondly, there was an opinion that by compliance with rules, massive destruction of the forest would be prevented. They therefore observed rules with a conservation attitude. There was also a general feeling of loyalty to the Government "which sets the rules". As some respondents naively put it "the forest is government property, the government sets the rules and we have no choice other than obey them". On several occasions, some respondents said that "we found these rules in place and it is just tradition that we observe them". A forth opinion was that by complying with the laws, there would be order in the use of the forest resources and this would make forest management by the concerned officials easy. Table 4.5 summarises the frequencies of these opinions.

The nine respondents (8%) who said they did not always comply with the rules and regulations gave two main reasons to their answer. That the permits were too expensive and there was strict supervision once you acquired the permit.

From group discussions, it was found that the community members were not comfortable with the permit charges. They felt that the fee was on the upper limit considering their low standards of living. Cattle grazing in the forest for instance, requires acquisition of a permit, which costs Ksh 33 per cow and Ksh 11 per sheep per month. With majority of the people having an average of 5 cows and a larger number of sheep, they found the charges being too high. However, apart from grazing charges, no other complaints on charges were raised.

Elaborating on the supervision after acquisition of permits, the community members said the guards would keep checking them to ensure they extract the commodity specified by the permit. This did not augur well with the community members as they would like to take "a few extra things" from the forest.

Table 4.5: Reasons for compliance with forest rules

Reasons for compliance	Frequency of responses	% of respondents
Fear of arrest	89	79.5%
Conservation of forest	52	46.4%
Loyalty to the Government	44	39.3%
Order and ease of management by concerned officials	13	11.6%

Researcher, 2001

4.3.3 Attitude to Importance of Laws and Regulations

To establish the attitude of the people towards the importance of regulations, respondents were asked whether they thought they should have exclusive rights of access to the forest resources without being restricted. A majority, 79.5% (89), felt that there was need for restrictions, while 20.5% (23) said they should be let to access

forest resources freely without restrictions. Various reasons were again given for the stand of opinions. Out of the 79.5% who felt that there was need to have regulations in place, 97.8% (87) said that restrictions prevented the forest from mass destruction, that if no rules existed, people would rush to take as much as they could from the forest.

During discussions, many ideas were brought forward as the members envisioned a scenario of a forest without access regulations. Some said that the 'well-to-do' would come with heavy machinery and 'grab' the trees and land.

Others said trees would be felled *en* mass, water resources would disappear and finally the place would become a '*jangwa'* (desert). Some said thugs would hide in the forest and easily terrorise people. Some 32.6 % of these respondents also mentioned that regulations made the work of management of the forest by the government easy. This was still an indication that they saw the forest purely as a government property and the government is supreme. Other reasons given were that with regulations, there was creation of job opportunities as there were duties to be performed, for instance some of their sons had been employed as forest guards by the forest department. They also saw animosity arising for having an open access resource, as people would scramble for whatever resources were available without consideration of the neighbours.

The 23 respondents (20.5%) who said they should be let free to access the forest without restrictions also had their own reasons to their opinion. Among them, 52.2 % (12) gave reasons touching on cultural and moral value ties with the forest. They said that their ancestors had lived with the forest long before the government came in and the forest was not destroyed. They further elaborated that they until recently,

were living right inside the forest and depending on it for their survival with no restrictions at all. Some elderly respondents in this category said they were mature and could not do anything harmful to the forest, that they know what is good or bad.

Another reason given by 39.1% of those respondents who would like to see the forest set open for access, said that the distance between them and the forest was too near for them to go to the forest station to acquire a permit. They said they could easily sneak into the forest at very 'convenient hours' (to themselves) and get whatever they wished.

All these nine respondents were found to live within five-kilometre radius or less from the forest boundary. Eight respondents (34.8%) mentioned that the restrictions were ineffective hence there was no need of their existence. Some cited that outsiders were getting access to forest resources while they, who are the very immediate neighbours to the forest are denied access to specific resources. On probing further, the researcher found out that they were referring to RaiPly Wood Company of Eldoret, which even after the presidential ban on harvesting of indigenous trees in 1986, had continued to enjoy preferential rights to harvest the Elgon teak trees (*Olea capensis* until year 2000 when the community barricaded the roads to block the company's vehicles from getting into the forest). Six respondents (26.1%) also said that the forest was the only resource that could meet their forest resource requirements, hence they should be let to use it. Two respondents also mentioned that the restrictions were too expensive. Table 4.6 summarises respondents' attitude towards regulations.

Table 4.6: Attitudes to regulations

Attitude	Reasons	Frequency of responses	% of respondents
1. To have regulations in place to control access to forest resources = 79.5% (89)	• Prevent forest destruction	87	97.8%
	• Easy government management	29	32.6%
	• Others	6	6.7%
2. To have free/open access to the forest resources = 20.5% (23)	• Cultural and moral ties to the forest	12	52.2%
	• Forest is too near	9	39.1%
	• It's the only resource	8	34.8%
	• Restrictions are ineffective	6	26.1%
	• Restrictions too costly	2	8.7%

Researcher, 2001

4.3.4 Attitude Towards Current State of Forest Management

Attitude towards the current state of management was assessed by asking the respondents whether they thought the forest resources were being managed well. About half of the respondents 50.9% (57), said the state of management is currently good while 44.6% (50) said it was not and 4.5% (5) said they could not comment, as they did not know.

The 50.9% who said the current management of the forest is good had varying reasons to back their answers, all of which indicated that the forest regulations are being enforced. Some said in the present times, it was hard to extract anything from the forest without being caught by the guards.

Others said illegal activities such as charcoal burning, forest squatting and logging had been minimised. Collaborative patrol missions by forest guards and game rangers were also seen to have reinforced regulations enforcement.

Those who felt that forest management was not yet good said that despite the strict regulations, it was still easy to carry out illegal activities by bribing the guards. This could be done when one was caught or in advance by colluding with the forest guards. The game rangers were said to be "unfriendly" as it was not easy to bribe them. Some also saw the frequent forest fires in the forest as an indication that charcoal burning and harvesting of wild honey, the main causes of forest fires in the Mt. Elgon were still taking place hence the forest management staff were not doing their work.

The group also cited the clearing of indigenous vegetation without reafforestation, thus leaving huge open gaps, as a sign that all was not well, that afforestation was taking too long to be implemented. There were also complaints that the procedure of issuance of permits was not transparent, as some people were not issued with receipts when they paid the permit money. While this issue was raised to the forester at the station, he explained that there were times that the office did not have a receipt book. Under such circumstances, the names of the payers would be written in a book with intent to transfer them when the receipt books were delivered. The presence of charcoal and timber in the local markets was also seen as an indicator of poor management of the forest.

Those five respondents (4.5%) who could not comment were either new in the area, having stayed in the area for five years or less, or lived furthest from the forest (over five kilometres) and did not have any interaction with it.

4.4 Nature and Extent of Community Involvement in the Formulation of Forest Resources Management Policies

To establish the nature and extent to which the community is involved in the forest resources management policies formulation, benefits accruing from the forest ecosystem to the community were analysed. Attitude of the people towards the permit fees was also assessed. The current nature of involvement of the community was evaluated with the aim of establishing the status of participation. In particular, involvement in seminars was looked at in order to find out whether people were involved at decision-making levels. In order to lay a platform for recommendations, future willingness to participate and future nature of participation was also assessed. The proposed nature of participation was then cross tabulated with the respondents' general characteristics in order to bring out any salient relationships.

4.4.1 Benefits Derived by the Community From the Forest

Respondents were requested to list the products/benefits they obtained from the forest. These were then categorised into five groups: fuel wood (firewood and charcoal) construction materials (timber, poles, posts, rafters, withies, ropes, thatching grass), fodder (pasture), medicinal herbs, and food (produce of non-residential cultivation, wild honey and vegetables, bamboo shoots). Table 4.7 illustrates the summary of these products that the community obtains from the forest ecosystem while Plates No. 1, 2, and 3 illustrate some of these products/benefits.

From table 4.7, it can be observed that fuel wood is a very important resource to the local people as the majority of respondents mentioned it. Building/construction materials closely follow fuelwood. Generally speaking, the benefits of the forest

resources to the people are at the very subsistence level though they can be commercialised.

For the products that require permit fee payment, respondents were asked whether the fee charged was fair. To elaborate on this opinion, they were asked whether they viewed the fee as necessary. Majority of them, 80.4% (90) said the fee was necessary. Some 82.2% saw the fee as a source of revenue for the government. They argued that with the current economic hardships, there was nothing for free as all public goods were being cost-shared. Some 56.7% also argued that the fee was important in controlling access and hence checking the rate of exploitation and subsequently helped prevent massive destruction of the forest. Still, among those who said the fee was necessary, 6.7% of these said the government had a purpose in imposing the fee, and much as they did not know its importance, the fact that the government set it, they just viewed it as important.

For those who argued that the fee was not necessary (19.6%), 54.5% of them said that the enforcement of the regulations was unfair as some people could still collect forest products without paying. They argued that all should enjoy equal rights; "that if one gets free, all should get free; if one pays, all should pay" (group discussion II at Kamtiong sub-location).

There was a 50% opinion that the forest resource was theirs hence no need for charges. Some 50% also shared the feeling that with or without the permit, the forest continued to be destroyed. Hence to them, it made no difference to go or not to go for the permit.

Table 4.7: Forest resource products obtained by respondents

Category of Products	Frequency of Responses	% Responses
1. Fuelwood	97	86.6%
2. Building/Construction materials	90	80.4%
3. Food	75	67%
4. Fodder	65	58%
5. Medicinal herbs	60	53.6%

Researcher, 2001

Plate No. 1: Some community members demonstrate preserved bamboo shoots which have been in store for over six months.

Researcher, 2001

Plate No. 2: Non-Residential Cultivation in the foreground. It is a preferred practice among the FAC

Researcher, 2001

Plate No. 3: Mzee 'Bambam', a herbalist lets the researcher see the 'ready to drink' herbal medicine

Researcher, 2001

4.4.2 Involvement in Decision Making

To obtain an idea of involvement in decision-making processes, the respondents were asked whether they knew how the money collected from permits was used. Some 41.1% said they knew while 58.9% said they had no idea of how it was used. For those who said they knew, responses given out-rightly indicated that respondents were guessing as they would start their statements in the manner: "…I think they pay the guards…; I think they divide amongst themselves,…., I think…" It was therefore interpreted that they were not aware of what happened to the money they pay once it leaves their pockets.

Attendance to meetings and seminars was also evaluated. Only 17% said they had attended a seminar on forest-related issues while another 10% had attended a public meeting in the last one year. These seminars were organised by the two main donor projects that operate in the area (MEICDP & AA-K) in conjunction with the forest department and Kenya Wildlife Service. When asked to narrate the nature of meetings, respondents gave cases of promoting on-farm forestry activities to reduce dependency on the forest as well as diversification of income generating activities.

4.4.3 Existing Forms of Participation

To establish the existing nature of participation in forest management by the community, respondents were required to say whether they were involved and the nature of involvement. A majority of the respondents, 71.4% (80), said they were not involved in any form of forest management issues, compared to 28.6% (32) who said they were involved. For those who felt they had been involved in the past, they were

asked to state the nature of involvement. The responses arising were summarised and presented as shown in table 4.8.

The farm forestry response included establishment of private tree nurseries and planting trees in individuals' private lands. Reafforestation was mainly referred to due to existence of the non-residential cultivation (NRC) system where the community takes care of young trees and in return grow crops mainly annuals and biannual. Perennial crops are not allowed since the contract for cultivation is for three years only.

4.4.4 Willingness to Participate and Forms of Future Participation

Those who said they were not involved, 71.4% (80) were asked whether they wished to be involved in future. Most of them, 70% (56) said they wished to be involved. All respondents willing to participate in future were asked how they wished to be involved. In total, there were 78.6% (88) respondents who said they wished to be involved in future. Varying views were given as summarised in table 4.9.

The wish of over 50% of the respondents was to be assisted in promoting farm forestry, government to start some projects, then inform them on what to do in implementation, and that they and their children be given jobs by the forest management institutions (58%, 56.8%, 55.7% responses respectively). Some 43.2 % respondents wished to be involved in reafforestation through non-residential cultivation while very few, 23.9% respondents said they wanted to participate in decision-making processes of forest management (the responses were not mutually exclusive).

Table 4.8: Forms of past involvement in forest management issues.

Forms of involvement	Frequency of Responses	% of Responses
Farm forestry	20	65.2%
Reafforestation	14	43.8%
Occasional tree planting	12	15.6%
Attendance to seminars	5	9%
Fire control	3	9%

Researcher, 2001

Table 4.9: Respondents' opinion on future involvement

Proposed form of future involvement by respondents (88)	**Frequency of responses**	**% of responses**
Assistance in promotion of farm forestry	51	58%
Government to make initiatives	50	56.8%
Job opportunities	49	55.7%
Forest reafforestation	38	43.2%
Forest management decision making	21	23.9%

Researcher, 2001

4.4.5 Cross Tabulations of General Characteristics of Respondents with Reference to Proposed Future Forms of Involvement

A cross tabulation of gender, level of education, age, distance from the forest boundary and years of settlement in the area was performed vis a vis the various forms of management the respondents said they wished to be involved. Table 4.10 summarises the results of the tabulation.

From the summary of these cross tabulations, the following were significantly noted:

4.4.5.1 Gender

- There were fewer females (13.9%) than males (30.8%) who said they wanted to participate in decision-making on forest management.

- There were more females (66.7%) than males (50%) who said they would like the government to take some initiative by starting some activities where they will be told what to do.

- There were more females (61.1%) than males (55.8%) who wished they could get assistance to promote farm forestry. This was an encouraging indicator of importance of forest resources at household level for subsistence – fuelwood and food.

4.4.5.2 Level of education

The higher the level of education, the more people want to be involved in decision making level of forest management. Not a single respondent without formal

education said he/she wished to be involved in decision-making. This was an important indicator of the role of education to the level of involvement.

There were more secondary (72.7%) and post-secondary/tertiary level of education (66.7%) respondents whose opinion was for assistance in promotion of farm forestry, than those with lower levels of education (never been to school – 57.1%; primary level – 49%)

4.4.5.3 Age:

The younger respondents (18-30 years) were the least interested (11.1%) in being involved in decision making processes of forest management compared to those of 31-45 years. – 26.8% and those above 46 years- 27.6%. This was probably because they are still young and without major relationship with the forest. The younger lot of the respondents led in the opinion on farm forestry (72.2%) compared to the category of 31-45 years (56.1%) and of 46 and above (51.7%). They seem to have a good vision of availability of forest resources in farms.

4.4.5.4 Distance from the Forest Boundary

There was general higher willingness percentage of respondents living within a five kilometres radius from the forest to participate in forest management, though the magnitudinal difference in willingness was not much.

Table 4.10: Cross tabulation results of forms of involvement versus general respondents characteristics

	Willingness to future participation	Forest management decision making (21)	Job opportunities (49)	Government initiatives (50)	Assistance in farm forestry (51)	Reafforestation (38)
Gender	Males (52)	(16)	59.6% (31)	50% (26)	55.8% (29)	48.1% (25)
	Females (36)	13.9% (5)	50% (18)	66.7% (24)	61.1% (22)	36.1% (13)
Level of education	Never been to school (7)	0% (0)	28.6% (2)	57.1% (4)	57.1% (4)	28.6% (2)
	Primary level (47)	17.4% (8)	55.3% (26)	57.4% (27)	49% (23)	34% (16)
	Secondary level (22)	36.4% (8)	72.7% (16)	68.2% (15)	72.7% (16)	68.2% (15)
	Post-sec/ tertiary level (12)	41.7% (5)	41.7% (5)	33.3% (4)	66.7% (8)	41.7% (5)
Age	18-35 years (18)	11.1% (2)	38.9% (7)	66% (12)	72.2% (13)	44.4% (8)
	36-45 years (41)	26.8% (11)	53.7% (22)	58.5% (24)	56.1% (23)	43.9% (18)
	46 years and above (29)	27.6% (8)	69% (20)	48.3% (14)	51.7% (15)	41.4% (12)
Distance from the forest	5 km or less (53)	20.8% (11)	58.5% (31)	58.5% (31)	64.2% (34)	49.1% (26)
	6-10 km (35)	28.6% (10)	51.4% (18)	54.3% (19)	48.6% (17)	34.3% (12)
Years of settlement	5 years or less (9)	55.6% (5)	44.4% (4)	44.4% (4)	77.8% (7)	77.8% (7)
	6 years and above (79)	21.3% (16)	57% (45)	58.2% (46)	55.7% (44)	39.2% (31)

Researcher, 2001

4.5 Stakeholders in Mt. Elgon Forest Management

This section specially looks at the two main government institutions charged with Mt. Elgon forest ecosystem management. These are: the Forest Department of the Ministry of Environment and Natural Resources and a parastatal body, The Kenya Wildlife Service. For each institution, their mandate is reviewed and related to the interaction with the forest-adjacent community. The two main donor agencies namely the Mt. Elgon Integrated Conservation and Development Project (MEICDP - funded

by the Netherlands Government with technical support from IUCN) and the Action-Aid Kenya are given a special mention as they contribute significantly towards forest management. The role of two Community-Based Organisation (CBO) groups – Chepsoikei Women Self-help Group and Mt. Elgon Beekeeping CBO- in relation to forest management is presented.

4.5.1 The Forest Department

The forest department is responsible for the protection and management of all gazetted forests as well as a few other forests whose management has been agreed upon by the owner, usually various county councils. Implementation responsibility is vested in the forester in-charge of forest stations in the districts in co-ordination with the District Forestry Office. The foresters in charge of stations undertake conservation and management measures in conformity with the Forest Act Cap 385, which is in accordance with the forest policy of 1968.

4.5.1.1 The Forest Policy and the Forest Act

The forest policy and subsequent Act give direction to the operations of the forest department at the forest stations.

The forest policy aims at demarcating and increasing the total forested areas in the country, maintaining and improving climatic and physiological conditions of the environment; conserving and regulating water supplies; preserving the soil by prevention of desiccation and erosion; and developing the economic production of sufficient forest products and generating a surplus for export.

The policy paper, sessional paper no 1 of 1968 and the Forest Act Cap 385 of the laws of Kenya provide for the establishment, regulation and control of central forests,

forest and forest areas in the Nairobi area and on unalienated government land. The Act also applies to areas, which have been set aside for the conservation of fauna and flora, water catchment areas, prevention of soil erosion and for the protection and management of indigenous forests on alienated government land (Republic of Kenya, 1968).

The forest Act is the legal instrument for implementing the policy. The Act governs the establishment, protection, conservation, utilization and management of the natural resources within gazetted forests. The Act also provides for the degazzetment and excisions of forestlands for other purposes through the Minister's discretionary powers.

4.5.1.2. Forest Reserve Management and Regulations

The district forest office is mandated with the management of forest resources in the district. It is involved in the planning, implementation, co-ordination and supervision of all forest management programmes. There are eight (8) forest stations, three in Mt Elgon District, namely Kaboywa, Kaberwa and Cheptais; and five in Trans Nzoia district – Suam, Saboti, Kiptogot, Kimothon and Sosio.

The foresters in charge of stations undertake conservation and management measures in conformity with the Act and the forest policy. Management planning is achieved through preparation of annual work programmes covering various activities within the forest stations, harvesting plans, including felling plans preparation and implementation, revenue forecasting and collection, resource valuation. They are also responsible for licensing and issuance of permits and therefore access controls to the exploitation of forest resources:-

4.5.1.2.1 Licensing

Exploitation of large-scale forest products in the forest reserve is done through licensing. A General Forest License (GFL) is used for extraction of major forest products such as sawn timber, pulpwood and large quantities of firewood, whereas the Monthly Fuel License (MFL)(permit) is for subsistence collection e.g. for firewood and pasture.

The general forest license is applied through the District Forest Licensing Review Committee (DFLRC) and forwarded through the Provincial Forest Licensing Review Committee (PFLRC) and to the National Forest Licensing Review Committee (NFLRC), which finally approves the licensing. The payment for licenses and permits are determined every year and a "General Forest Order" is posted at every station detailing new pricing list.

4.5.1.2.2 Issuance of Permits

Permits are issued at the forest stations by the forester in charge. They are issued for the collection of small-scale forest products such as firewood, pasture, posts, rafters, and withies.

Firewood collection for household use is allowed on obtaining a permit, purchased on monthly basis at Ksh 39 per month. The permit allows collection of one head-load per day. Wasike (1999) estimates that an average of 2000 people in the district pay the monthly fuel license, while there is no record of anyone paying the annual fuel license. The official figure for the licensees is rather low as there are many people who do not pay for the license and play a hide and seek game with the forest guards (FD, per.comm. by Key informant) in exploiting forest resources.

Posts permit costs Ksh 1.25 each while to graze in the forest requires Ksh 33 for the cow and Ksh10 for the sheep per month. Goats are not allowed in the forest due to their indiscriminate browsing behaviour. Instructions are normally issued on the zones of grazing at any one time.

Wild fruits, wild vegetables, mushrooms and medicinal herbs, all of which fall under the category of minor forest products/non-timber forest products are not included in the royalties list and their collection may thus be termed as free. However, where the extraction of a product may endanger the flora and/or fauna of the forest, the activity is restricted. To ensure this does not happen, the local people are always advised to obtain a clearance letter from the forest station. Such a letter contains the details of the intended product of extraction. It must be produced to the forest guards while in the forest.

Currently, extraction of timber, bamboo shoots, bamboo stems and wild honey are strictly forbidden though there is a provision of their collection in the royalty's records (pers comm., DFO).

The past 10 years have witnessed an extensive destruction of Mt. Elgon forest through felling of indigenous trees for timber, especially the Elgon olive tree (*Olea welwetschii*). Reafforestation of plantation zones has also been very slow due to various institutional problems facing the department such as nursery staff retrenchment, lack of finances to implement the yearly management plans etc. This has resulted to a general increase in the number of open patches in the forest. It is for these reasons that collection of these products has been banned.

Bamboo vegetation is mainly found on the middle and lower zones of the forest reserve and in the national park. Entry into the national park is strictly forbidden by

the Kenya Wildlife Service. In the past, collection of bamboo shoots (which are used as vegetables) was not restricted in the forest reserve. However, with time, it was observed that the local people would start fires in the bamboo zone with the intent to stimulate sprouting of fresh shoots. This had a wide range of consequences to the forest bio-diversity and the ecosystem. The local community uses traditional methods to harvest wild honey. These involve the use of fire, which becomes uncontrollable in some cases, and thus leading to forest fires. It is then in the spirit of these dangers that such collection is outlawed.

4.5.1.2.3 Access Controls

Access controls mainly involve law enforcement by forest guards and game rangers by conducting regular patrols to deter illegal activities such as timber poaching in indigenous forests and plantations, and encroachment on boundaries. Monitoring especially of plantations is done to detect and report on emergent diseases, fire outbreaks and any other form of activities endangering the forest status.

4.5.1.3 The Role of the Rural Afforestation Extensions Officer

The rural afforestation extension officer is charged with the responsibility of overseeing and promoting farm forestry in order to reduce demand for forest resources from the forest reserve. She is expected to disseminate information on agro-forestry within the division. To effectively perform these duties, she is expected to liaise with other relevant government departments such as the Ministry of Agriculture, livestock and rural development and Ministry of Energy, in order to harmonize their objectives as they often overlap.

Her operations are however constrained by poor infrastructure, large spatial coverage (a division) as well as lack of necessary capital equipment such as cars to ease mobility. To confirm this deficiency, it was found that out of the 21.4% respondents who said they were visited by extension staff in the last one year, only 2 respondents representing 1.3% of the sample, said they had been visited by the forest extension officer.

4.5.1.4 Constraints to Implementation of Policy.

According to the forester in-charge of the Kaberwa station, a major constraint to the department's operations is encroachment by squatters, who have rendered forest boundary marking a frustrating task. The squatter problem dates back to the early 1970's and has not been solved to date. It is further complicated by the political attachments associated with it. However, there are plans to degazette the settled area. MEICDP is currently sponsoring survey and making of the boundary.

Staff retrenchment has adversely affected the patrol quorum of the department. By December 1999, there were 32 guards at the Kaberwa station in-charge of 9 manning bits (units). This number had been reduced to 22 at the time of the interview, November 2000. The implication is that the guards cannot patrol the forest reserve thoroughly, at all points at all times. Being aware of this, one guard says the local community has taken advantage to poach forest products illegally. This marches information provided by the survey respondents that Forest Department Officials were not effective in their operations.

Staff retrenchment has also affected the nursery establishment, as the guards are also involved in the collection of wild seedlings. The forester also cited problems of under-funding from the treasury. This, he said, hinders the realization of the annual

work plan. Lack of new or maintenance of old equipment eg cars and water pumps hampered major operations like patrols and nursery establishment.

Out of the 22 guards remaining at the Kaberwa station, 11 have been recruited from the local community. However, as one forest guard pointed out, this has a major disadvantage. He quips that it is very easy for the local guard to collude with the community members in the illegal extraction of forest products, as they already know each other. In addition, he laments that it is difficult for a guard to arrest a relative caught carrying out illegal operations in the forest. The community members cited cases where the forest officials performed illegal businesses too, especially of timber by delegating some members of the community to do the task on their behalf.

Though the Act empowers the Forest Department with implementation, there are various contradictions that arise. Political interference for instance, had been viewed as a major hindrance to the operations of the Forest Department.

A case in point is the RaiPly Wood Company of Eldoret, which continued to enjoy preferential rights of harvesting indigenous forests even after the presidential ban on harvesting of indigenous forest in 1986. The issue of excision of forest land has also posed a major problem, as some actions are sanctioned from the Office of the President which is viewed as unquestionable.

4.5.2 The Kenya Wildlife Service

The Kenya Wildlife Service has the mandate to conserve and manage the Kenya wildlife as provided for by the Wildlife (Conservation and Management) Act Cap 376 of 1975 of the laws of Kenya and the 1989 amendment Act that authorized the formation of the Kenya Wildlife Service as the implementing agency.

The sessional paper No. 3 of 1975, 'The Statement of Future Wildlife Management Policy in Kenya' provides the foundation of the Act (Republic of Kenya, 1977). The policy highlights the government's fundamental goal with respect to wildlife as the optimisation of the returns from these resources while taking into current account other forms of land use. It provides for the creation of a Wildlife Service for the centralization and the flexible management of the wildlife resources. The Act governs the protection, conservation and the management of wildlife resources through a protected areas' network and wildlife management outside these areas. It also provides a framework for the establishment and management of wildlife in protected areas (parks, sanctuaries and reserves) and a network that supports a tourism industry.

4.5.2.1 Park Management

KWS is vested with the responsibility to prepare and implement plans for National Parks and Reserves and the display of fauna and flora in their natural state for the promotion of tourism and education of the inhabitants of Kenya. The Service also provides advice to the government, local authorities and landowners on the best methods of wildlife conservation and management.

The management goal of KWS is to oversee conservation of the different biotic communities in the park through collaboration with forest department under a 1991 Memorandum of Understanding, environmental protection such as fire prevention by establishing firebreaks, anti-poaching operations; conservation education; research activities geared towards sound guidance to conservation and management of the park; development and diversification of tourism activities; reduction of

human/wildlife conflicts; increased KWS revenue collection and enhancement of good public relation with communities living adjacent to the park.

Management procedures are through tourism management and control of visitor and tour operators. However, there is no tourist entrance from the Mt. Elgon district side due to poor infrastructure, especially of roads.

Habitat management is done through extension and creation of firebreaks. The area beyond the park is policed through the established station at Kaberwa. Park regulations involve law enforcement by game rangers and forest guards by conducting regular patrols to deter illegal activities. Firebreaks used include rivers, which act as natural barriers, and roads, which are artificial barriers. Fire fighting equipment is also used.

Restricted and controlled development in the park is used as a form of habitat management. For animal management, there is the Problem Animal Control – PAC. Animal scaring and shooting of rogue buffaloes is done in some cases. No consumptive utilization whatsoever is allowed in the park.

4.5.3 Involvement and Interaction with the Community

In regard to participation of the local community, a key informant from the forest station pointed out the main forms of participation as being, reafforestation program whereby the community and the FD enter into a contract of three years. The community members are allowed to grow annual crops and are expected to tend to the young seedlings in the new plantations.

They thus provide labour in the initial clearing of the forest vegetation and assist in the planting of seedlings. To be involved in the programme, interested members pay Ksh 330 per acre per year.

During year 2000, the community members volunteered labour in an afforestation programme sponsored by the MEICDP. Towards this, the MEICDP bought seedlings from individuals and community groups that have tree nurseries, since the FD did not have enough seedlings in its own nurseries.

Members have also been involved in volunteering of information in cases where one is suspected of carrying out major illegal activities in the forest like pit-sawing and charcoal burning. Community members have also been involved in efforts of fire fighting during such outbreaks. There is a general feeling among the institutions that involving the community is time consuming and tedious.

One key informant pointed out that the "business" of forest management should be left to the forest department and Kenya Wildlife Service as the two had the technical knowledge and skills required to do this.

The two institutions also play an important role in education of the public through public *barazas* organized by Chiefs, DOs, the DC as well as through the NGO forums. When asked about involvement of the community at decision-making forums, the officers both of FD and KWS, contended that "their hands were tied" and that their powers were limited by the existing Acts' framework.

Though the KWS does not allow any consumptive activities within the park, the community has benefited from the goodwill of projects such as schools and hospitals.

In particular, KWS contributed to the construction of two classrooms at Kaberwa as part of revenue sharing with the park adjacent community.

4.5.4 Collaboration Amongst Institutions.

There is a Memorandum of Understanding (MoU) between FD and KWS for joint operations between the two. At present the two are carrying out joint patrols and joint fire fighting in the forest. However, their operations are hindered by the conspicuous differences between the two institutions in terms of financial and technical capacities. While the KWS rangers are properly equipped with warm clothes and walkie-talkie radios, the FD guards are deficient of these or what they have is old, non-functional and outdated. The KWS officers have better remuneration packages compared to their colleagues in forest department. This has resulted to development of some cold blood between the two patrol teams as one feels better of than the other, hence a bit superior than the other.

The FD, KWS and other government departments especially Ministry of Agriculture, Livestock and Rural Development, the local county council and the community, collaborate with the facilitation of the two main donor agencies in the district, Action Aid-Kenya and MEICDP, in efforts to increase awareness on forest conservation, innovation of income generating activities that reduce pressure in forest reserve and park as well as education on sustainable land management that incorporates agro-forestry.

The Nyayo Tea Zone (a parastatal) has tree nurseries and a plantation in the forest reserve as a contribution to reafforestation.

4.5.5 Mt. Elgon Integrated Conservation and Development Project

This is a donor-funded project whose goal is to enhance sustainable management of Mt. Elgon ecosystem through 'Integrated Conservation and Development' approach. The project has five programmes in two districts: Trans Nzoia and Mt Elgon District. The programmes are: collaborative natural resources management; community capacity building; rural livelihood improvement; boosting tourism; and policy development. Programmes specially targeting the community are operationalised in two pilot areas in Mt Elgon district: Kamtiong' sub-location in Kapsokwony Division and Kongit sub-location in Kaptama Division.

The project so far has assisted the local community in the pilot areas with training on construction of the Kenya Top Bar Hive and honey processing techniques as well as promotion of production of quality potato seeds, all aimed at diversifying the income sources of the community and hence reducing dependency on the forest. It also conducts conservation awareness campaigns through seminars and public video shows.

In addition, in its pilot areas, the project has community conservation teams, individuals within the village who volunteer to work with the project and become an example to the village in spearheading conservation work. These individuals are given training in relevant areas such as leadership and communication skills so that they can disseminate information to their colleagues in the village. They are also exposed to other conservation environments through excursions outside the district.

4.5.6 Action Aid-Kenya (AA-K)

Action Aid is oriented towards poverty alleviation in the district. It does this through promotion of creation of community groups that have income generating initiatives. By December 2000, there were 68 groups within Kapsokwony Division, registered under action aid out of which some 46 groups are involved in forestry related income generating activities such as beekeeping and tree nurseries establishment for the purpose of generating income or have the intent to start such activities. The main forms of assistance given to the groups include finance to start defined activities as well as training for various operations such as bee management, proposal writing and leadership.

During the year 2000, the AA-K contributed funds to aid the forest department in its operations by financing a stakeholders' workshop aimed at creation of an action plan by the stakeholders including the community, in enhancing forest conservation.

4.5.7 Community-Based Organisations

These are groups of community members that have come together with a common goal. In the whole district, there were 539 community-based groups registered under the district social services office between 1996-2000. Out of these, 203 had been registered from Kapsokwony Division. Action Aid-Kenya has been very instrumental in the promotion of the formation of these community groups.

The reason behind this high number of registration in the Division is because of the impact of AA-K in the Division especially after the infamous 1991-95 tribal clashes which had seriously affected the Division.

There were nine CBOs registered with AA-K by December 2000. Each group is composed of about 5 –14 separate self-help groups while each group has 20 – 30 individuals. The self-help groups are composed of youth groups, women groups and a mixture of people of all ages and genders. The groups normally have defined objectives to guide their operations. With the aid of AA-K, two CBO leaders whose CBO dealt with forest conservation were identified and interviewed.

4.5.7.1 Chepsokei Women Group

This group is composed of 28 women who have come together and strategized ways of increasing their household incomes. Important to the researcher in the groups' objectives is the raising of tree nurseries for sale (see Plate No. 4).

Tree seedlings from local indigenous and exotic tree species are collected and raised in seedbed. The members improvise used containers (e.g. cooking oil containers) as tubes to hold the young seedlings. Once seedlings are mature enough for transplanting, the members plant them in their own farms and sell others to the neighbours. This way, they are able to add the tree cover in their own farms as well as raise extra money to contribute to their households' income.

On probing the background of the interviewee, a leader in the group, it was discovered that she had been trained by MEICDP as a CCT member – read – Community Conservation Team member. CCTs are individuals from the community

who volunteer to be trained by the project to spearhead conservation through rural development. The interviewee narrated her experiences of excursions to Mt. Elgon National Park- Uganda and Narok among other places she had visited as part of

awareness creation programme in training the CCTs. She had been trained in participatory approaches such as participatory learning and action (PLA).

In one of the awareness campaign programmes, she organized a public video show at a local church on zero grazing. For those members not conversant with language of communication, she would interpret for them.

Plate No. 4: Chepsoikei tree nursery

Researcher, 2001

4.5.7.2 Mt. Elgon Beekeeping CBO

This CBO was founded in 1998 with the resolution of 21 community members who had attended beekeeping training at *Baraka* Farmers' Training Centre in Molo, which had been organized by AA-K. The CBO was formed with the aim of mobilizing locally available resources for the eradication of poverty through beekeeping activities.

Since its formation, the organization had mainly undertaken activities that touch on: community awareness campaigns on beekeeping; women participation in beekeeping activities; registration of CBO groups; buying of crude honey for farmers; incentives to encourage beekeeping by selling subsidized hives – Kenya Top Bar Hive-; honey processing, packaging and marketing. One bottle of 500 grams of honey costs Ksh 120. According to one of the members, the demand for refined honey is so high that no honey lasts for a week on the shelves.

The motive behind the promotion of on-farm bee keeping emanates from the problem of forest fires, presumed to originate from the activities of the illegal wild honey poachers in the forest. The NGOs and the Government departments especially Forest Department and Livestock department, hypothesized that by promoting on-farm bee keeping, training community members in bee management – good hive type, proper harvesting techniques, processing of the honey etc, the illegal wild honey hunting in the forest would be reduced. Whether this hypothesis is true is yet to be confirmed. However, there is consensus from the forest department that wild honey poaching is not presently a major threat to the forest ecosystem. Plate No. 5 shows the CBO's office while Plate No. 6 shows a row of 'Kenya Top Bar' hives belonging to Kipnyokos self-help group, which is a member of the beekeeping CBO.

Plate No. 5: The offices of Mt. Elgon Beekeeping CBO

Researcher, 2001

Plate No. 6: Kipnyokos self-help group's beehives

Researcher, 2001

4.6 Mechanisms of Local Community Involvement in Formulation and Implementation of Forest Resources Policies

This section discusses mechanisms through which the community can be involved in the formulation and implementation of forest resource policies. Specifically, the section discusses forest policy information dissemination forms as important channels of communication and dialogue. A cross tabulation of general respondents' characteristics vis a vis policy information dissemination forms is analysed. Respondents' farm forestry status is also presented in order to shed light on the level of self-sufficiency of forest products at household level. Lastly, the section presents community groups as potential entry points for community mobilisation for participation.

4.6.1 Forest Policy Information Dissemination

In order to get an insight on forest policy information dissemination, respondents were asked how they got the policy information. Majority of respondents, 97.3% said they got the information through the provincial administrators especially Assistant Chiefs, Chiefs, District Officers and District Commissioners. Some 75% of respondents also said they obtained such information from the radio while 67.9% said they got it from neighbours and friends while 42.9% said they obtained information from forest department officers and Non-governmental organisations respectively. Only 4.5% mentioned having obtained such information from extension staff. Table 4.11 summarises the community's sources of policy information.

Of particular interest was the policy information disseminated through the electronic media. A cross tabulation of level education vis a vis electronic media showed a close relationship between tendency to listen to the radio and the level of education. The higher the level of education, the higher the number of respondents who listened to the radio (See table 4.12).

Communication of policy information through literature was also assessed by enquiring on habits of newspaper reading and well as the frequency of reading. It was found that 50% of respondents read the newspapers. On probing the frequency of reading, it was discovered that only 8.9% read the paper daily, while 39.3% read about once in a week, 19.6% read once in two weeks and 32.1% read occasionally.

The common newspapers read were found to be *Taifa* (41.1%), *Nation* (29%), *Standard* (17.8%) and *People* (11.1%). However it was notable that people read a combination of papers, and sometimes the choice is influenced by availability of the paper e.g. buying or borrowing from friends. Table 4.13 below summarises the newspaper reading culture and the common types of newspapers commonly read by the respondents.

Table 4.11: Community's sources of policy information

Source of policy information	No. of responses	% of responses
Provincial Administration	109	97.3%
Electronic Media – Radio	84	75%
Neighbours and Friends	76	67.9%
Forest Department Staff	48	42.9%
Non-Governmental Organisations	48	42.9%
Extension Staff	5	4.5%

Researcher, 2001

Table 4.12: Level of Education vis a vis Electronic Media as a Form of Policy Information Dissemination

		Listens to the Radio (84)	
Level of Education of Respondents	Never been to school (14)	6	42.9%
	Primary level (57)	42	73.7%
	Secondary level (27)	22	81.3%
	Post-secondary/tertiary level (14)	14	100%

Researcher, 2001

Table 4.13: Types and frequency of newspaper reading

		No. of Responses	% of Responses
Common Newspaper	**Taifa**	23	41.1%
	Nation	16	28.6%
	Standard	11	19.6%
	People	6	10.7%
Reading Frequency	Daily	5	8.9%
	Once a week	22	39.3%
	Once in two weeks	11	19.6%
	Occasionally	18	32.1%

Researcher, 2001

On cross-tabulating the reading culture with gender and levels of education, significant observations were made as summarised in table 4.14 and 4.15.

In relation to gender, more men (57.8%) than women (39.6%) said they read newspapers. In regard to the frequency of reading, while 13.5% of the male respondents said they managed to read a newspaper daily, there was no record of daily reading amongst women respondents.

Some 48.6% of men read a newspaper once a week compared to a low percentage of 21.1% among the women respondents. 21.6% of men read a newspaper at least once in two weeks while women's record is 15.8%. More women (63.2%) rarely read the newspapers compared to their male counterparts (16.3%).

In regard to education levels, it was found that all respondents with post-secondary/tertiary education read newspapers while not at all surprising, no one with

no formal education read. Some 70.4% of respondents with secondary level education read while only 40.4% of those with primary level of education read the newspapers.

The frequency of reading showed that no respondent with primary level education read the newspapers on daily basis. Only 15.8% of those with secondary level of education and 14.3% of those with post-secondary/tertiary education read the papers daily. Majority of respondents read once a week led by those with post-secondary/tertiary education (57.1%), followed by those with secondary level education (52.6%) and primary level (17.4%). Some 26.1% respondents of primary level, 15.8% of secondary level, and 14.3% with post-secondary/tertiary level of education read once in about two weeks. Majority of respondents with primary level education (56.5%) hardly read the newspaper, while only a small percentage of 15.8% and 14.3% of those with secondary level and post-secondary/tertiary level education read the papers occasionally. The conspicuous indication in the above cross tabulation is that those with higher levels of education tend to read newspapers more frequently compared to those with lower or no formal education.

Table 4.14: Cross tabulation: Gender verses Newspaper Reading and Frequency of Reading

		Gender of Respondents			
		Males		Females	
		No. of males	% of males	No. of females	% of females
Newspapers Readers		37	**57.8%**	19	**39.6%**
Frequency of Newspaper Reading	Daily	5	**13.5%**	0	**0%**
	Once a week	18	**48.6%**	4	**21.1%**
	Once in two weeks	8	**21.6%**	3	**15.8%**
	Occasionally	6	**16.2%**	12	**63.2%**

Researcher, 2001

Table 4.15: Cross Tabulation: Level of education verses Newspaper Reading and Frequency of Reading.

	Level of Education				
		Never been to school (%)	Primary level (%)	Secondary level (%)	Post-secondary /tertiary level (%)
Newspaper Readers		0%	40.4% (23)	70.4% (19)	100% (14)
Frequency of Newspaper Reading	Daily	0%	0%	15.8%	14.3%
	Once a week	0%	17.4%	52.6%	57.1%
	Once in two weeks	0%	26.1%	15.8%	14.3%
	Occasionally	0%	56.5%	15.8%	14.3%

Researcher, 2001

4.6.2 Farm Forestry

Inquiry into existence of farm forestry gave encouraging results as 94.6% of the respondents said they planted trees in their farms. However, this was noted to be a new trend as most farm plots were still devoid of young tree stands. The old remnants of the indigenous natural forest trees can still be seen scattered in the farms (See Plate No. 7).

Plate No. 7: Scarcity of on-farm trees

Researcher, 2001

4.6.3 Community Groups

Respondents were asked to state whether they belonged to any locally organised groups. Only 25% of respondents were found to be members of such groups. Out of these, 85.7% of the members were in groups engaged in tree nurseries establishment and beekeeping. Other group activities include merry-go-round, poultry keeping, sheep rearing, zero grazing, agro-forestry etc. These groups are mainly aimed at income generation and provision of basic services like tapped water.

All the group members interviewed conceded that their groups were officially registered mainly under CBOs with the district social service development office and/or with the Action-Aid Kenya. The records at the District Social Services Development office indicated that 539 self-help groups were registered between 1996-2000 in the whole district with 203 having been registered from Kapsokwony division.

CHAPTER FIVE
DISCUSSION AND RECOMMENDATIONS

5.1 Introduction

This study set out to establish mechanisms for promoting community participation in the management of forest resources. The preceding chapter has presented the results of the study as they were obtained from the field. This chapter presents a discussion of the findings, and makes relevant recommendations objective by objective.

5.2 Discussion

The first objective of the study aimed at establishing the level of community awareness of forest resource management policies, laws and regulations. From the results of the study the assessment of awareness of forest resource management policies, laws and regulations that define interaction between the forest management institutions and the local community living adjacent to the forest showed a high level of awareness as all study respondents answered in the affirmative about their knowledge. They further confirmed this fact by naming examples of the various rules and regulations established by the government to guide the management of the forest.

At a mere glance, this result negates the original organising hypothesis put forward to guide this study, that there was low level of community awareness of forest resource management policies, laws and regulations among the local people living adjacent to the forest. This is a commendable state of affairs implying that the government has succeeded in its awareness campaigns.

It may imply a strong presence of the Forest Department and KWS officers, thus intense interaction with members of the community. It also implies a high level of dependency on the forest resources as to master the rules of facilitation.

The results however, show an emphatic lack of compliance with the laid down laws and regulations. While the survey showed that 92% of respondents complied with the regulations, group discussions and key informants disapproved this result. Though no numbers were quoted, perhaps due to some irregular activities, the informants from the forest management institutions cited regular arrests of culprits who illegally exploited forest resources. This means that the views of the participants in group discussions and those of the key informants from the forest management institutions who are the management watchdogs, were at variance. The fact that personal interviews may make respondents give information that may in their own opinion betray them was taken as the reason behind peoples generous affirmative response to compliance with the laws and regulations, while the converse is actually the case.

While the local people do not always comply with regulations governing forest management, it was significantly noted that they did understand the need to have these regulations in place, as was indicated by 79.5% of the survey respondents. Citation that restrictions helped to conserve the forest was a clear indicator of acknowledgement of the spirit of the forest policy.

Probing into reasons of compliance however, showed that a majority, 79.5%, who said they comply did so out of fear of arrest by the forest management staff. It is ridiculous that a person who understood that regulations helped conserve the forest on one hand, would on the other, say he complied with these regulations for fear of arrest.

The expectation would be that he would observe the regulations in order to conserve the forest. This controversy may have arisen due to non-consultation of the local people who are a major stakeholder in the forest policy formulation process, in order

to give consideration to local needs and aspirations of the people. Non-involvement of the people has resulted in discontentment, thus even when they know the importance of the regulations, to conserve, they ignore them.

A sincere opinion, to have free, open access to the forest and forest resources by 20.5% of respondents needs to be put into consideration. This portion of the survey respondents felt they had been denied their cultural attachment to the forest. They felt morally downtrodden by the government's attitude that "peasants are ignorant", thus they therefore cannot be consulted in matters they have a stake in, such as the management of a forest from which they obtain basic resources. What comes to light is that through nationalisation of forests, the resources therein were alienated from the forest dependant communities. The nationalisation process was based on the premise of state ownership and control over natural resources, which should be exploited for the common good of all Kenyans. It should however, be borne in mind that communities neighbouring such natural resources should not sacrifice beyond a certain point in order to achieve national goals elusive to the local community.

In summary, what emerges from this discourse is that people are aware of the policies, laws and regulations governing the management of the Mt Elgon forest. They comply to be on the safe side, to evade the "long arm of the law". Others play a "hide and seek" game in non-compliance. The information given by the three groups: survey respondents, key informants and focused group discussions; does not give a clear allowance to draw a line separating those who comply and those who don’t comply with the rules.

However, it is clear that the community understands the need for having restrictions in place much as a proportion of them do not observe these restrictions.

Based on these findings, it can be concluded that due to lack of involvement in the policy formulation of these state-based forest resources however, they do not always comply with these laws and regulations, as these do not embrace their interests in terms of their local needs and aspirations.

The second objective sought to establish the nature and extent of community involvement in forest policy formulation. One crucial hypothesis of the study was that there is low level of participation of the community in the formulation of forest management policies.

Participation of a community in any program can occur in many forms. These may include providing labour, materials, cash, involvement in problem identification and planning, involvement in implementation, monitoring, evaluation etc. (Barrow, 1996:119-162). There is however, consensus that gives emphasis to different aspects of participation such as active and passive participation, perverse and genuine participation (Davis-Case, 1992).

In this study, various forms of involvement of the local community by the forest management institutions were identified. The initial and important to the community was the benefits they derived from the forest in form of fuelwood, building/construction materials, food from non-residential cultivation and from wild sources – green vegetables, honey, mushrooms, bamboo shoots- as well as pasture for their livestock. The community therefore derives basic sustenance resources from the forest.

The government is the main player in the implementation of forest management policies. It does so through a set of laws and regulations, which control access into the forest. Since these rules and regulations do not accommodate community views

and needs, many people do not observe them though very few are willing to publicly declare that they do not do so. Majority of respondents, 92% admit that they follow the set regulations. However, probing in group-discussions gave a clear expression that a smaller percentage observes these regulations.

In their endeavours to acquire forest resources, the local community illegally harvests the forest resources thus resulting in negative participation. This negative participation is manifested in forms of permit fee evasion; bribery of enforcing officials when arrested; and entry into the forest at odd hours such as at night, very early in the morning and on public holidays and Sundays, the times they guess the enforcing officers are not at work. When arrested, one is taken to court and fined cash or given a jail term. This is characteristic of perverse participation which involves "forcing a say" whereby the policy implementing institutions enforce the policy, failure to which there results to court ordered arbitration to settle the disputes (Mlenge, 1991; Barrow, 1996).

In response to this negative participation, some enforcing officers particularly from the forest department perpetuated disincentives to positive participation by co-operating and colluding with some community members through acceptance of bribes. Some enforcing officers were even cited to commission local people to carry out illegal forest resources extraction on their behalf. Some were quoted to be inhuman to illegal extractors, especially women, where it was reported that the officers extended corporal punishment through beatings.

The study results also indicate participation by material incentives as evidenced by the system of non-residential cultivation. The community clears and cultivates forest land to obtain food produce. In return, they have to provide labour by tending to the young

tree seedlings for a period of three years. Here the unwritten policy is quite loud: "no tending to the seedlings, no land for cultivation". Considering that the virgin forest land is more fertile than the individuals' private lands which have been cultivated over the years, and that private land sizes are decreasing (2 acres per household) while population is increasing (Republic of Kenya, 1997), more and more people would wish to cultivate in the forest (53.2%) no matter what they will be told to do in return for the "favour".

Over half of the respondents' (56.8%) wish is that the government formulates and initiates some activities, then informs them on what to do. Passive participation! A real manifestation of how people have become so inclined to the top-bottom approach of being told what they should do! Avoiding any subjectivity, the researcher observed the sincerity with which this form of participation was suggested. The genuine expression here is that the government has always done things its way. So even in future, it should continue. A case to point at is the 6.7% who said they think the permit fee is necessary because the government decided the fee should be there. While this is a very small representation of opinion of the population, it cannot be let to go unnoticed. This passive participation seems to even have gender inclinations where more women would like to see government come up with activities and they can be told where to fit in. Notable too is that 21.4% of respondents are not interested in forest management. As Gebre (1990:13.17) observes, it is not always correct to assume that willingness to participate in a given target group exists.

However, non-participation should not imply a belief in the old assumption about peasant fatalism and apathy. The fact is as individuals, people may not be interested

in participating for various reasons such as distance from the forest and work commitments.

Passive participation was also taken note of through the informative approach of delivery of pre-packaged information on policies, rules and regulations, through the provincial administration and forest management institutions. While only 10% said they attended public meetings, (popularly known as *Barazas*) information given during such meetings spread fast through friends and neighbours. Such meetings, normally expected to be attended by all and sundry within the community showed very low attendance response. For instance, the researcher estimated not more than 150 persons, half of whom were children, who had attended the District Commissioner's speech during the 12th December 2000 *Jamhuri* celebrations. This showed how unpopular the public meetings have become. However, as observed in chapter four section five, these public meetings continue to be useful sources of policy information.

Active participation, through decision-making processes is highly lacking. The respondents were not sure how the money they paid for permits was spent. They could only speculate. Seminars are important forums of discussion, planning and exchange of ideas. However, only 15.6% of respondents have attended such a seminar in the last one year. There is evidence that Non-Governmental groups are doing an essential job in facilitating joint venture activities by bringing together forest management institutions, and the community to discuss forest management issues in and outside the gazetted forest.

Action Aid-Kenya and MEICDP popularly known as the IUCN project were mentioned to be the main organisers of seminars.

The cross tabulation results on aspired forms of participation in regard to the general respondents' characteristics have important issues that require consideration. Gender-based differences to participation were significantly noted in relation to aspired future forms of participation. The cultural practices in regard to gender are noted to be at play. For instance, during the survey, a woman would not respond to the interviewer in front of her husband. The *husband decides first!* The women seem to have internalised this concept hence they seem to shy away from decision-making echelons. They constituted 23.8% of those whose wish was for involvement in the forest management decision-making processes, compared to men – 76.2%. Important to note however, is their aspiration for active play in promoting farm forestry. This is a good indicator of appreciation of reducing dependency on the gazetted forest as it also reduces the time and labour spent in travelling to the forest for the forest products.

Education was also noted to influence nature of future participation proposed by the respondents. More educated people wanted to be involved in an active way of decision making compared to those of lower levels of education. No one respondent without any form of formal education said he was interested in forest management decision making. The role of education in promoting active participation cannot therefore be ignored.

Also significant was the higher willingness to participate by respondents who were immediate neighbours to the forest, interpreted as five kilometres or less from the forest boundary, compared to those beyond (over five kilometres).

For instance, in forest management decision-making opinion, 72.4% of responses were given by those respondents living within five kilometres from the forest

boundary. For government initiatives, assistance in farm forestry and reafforestation opinions were given by 62%, 66% and 68% of these respondents respectively. The form of participation not withstanding, what comes out of this result is that those closer to the forest are more willing to invest their time and energies in forest management.

From the above discourse it can be concluded that active participation of the community through consultation is lacking. Negative, perverse participation is witnessed due to conflicts of interests between law enforcers and the community in the exploitation of forest-based resources. The government's sole role of implementation of forest laws and regulations, without regard to local interests promotes disincentives to active and positive participation. Participation by "lure" through incentives – non-residential cultivation- is used to attract people to provide labour for the cash-strapped government to promote reafforestation.

Passive involvement, perpetuated by government's top-bottom approach is still persistent as indicated by the involvement through informative approach – the community members are just mere recipients of information on rules, laws and methods of exploitation. All this may be summarised to mean there is low level of participation of the local community in forest resource management policies formulation processes and hence agree with the second organising hypothesis of the study.

Proposed future forms of involvement showed a close link to gender, levels of education and distance from the forest. More men than women were willing to participate in decision-making processes.

Willingness to actively participate varied with education, with people with higher levels of education willing to participate more in forest management decision-making processes. Willingness to participate in forest management in general was also observed to increase with nearness to the forest. These links need to be borne in mind while formulating any forms of interventions.

The third objective of the study was to evaluate the role of stakeholders in forest management and how they relate with the forest-adjacent community in their operation frameworks.

The Forest Department of the Ministry of Environment and Natural Resources and a parastatal body, the Kenya Wildlife Service, created by an Act of Parliament, form the two main government-implementing institutions in forest management in Mt. Elgon forest.

Two donor projects: Mt. Elgon Integrated Conservation and Development Project (MEICDP) and Action Aid Kenya (AA-K) as well as Community Based Organisations (CBOs) supplement forest management at varying capacities, in accordance to laid out policies of the two government institutions.

Degradation of Mt. Elgon ecosystem has continued despite the policies, regulations and access controls being in place. By observation, there was very little tree cover on private farms (see Plate No. 7), a situation that makes the adjacent community heavily dependent on the forest for most of their basic household requirements such as food, pasture for livestock, woodfuel and construction materials. The community feels that these regulations have not been accommodative to their needs, considering that they have lived with the forest since times immemorial.

An element of negative attitude and lack of trust towards the forest department, which was strongly emphasized by the community during discussions, is the preferential rights given to commercial loggers. The fact that the large-scale destruction of the forest is permitted while one head-load of firewood is severely punished has lead to further erosion of the already strained relationship between forest department and local communities.

The forest ecosystem lacks an approved management plan, with management practices dwelling mainly on harvesting regulations and establishment of plantations through non-residential cultivation. Reviewing the management of forest resources in the Mt. Elgon ecosystem, a team commissioned by the steering committee of MEICDP (2000) also found out that the control mechanisms on all forest activities are weak as licenses are issued but implementation is hardly monitored.

The policy does not cover the needs of the local community. This leads to conflicts and bad blood between the community and policy implementers. The result has been 'hide and seek' games between the forest administrators and the community. Without a permit or on collecting outlawed products from the forest, the locals face arrest, heavy fines (depending on the product), harassment e.g. beating of women in some instances, and confiscation of tools (panga's, saws etc). If threatened with arrest, the person may pay heavily in terms of bribe to avoid court charges. Consequently, the local communities experience various constraints in their efforts to obtain forest and tree resources that are outlawed especially timber sawing and charcoal burning. These include high transportation charges where the product cannot be transported by only one person or there is need for a vehicle.

Marketing the product is also problematic since it has to be done secretly for fear of discovery by the authorities.

The local people are always in fear while in the forest. They therefore avoid using major routes and have to be on the look out throughout the illegal extraction expedition. Coping strategies include extracting the products at night, very early in the morning or on public holidays when they suspect that the forest guards and game rangers may not be at work.

Armed with the above coping mechanisms, the community has continued to extract the forest resources endangering the sustainability of the ecosystem. Forest cultivation under the NRC system has led to riverbanks degradation as cultivators encroach for more farming land. This has consequently increased soil erosion and has affected the water catchment system.

On the other hand, penalties for forest offenders are too lenient. The penalty for failing to comply with the terms of a license is a fine of three thousand shillings and two hundred for offences of outlawed collection of forest produce. The number of forest guards remaining cannot effectively man the forest. No wonder then that the local people think that the department is not doing its job because they, the community have had more ease in performing illegal activities as a result of the shortage of patrol staff.

The staff retrenchment means that the forest management staff cannot fulfil their annual work plans. This leads to severe backlog in silvi-cultural operations. The forest station tree nurseries cannot also meet station's seedlings requirement.

A case in point is the year 2000 when MEICDP sponsored reafforestation activities but the forest station did not have enough seedlings for the activity.

The financial resources of the management institutions are variable but often very limited. The budget of FD for the management of the Forest Reserve is too small and concession fees for the exploitation of products from the forest reserve are paid the treasury with no guarantee of proportionate allocation of funds. It is no wonder then that the community members do not understand how the money paid at the station is spent.

The persistent under-funding of the Forest Department and to a less extent the KWS has led to a decline of infrastructure and equipment and a backlog in practical and advanced staff training. This compounded with low pay leads to relatively low motivation of the staff. Under these circumstances, management plans are not made and proper monitoring, control and enforcement are not taking place. This had led to insecurity problems, slow response to human/wildlife conflicts among other calamities.

The current legal and policy framework allows excision to take place and leaves loopholes for unsustainable logging. At the local level, political pressure exerted on FD staff may prevent them from taking adequate action against unsustainable exploitation.

Legislation also stipulates that income from the FR and NP is handed over to the treasury, leaving no incentives to local foresters to run their Forest Reserves as efficiently as possible. Moreover the current legislation gives very little room for alternative management systems e.g. systems that allow local communities a greater say in resource use, management and monitoring.

The forest Act covers only gazetted forests. Despite government emphasis on the need to plant trees, the forest policy does not concern itself with tree planting outside the gazetted forest areas. Even though silent on the subject of on-farm tree planting, the rural afforestation service is established in the forest department and exclusively deals with farm forestry. The RAES extension staff however experience problems due to financial constraints, lack of infrastructure and inadequate transport facilities. There is hope that once the new policy, which is pending parliament enactment, is put in place, these loopholes will be covered. The new forest policy will replace that formulated in 1957 and revised in 1968.

A major thrust, lacking in the operating policy, is the new policy's hope to alleviate poverty and promote rural development by providing employment, promoting equity and participation by local communities.

In the case of the Wildlife Act, the role and participation of stakeholders is poorly defined in relation to wildlife utilization, access to benefits and the right of use by the park adjacent communities. There is inadequate compensation and no insurance schemes for properties, livestock and crop losses. Human compensation is very low for injuries and death (death = Ksh 40,000) and does not reflect the current socio-economic realities (pers. Comm., KWS official).

That the Non-Governmental Organisations (NGOs) and Community Based Organisations (CBOs) are playing an important role in forest management cannot be doubted. There is consensus from the community that the NGOs have helped them learn many conservation issues that were hitherto not known to them. The NGOs have better financial capacity and are therefore key in facilitating interaction of the government's forest management institutions and the community. The government

institutions have the technical capacity but their operations are constrained by the limited financial capacity.

The NGOs also have the capacity to facilitate community groups' formations through training on such issues as group dynamics, leadership, fundraising, transparency and accountability. The motivation given to the groups enables them to organize themselves and carry out activities that befit their problems. Low income problems as observed earlier have been tackled through productive strategies like bee keeping and raising seedlings. The dual achievement in this is the fact that the local community increases its income level while at the same time reducing any negative impact on the forest.

The operations of the NGOs, just like the government institutions, are that they also have to work within the guidelines of the existing policy albeit not as rigid as these institutions. They must seek clearance and acceptance from the existing government structures and political goodwill. A case in point is the attitude of the local government councillors in the division.

During the *Jamhuri* day celebrations, they blatantly claimed that they did not see the importance of having the MEICP, as it had not assisted the community as well as the way AA-K had done (AA-K given community groups money for group projects while MEICDP does not and instead concentrates in awareness creation and empowerment). In their view, an NGO should dish money to the people in order to alleviate community problems, failure to which the NGO looses favour with them.

In summary, it can be stated that the forest department, due to its limiting policy framework, is not responsive to the needs of the people as indicated by the strained

relationship between it and the local community. As an institution, it is also incapacitated, technically and financially, to effectively manage the forests.

The KWS on the other hand, operating within the mandate of the Wildlife (Management and Conservation) Act Cap 376 of 1975, is very conservative as it excludes the local communities in its layout of operations. Strictly no consumptive activities are allowed in the park and presence of anyone within the boundaries of its operations without license is illegal. The Act completely shuts out park adjacent communities. Any wildlife in and outside the park is taken to be the Service property. There have been efforts however to pass on some benefits to park adjacent communities. In the study area, the Service had constructed two classrooms at Kaberwa primary school (near their Kaberwa station).

Despite the inaccomondative policy frameworks of these two government institutions, donor projects have intervened by injecting into the management system the spirit of community participation. The Mt. Elgon Integrated Conservation and Development Project, is purely a donor intervention intended to step up community participation in the forest management.

It has done this through facilitation of consultative planning meetings between the two institutions and the community, reafforestation as well as facilitation of diversification of income generating activities among the local people to ease pressure of dependence on forest resources.

Action Aid-Kenya, though not purely focused on natural resources management (focuses on poverty alleviation) plays a major role in facilitating formation of community groups and starting of income generating activities of these groups.

Most significant activities are bee keeping projects and tree nursery establishments meant for income generation. AA-K has also in the recent past chipped in financial facilitation of consultative planning meetings between the community and the Forest Department, which have led to the formation of Mt. Elgon Forest Advocacy Network (MEFAN).

The role of Community-Based Organisations cannot be overemphasised. These are groups of local people who have come "to pull" together with a common goal. Those that are involved in tree nurseries and beekeeping play a major role of income generation while at the same time reducing impact and conflicts with the government's forest management institutions.

In conclusion, it is observed that the current forest policy and subsequently the Forest Act Cap 385 have little regard to local needs and aspirations. The Forest Department does not have adequate financial and technical capacity to effectively manage the forest as the government is in a transitional process of trimming its expenditures.

The study acknowledges the current efforts to amend the Act to accommodate the forest dependent local communities. It is hoped that the enactment of the bill will change this situation. KWS needs to restructure its policy to include the rights of the local community.

The forth objective of the study sort for mechanisms of community involvement in forest resources policy formulation. Mechanisms for community involvement were assessed mainly through information flow channels.

The main forms of policy information flow were found to be through the provincial administration as indicated by 97.3% of the respondents. This was followed by the

electronic media, the radio (75%). Friends and neighbours also played an important role in policy information exchange (67.9%) as community members converse and share information on e.g. what the District Commissioner said in a baraza, what the radio announced or what was in the newspaper. Group discussions indicated that the attendance to public *Barazas* is normally low but the message spreads fast by word of mouth through friends and neighbours.

The forest department, which is directly involved with interaction of the community and the forest, ranks low with only 42.9% of respondents acknowledging reception of policy information from the department. Least popular source of information is the extension staff, presumably those under Forest Department and Ministry of Agriculture. The extension staffs seem unpopular with the community as only 4.5% of respondents mentioned having gained some information from them.

A general and limiting characteristic with all these forms of information dissemination is that they have no forum for exchange and discussion with the policy formulators. They hence lack active participation. However, it is notable that they contribute to the dissemination of information and creation of awareness on forest policy issues.

The assessment of degree of reading culture among the community indicates that such culture is low. Only 8.9% of the respondents read the local dailies daily. This percentage is too low for effective communication with the people in writing. However, it is important to note the popular newspaper, the '*Taifa'*, which is written in Kiswahili.

This indicates that language of communication is an important consideration when conveying information, not only written but also oral. The researcher's experience in

the study area is that even seminars organised for awareness creation become crippled when some members of the audience cannot communicate in one common language.

However, it cannot be ignored that a huge percentage of 67.9% get policy information from friends and neighbours. The main difference may be that the 'readers' have advantage of getting first-hand information. The information conveyed through word of mouth is also known to acquire distortions down the line of communication such that in the end the information becomes very different from the original message.

Mass methods of public communication are intended to carry forestry information to more people than can be reached through individuals or groups. They help shape a favourable attitude in a general public towards the government's outreach projects.

Howard & Scott-Villiers, (2000:28:31) in their article, *they are shouting whenever they can*, note the importance of the radio in increasing people's knowledge and therefore understanding of situations and of people with different interests and priorities. They argue that through this greater understanding, negotiations and peaceful resolution becomes possible. While the radio is a relatively inexpensive way to rely messages, technical explanations or open appeals and discussion cannot be relied back effectively. Newspapers are important communication tools. However they are largely impended by high levels of illiteracy, reading time and affordability. In a rural setting, buying a newspaper for the sake of general reading is a rare habit as is indicated by the 8.9% who read the newspapers daily.

The cost of the newspapers may also be prohibitive as majority are still struggling with poverty and the little resources they have go to cater for the household subsistence needs. In the same struggle, the people may have little time to sit down and read newspapers.

The general trend indicated by cross tabulations of education and reading habits is that those with relatively higher levels of education (secondary and post-secondary/tertiary levels) read more frequently than those with relatively lower levels of education (primary levels and less). The former are therefore likely to be aware of any policy issues included in the newspapers compared to the under-educated.

Existence of local community groups is a great potential. A major advantage of community groups is that group membership is through self-selection and participation of members is thus direct and not through representation. As Barrow (1996:129) notes, traditional and local groups form a mobilization asset in natural resource management activities.

They form vital entry points for participatory extension work through which improvements can be proposed, discussed and made; awareness created and responsibility allotted. They can thus be employed to enhance interaction, mobilisation and participation among the local people.

The role of donor projects in policy information dissemination especially in conservation and diversification of income generation was notable. MEICDP shows video shows to the local community in its pilot areas. The researcher participated in one such show advocating for zero grazing.

Extension visits are rare as only 4.5% (5) said they were visited by extension officers. Among them, only 2 said they were visited by a forest extension officer. This indicates a major missing link between technical knowledge transfer from the experts to the local people - the implementers. It also means that there is no merger between this knowledge and local indigenous knowledge, hence people are left to grope and

experiment with trees through trial and error. The option of not taking action on on-farm tree planting is evidenced by the bare state of the community's individual farms.

In conclusion, the typical characteristic of these modes of information flow is the unidirectional flow. They provide no room for discussion and exchange except in the case of NGO initiatives. The language of communication as well as variety of forms of communication of policy information is important. Variety in this context may be taken to mean visual, audio, printed forms etc. in order to accommodate all people on board – educated and uneducated.

Local community groups are important forums for discussion and dialogue and this is a major potential that requires to be harnessed in the promotion of dialogue.

5.3 Recommendations

From the first objective of the study, it was concluded that there is general lack of involvement of the forest-adjacent community in the formulation of the forest resource policies, and this has resulted to low compliance with laws and regulations despite a high level of awareness of these laws and regulations. The government has the power machinery and responsibility to ensure that the community's needs and aspirations are incorporated in the policy framework from conceptualisation to implementation, monitoring and evaluation. This can be achieved through:-

- Creating an enabling environment that incorporates people's needs and aspirations through decentralisation of management and decision-making responsibilities that includes the participation of the local people.

- Creating "partnership in change" from top-bottom to bottom-up, people-centred approach where involvement of the community takes place through localised problem identification, diagnosis, remedy formulation as well as sharing and learning.

The study established that there is low level of active participation by the forest-adjacent community in forest management in general. Perverse, passive participation as well as participation by incentives were found to be the main forms of participation. To reverse this trend and hence promote active and positive participation, the following recommendations are suggested.

- Active participation should be designed to develop and strengthen capacities of the local people to gain responsibility for and authority over forest resources and effectively contribute to decisions on how these are used. This should also embrace efforts to change people's attitude of government "knows it all".

- Participation should be taken as a 2-way learning process of dialogue, negotiation and decision-making between government and local communities, concerning activities of forest management. Any participatory approach should therefore aim at local empowerment and accountability of individuals within the community. To achieve this local empowerment, access to and control over benefits from the forest resources should be guaranteed through legislation.

- The government should desist from delivering pre-established packages, to proposals to be defined and negotiated on the bases of local priority needs,

opportunities and constraints through different interest user groups such as grazers, cultivators etc.

- The government should be at the forefront to stimulate active participation through effective communication with the local people

- Gender issues should be put into consideration while devising and promoting forms of participation since both male and female members of the community use the forest to extract various needs relevant to their gender roles.

As established through the findings of the third objective, the two government institutions, FD and KWS have little regard to local community needs and aspirations. The FD does not have adequate financial and technical capacity to effectively run its operations. The study therefore suggests the following recommendations:-

- Decentralisation of decision making platforms for a heterogeneous set of people with multiple and overlapping needs through community-based institutions such as Community-Based Organizations.

- Interventions need to be directed towards strengthening traditional methods of land and tree management and direct incentives for on-farm tree growing to diversify sources of forest resources.

- There is need to devolve wildlife user rights to accommodate community interests in order to remove disincentives to participation. The government must decide upon structures and institutions to which these rights should be devolved, the transferability of these rights, checks and balances to these rights.

- There is need to transitionally shift implementation responsibility to the community. Participatory approaches can make this possible. This way the government institutions will not be financially overburdened and will thus be able to make optimal use of the limited resources. By giving responsibility to the local forest resources, external influence will be limited to facilitation.

Existing modes of information flow as established by the fourth objective of the study, which aimed at establishing mechanisms for involvement, showed a unidirectional flow of policy information from policy makers to the local community. Consultative forums for discussions and exchange were found to be lacking. The role of local community groups was noted.

Treated holistically, integration of the local community in the forest resources policy formulation process needs to embrace the following suggested mechanisms:

➢ **Participatory Planning:**

Participatory planning should be regarded as an initial step in developing and negotiating dialogue between the local community and government institutions in order to define a common agenda. This participatory approach should:-

- Be consultative where the community is explicitly asked to give their views on various forest management issues

- Involve co-operation that goes beyond delivery of information. This co-operation needs to take cognisance of local knowledge as a crucial resource in order to reach forest management goals.

- Involve effective information exchange whereby the local people's considerations are taken into account in the objectives, strategies and decisions, through participatory methods such as participatory rural appraisal (PRA), participatory learning and action (PLA) and participatory action, monitoring and evaluation (PAME).

- Involve joint consultative committees to build partnership in decision making mechanisms

➢ **Participatory Extension**:

- Participatory extension is needed to examine traditional knowledge and customs, to identify existing opportunities and constraints, solutions as well as reach community-based decisions for action. This will create information awareness that is conducive to action to improve forest management and facilitate change.

- Direct involvement of extension staff is an important role in facilitating sharing of information, feedback mechanisms, reflection and discussion. NGOs should step up their bilateral assistance with the government's implementing institutions to facilitate extension staff to reach the people.

- **Participatory Discussions**:

Discussion meetings should be held with small groups of interest groups of the local community. Small meetings with less than 30 people facilitate more active participation and can be guided, facilitated and catalysed more effectively. With small community groups, it is easy to explain an idea, an issue, an opportunity, a problem or a technology. Participatory discussions are especially important for those who are shy or afraid to speak in presence of large groups as people become more open and able to make realistic contributions and decisions. Small group meetings make it possible for all people in the group to fully participate as all, men and women, shy or outspoken are easily encouraged to participate.

- **Participatory Rural Appraisal (PRA)**

PRA is considered as an important means of encouraging a more participatory, enabling and empowering approach for local communities as they strive to solve problems, create opportunities and in general, take a greater responsibility and authority for managing and using natural resources such as forest. PRA is flexible, adoptive and has an array of communication devices by which governments and non-governmental organisations can harness for conducive participation such as data and information gathering, and community action planning towards generally accepted themes by all the stakeholders.

5.4 Areas of Further Research.

5.4.1 Gender Issues

The study proposes some further deeper and focused research to look into gender issues as they relate to participation in forest management. This is based on the study's finding of significant gender discrepancies relating to the nature and extent of participation. Gender, here is taken to refer to difference in the way men and women look at, understand and participate in forest management. Such a study should include who has priority over whom, what and how, who plants and who has harvest rights.

5.4.2 Equity Issues

It is suggested that studies should be undertaken to establish how various groups within the community could be equally involved. This is based on the fact that different community groups may have different requirements.

For instance, since the wealthy are more powerful financially and politically, their requirements are likely to be met before those of the poor, who then become further marginalized. In extending participation, care should be taken about what group of people may dominate.

5.4.3 Traditional and Local Knowledge

Further research is required to establish who has traditional and local knowledge, and how such knowledge and modern interventions can be integrated to enhance participation.

Traditional and local knowledge should be established by precise definition of who the people are and how they are organised, through sociological analysis to workout strategies for organising individual issues of natural resources into user groups and to enable such groups to act as producers and self-mangers to generate increased benefits for themselves. These should also give insight into linkages, conflicts and relations of the different groups.

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A P P E N D I C E S

INTRODUCTION

I am a post graduate student from Moi University carrying out a survey on community participation in policy formulation for forest resources management in Mt Elgon forest and its environs. The goal of the study is to develop better mechanisms for community integration in forest management for sustainable development.

Your co-operation and response to all the items in the questionnaire/interview schedule is highly appreciated. The information collected will be for academic purpose only and will be treated with strict confidence.

Thanking you in advance,

Yours sincerely,

Kiragu, Serah Wambui

APPENDIX A - QUESTIONNAIRE FOR COMMUNITY MEMBERS

APPENDIX A - QUESTIONNAIRE FOR COMMUNITY MEMBERS

Questionnaire No: ☐ Date:……

Name of Research Assistant…… Location:…….

Name of Respondent (optional)…….. Sub-location:……

PART I –GENERAL INFORMATION

1. Respondent's gender [1] M ale [2] Female

2. Marital status: [1] Married [2] Single
   [3] Windowed [4] Divorced

3. Age
   [1] 18-30 years [2] 31-45 years [3] 46 years and above

4. Distance from the forest
   [1] <= 5 Km [2] 6-10 Km

5. Level of Education
   [1] Never been to school
   [2] Primary level
   [3] Secondary level
   [4] Post secondary/tertiary level
   [5] University level

6. When did you settle in Kapsokwany?
   [1] <=5 years
   [2] Over five years ago

7. Do you own the land you occupy?
   [1] Yes
   [2] No

PART II: COMMUNITY AWARENESS OF FOREST RESOURCE MANAGEMENT POLICIES, LAWS AND REGULATIONS.

8. Are you aware of any forest laws and regulations? [1] Yes [2] No

9. If yes, mention them.

- -
- -
- -

10. Do you always comply with these laws? [1] Yes [2] No

11. a) If yes, give reasons

-
-
-

b) If no, give reasons

-
-
-

12. Do you think you have a right to access the forest resources without being restricted? [1] Yes [2] No

13. a) If yes, give reasons

-
-
-

b) If no, give reasons

-
-
-

14. Currently, do you think the forest resources are being managed well

[1] yes [2] No

15. a) If yes, give reasons

-
-
-

b) If no, give reasons

-

-

-

PART III: NATURE AND EXTENT OF COMMUNITY INVOLVEMENT IN FOREST RESOURCES MANAGEMENT POLICIES

16. Name the major products/services you obtain form the forest

- -
- -
- -

17. Are you expected to hold a permit for the products you have named above?

[1] yes [2] No

18. Do you always go for the permit?

[1] Yes [2] No

19. If no, give reasons

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–

–

20. Who checks the permit once you enter the forest?

-

-

21. What happens if you are caught in the forest without a permit?

[1] Fined [3] Bribes

[2] Taken to court [4] Others

22. In your opinion, is the fee charges on the permit fair?

[1] yes [2] No

23. Do you think this fee is necessary? [1] Yes [2] No

24. a) If yes, give reasons

-
-
-

b) If no, give reasons

-
-
-

25. Do you know where or how the money collected on permits is used by the issuers of the permit? [1] Yes [2] No

26. Do you attend any seminar or courses on forest issues?

[1] Yes [2] No

27. If yes, when did you attend the last one year?

[1] One year ago [2] over a year ago

28. Who had organised the seminar/course?

–

-

29. What issues are discussed during such seminar/course?

-

-

-

30. Do you get involved in the planning and management of the forest?

[1] Yes [2] No

31. If yes, in which ways?

–

–

–

32. If no, would you like to be involved? [1] Yes [2] No

33. Give ways in which you would like to be involved in future.

-

-

-

34. In your opinion, what extractive uses are destructive to the forest?

-

-

-

PART IV: ROLE OF INSTITUTIONS IN THE MANAGEMENT OF MT. ELGON FOREST

35. What are the roles of Forest Department officials in forest management?

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–

–

36. What are the roles of KWS officials in forest management?

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37. What are the roles of MEICDP (IUCN Project) officials in forest management?

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–

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38. What are the roles of Action Aid-Kenya officials in forest management?

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39. Are you visited by any extension officer? [1] Yes [2] No

40. If yes, which one(s)?

-

-

-

41. How often are you visited?

[1] Once a week [2] Once in a fortnight

[3] Once a month [4] Rarely

42. What issues do you discuss when visited?

-

-

-

PART V: MECHANISMS FOR LOCAL COMMUNITY INVOLVEMENT IN POLICY FORMULATION

43. Where do you obtain information on forest resource management policies?

[1] Newspapers [5] Extension officers

[2] Local provincial administrators [6] Friends and neighbours

[3] Forest Department Officials [7] NGOs

[4] Radio [8] Others (specify)…

44. Do you read newspapers? [1] Yes [2] No

45. If yes, which ones?

[1] Nation [3] Taifa [5] People

[2] Standard [4] East African [6] Others (specify)….

46. How often do you read the paper(s) you have named above?

[1] Daily [2] Once a week

[3] Once on two weeks [4] Rarely

47. Do you plant trees on your farm? [1] Yes [2] No

48. If yes, how useful are these trees to you?

-

-

-

49. Are you a member of any organised group involved in management of and use of forest resources? [1] Yes [2] No

50. What is the name of the group?……..

51. When was it started?……

52. What activities is your group involved in?

–

–

–

53. Is it registered? [1] Yes [2] No

54. If yes, under which office?

[1] Social Services [2] Others (specify)….

[3] Action Aid

55. Do forest officials know about it? [1] Yes [2] No

56. Do you have any question on additional information you would like to let me know over the issues we have discussed?

-

-

-

THANK YOU VERY MUCH

END

APPENDIX B - KEY INFORMANT INTERVIEW SCHEDULE

KEY INFORMANT INTERVIEW SCHEDULE

Name of key informant being interviewed:…….

Position of the informant (officer) being interviewed:……..

1. For how long have you worked in this area? (years)
2. In brief, what are your duties and responsibilities?
3. What is the importance of this forest?
4. What threats have been facing the Mt. Elgon forest?
5. What has been the causes of these threats?
6. What measures (laws, regulations, policies) are in place to protect Mt. Elgon forest?
7. Who formulates these laws?
8. What is the role of the community in the formulation of these laws and regulations?
9. What is your role in ensuring that these laws and regulations are adhered to?
10. What problems do you encounter especially as you carry out this role?
11. Do you think the interests of the community are given adequate consideration by these laws?
12. If no, in what aspects?
13. (Forest Department Officials) Do you have a management plan for Mt. Elgon forest reserve?
14. I yes, what are its priorities?
15. Is there a natural forest not within the gazetted zone?
16. If yes, how is it managed

17. If the forest is under another body's management, how do you co-ordinate your activities with those of this body?
18. Which office is in-charge of issuing permits to harvest/use forest products?
19. How is the issuance of permits determined?
20. Are there planted forests in the division?
21. Who is responsible for their management?
22. Which other co-operating bodies/organisations do you work with closely on issues concerning forest management?
23. Are there saw millers who extract trees from the forest?
24. If any, how do you regulate their operations?