

Influence of Community Dependence on Forest Conservation in Maasai Mau Forest, Kenya

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Abstract: *The Maasai Mau forest plays an important role in supporting the livelihood of people living around the forest. However, its massive destruction has made news headlines in the country with the government and the local community publicly disagreeing on the conservation methods to be used. Community participatory approach has been heavily criticized as having failed to yield much needed conservation results. The purpose of this study is to examine the dependence of the local community on the forest as a source of livelihood. This study used descriptive survey design which was necessary for obtaining numerical data. Respondents were drawn from members of Nkareta Community Forest Association (CFA) who do not live within the marked outline and representatives were selected from the registered members of the CFA. Primary data were collected using a survey questionnaire consisting of semi-structured questions. Closed-ended and open-ended questions were posed. The key informants were interviewed and focus group discussions were carried out. Data were analyzed using descriptive statistics and presented using tables and figures. It was found out that majority (55.7%) of the members of Nkareta CFA are not active members of the CFA. This was due to lack of direct benefit from conservation initiatives. It was also established that the majority (63.5%) of the respondents own small parcels of land that cannot sustain their food requirements. The researcher from the study findings concluded that the local community is highly dependent on the local community for living and therefore the government needs to look into ways of providing alternative means of livelihood to reduce dependence on the forest. The government should introduce improved agricultural practices to the farmers which will go a long way in solving problems related to low yields which causes nutrient exhaustion hence farmers moving to new lands. The government should also provide low interest loans for people to do business to reduce dependence on forests.*

Keywords: Community, Conservation, Participatory Approach, Livelihood, Dependency

1. Introduction

In many countries, plans to protect forest ecosystems have failed to address the needs and knowledge of local forest-dependent communities (Kumar, 2000). According to Poffenberger (2000) participation by local people is essential to any conservation effort. In forest conservation, participation is often associated with community forestry, which refers to forest management or co-management by people living close to the forest. Legal, political and cultural settings for community forestry vary widely, and the term covers a wide range of experiences and practices. Community forestry is often associated with South and Southeast Asia, but it is also common in other regions.

The history of forest reserves in former British colonies is a history of struggle between competing stakeholder groups and present-day policies of governments of independent African states (Barrow, Karanja, Tessema (2002). Forest reservation took place throughout most of Eastern and Southern Africa during the first half of the twentieth century in line with the colonial forest policy at the time to ensure a continued supply of hardwood from colonies to support British industry (Barrow *et al.* 2002; Sunseri 2005). Post-independence forest departments were set up to manage forest reserves to maintain colonial authorities' user rights to valuable timber, and in part to protect important watersheds, ecosystems, and habitats (Sunseri, 2005).

Barrow *et al.* (2002) noted that local communities and their rights of access and use of forests were not a priority mainly

because population densities and pressure on forests at the time was low, and this gave greater latitude for tolerance and compromise. Sunseri (2005) further indicated that as the human population increased, forest departments in Tanzania, Kenya, Uganda and Zimbabwe used the colonial forest statutes as a means to impose permit-based access systems, thereby significantly downgrading local peoples' customary management systems and rights. That with land and forest pressures increasing, permit-based access rights were compromised, as land was encroached, degraded, and cultivated, with the forest department reacting by blaming 'encroachers' and evicting them; including those who may have had legitimate secure customary rights.

Isager and Theilade (2001) purported that although local participation is important in forest conservation, there are circumstances in which it is absolutely necessary, for example high population pressures and resource use conflicts, communal ownership and in smaller and more vulnerable protected areas. In such cases, conservation without local participation is doomed to failure. Nevertheless, participation in itself provides no guarantee of success. The outcome of participatory processes often depends on additional factors such as institutional or legal frameworks, and the education or interests of local people and other stakeholders.

According to Fomete and Vermaat (2001) 57% of the world's forests cover is located in developing countries mostly in the tropics. Lok-Dessallien (1998), Dev(2003) and Hopley (2006) report that worldwide, about 1.6 billion

people rely heavily on forest resources for their livelihoods. Blomley and Schedler(2008) and Belcher (2007), noted that these forest products are like firewood, timber, poles, fodder, charcoal, fruits, honey and services such as water catchments function, ecological processes maintenance, carbon sinks, and sites for cultural, traditional and religious beliefs. According to Food and Agriculture Organization (FAO2008), Kenya is classified as a low forest cover country, where the closed canopy forest cover is about 1.24 million ha. Which is less than 2% of total land area? The study by Action Research into Poverty Impact of Participatory Forest Management (ARPIP, 2009) attributed degradation and loss of forest cover to competing land use from agriculture, industries, human settlements and other infrastructural developments. To counteract these negative impacts, Kenya Forest Service (KFS) has embarked on an aggressive management and conservation of all public (gazetted) forests through PFM (KFS, 2009). Participatory Forest Management is an approach, which deliberately involves forest adjacent communities and other stakeholders in management of forests within a framework that contributes to community's livelihoods (Schreckenberger *et al.*, 2007).

The Kenya Forest Act(2005) was developed and enacted to end the colonial and pre-colonial command and control of forests while at the same time recognizing that state agencies had failed to protect forests surrounded by disgruntled local communities. Section 46 of the Forest Act allows members of a community residing around a forest area to register a Community Forest Association (CFA) under the Societies Act(1998) (Chapter 108), in order to participate in the conservation and management of state or local authority managed forests. Communities registered in this manner can invoke Section 47 of the Forest Act to protect, conserve, and manage forests and formulate and implement forest programmes consistent with the traditional forest user rights of the community in accordance with sustainable use criteria (Matiku, 2011b).

Blomley *et al* (2008) notes that the communities living around the forests are supposed to assist the Kenya Forest Service in enforcing the provisions of the Forest Act, especially with respect to illegal harvesting of forest produce. Section 13(2) of the Forest Act, 2005, allows establishment of forest conservation committees under the Act, to, among other functions, assist local communities to benefit from royalties and other rights derived from flora or fauna traditionally used or newly discovered by such communities.

The establishment of a Forest Management and Conservation Fund under Section 18 of the Forest Act(2005), aimed at enhancing maintenance and rehabilitation of forests, promotion of community-based forest projects, establishment of nurseries and seedling production, and facilitation of education and research activities, among other uses (Matiku, 2011b). Under the Act, Section 25(4) allows owners of private forests to apply for exemption from paying part or all land rate charges and to obtain loans from the Fund and seek technical advice on appropriate forestry practices, while Section 52 of the Act deters any person from engaging in prohibited activities in

the forest, and provides harsh penalties such as fines of not less than KES 50,000 or imprisonment of not less than six months, or both, to those who contravene this provision (Schmidt-Soltau & Brockington, 2007).

Waithiru (2012) noted that between 2005 and 2007, the Mau complex witnessed a number of positive developments. Only 63.06 ha of the entire Mau Complex were cleared. A total of 5 970 ha of the forest complex showed signs of regeneration. It was further noted that a public-private sector partnership under the auspices of the "Save the Mau Trust" has stepped up efforts to rehabilitate the degraded portions of the forest. The progress made in reclaiming the forest is captured in reports by an Inter-Ministerial Conservation Secretariat in the Prime Minister's office. Four phases of the rehabilitation Programme have so far been completed and the initiative is currently in its fifth phase Kenya Forest Working Group (KFWG) personal communication.

This paper therefore sought to find out the influence of community dependency on Forest Conservation in Maasai Mau Forest. According to the forestry officer at Narok Station, the divested state of the forest is thought to be among the causes of prolonged drought and the unexplained lack of rainfall in the area. This study seeks to find out the extent to which the community participation can be incorporated in enhancing the conservation of the Mau forest.

1.1 Statement of the Problem

Great benefits have been derived from forests in all spheres of life since time immemorial, nevertheless, forest cover has been decreasing by the day and forest encroachment is increasingly fierce in 21st Century. In Kenya, there has been a decrease of 0.3 percent of forest cover in the past two decades between 1990-2015, with the remainder being approximately 35000 km² (FAO, 2006). Between the years 2000 and 2010 forest degradation was more intense with approximately 13 million hectares of forests transformed into competing uses; agriculture being the most prevalent (United Nations Framework Convention on Climate Change (UNFCCC, 2007). According to UNEP(2005) Maasai Mau in particular is the most threatened forest blocks with 14000 ha lost due to irregular allocations for settlement.

Despite efforts being made by the government and other stakeholders to enhance the sustainability and protection around the Maasai Mau forest, the local community is still largely inactive in the conservation initiatives, with relatively high dependency on the forest as a source of livelihood and their perception towards conservation tend to contradict some conservation regulations. This paper therefore sought to examine the various methods of dependency by the community and how it influences the Conservation of the forest.

1.2 Theoretical Framework

This paper was based on two theories Pimpert and Pretty theory of participation and also Arnstein participation theory popularly known as a ladder of citizen participation theory. A Ladder Of Citizen Participation Theory: In this theory,

Arnstein(2004) highlighted eight levels of participation namely manipulation, therapy, informing, consulting, placation, partnership, delegated power and citizen control.

Another participation model is that proposed by Pimbert and Pretty (1994). This model has seven topologies namely; passive participation, participation in information giving, participation by consultation, participation by material incentives, functional participation, reactive participation and self-mobilization participation (local initiatives). This is represented below starting from the lowest to highest level of participation. The two topologies of participation proposed by both Arnstein, Pimbert and Pretty, all point to the fact that active citizen participation occurs when they take part in decision making concerning the resource that has to be managed.

This study conceptualizes that PFM approaches and community participation in management of forest and other natural resources was expected to result to high forest conservation and management and in general, improve coordination of PFM activities. This study conceptualizes community dependency on forest resources as shown in Figure 1.1.

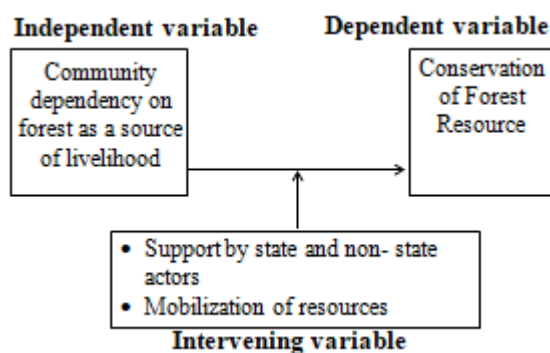


Figure 1.1: Conceptual framework

This study has forest conservation as the dependent variable and community dependence on the forest as the independent variable. The conceptual model of this presented assumes that the level of dependence of the local community determines how successful conservation efforts are a success. the higher the dependence the more the forest will be destroyed. However there are external factors that might influence the relationship. These factors were identified as intervening variables which were resource mobilization by the government and also support by state and non-state actors.

2. Literature Review

There has been a long history of relationship between communities around the forests and their dependence on the forests, in India alone; about 5 million and a whopping 147 million populace live and obtain economic resource respectively, from them (Kutty& Kothari, 2001).The locals in the peripheries of protected zones obtain various resources for instance grass for their livestock, land to practice farming, grounds for obtaining wild meat and source of medicinal forest products (Davidaret al., 2010). There is an upsurge need for land for settlement and other

resources by ever increasing population, hence resource needs from the forests will significantly alter vegetation and structure and as such affecting biodiversity (Sagar& Singh, 2004).

There is wide documentation on dependence on tropical and subtropical forests by locals in many countries (Sodhi et al., 2004; Sodhi, 2008), though the so called dependence on forest resource is not necessarily need based or poverty but rather due to closeness with the resource they derive benefit from (Arjunan et al., 2006; Davidaret al., 2008). Naoto (2006) noted that Conservation efforts in Africa faces many hurdles including high poverty index with approximately 48% of the region’s populace consuming less than a dollar a day high population and almost absolute dependence on natural resources for survival. They noted that deforestation in Sub-Saharan Africa has been attributed to high population growth and forest wood harvesting for fuel and for sale a position supported by (FAO 2006) noting poverty as a cause of deforestation. Godoy (2001) argues that aggravated by climate change, deforestation is all time high. The study established a worrying trend with Africa continent leading in very alarming rates of deforestation. Not only has deforestation been caused solely by human activity influence; some other contributing factors have been brought to the fore.

Scholars have argued that poorer members of the communities around the forested areas are more likely to take part in forest conservation (Maharjan, Gabriel , 2009) and Tropenbos International, 2005). This view therefore suggests that for these communities to champion conservation, trickledown effect as suggested by Malla and Tibbo, (2003) are ensured so that resources reaches the lowly in society and if this is not guaranteed then exploitation of the poor will most likely be the result (Castro and Nielsen 2003).Recreational facilities, areas reserved as botanical gardens, cultural sites and shrines as well as camping sites be made available to the locals to make for their benefit and tourism sector in general Iversen et al..2006).

Forest resources are of big importance to the people who live around it. This is because the local community close to such resources is mostly poor and that almost all their livelihoods depend on the forest. When communities are involved in the conservation initiatives, they can make informed choices and improve on their interaction with the forest including activities to undertake in order to reduce poverty. Therefore, there exist a link between poverty reduction and forest resource management (Barrow et al (2005).

The environment matters a lot to people living in poverty. The poor often Depend directly on a wide range of natural resources and ecosystem services for their livelihoods; they are often the most affected by unclean water, indoor air pollution, and exposure to toxic chemicals; and they are particularly vulnerable to environmental hazards (such as floods, prolonged drought and attack by crop pests) and environment-related conflict. Addressing these poverty-environment linkages must be at the core of national efforts to eradicate poverty” (UNDP, EU, and DFID& WB 2002).

2.2 Summary

Previous Studies such as Davidaret *et al.*, 2010, Sagar& Singh, 2004), Malla andTibbo, 2003, Asiedu (2004) and Naoto (2006) on participatory conservation, have focused on forest replanting and rehabilitation of degraded areas without a clear emphasis on livelihoods of the residents. This study joins these studies to establish the influence of community dependence on forest conservation in the Maasai Mau forest in Narok County with a focus on ways of enhancing participation and community livelihoods. The scope will encompass assessment on pre-existing models of community participation, effects of participation and collaborations that foster community participation in Maasai Mau. Different scholars as cited in this review have argued in support of participatory strategies but the issues underlying implementation of the same have not been well articulated. Thus, there is needed to look at implementation of community participation going forward so that the stalemate of forest destruction can be avoided in the long run. This study identifies the dependence of the local community on the forest as a source of livelihood as the major determinant of sustainable forest conservation.

Despite the observed thriving impacts of community dependence in conservation as supported by literature, people's dependence on the forest as a source of livelihood has not been given paramount importance. This study identified the literature gap in how it can influence conservation in terms of implementation of PFM initiative by the government. It is widely accepted that the decision by the local community on whether to participate in the developmental activities or not is largely determined by their perceived benefits and their perception towards the laws, policies and initiatives by the government to conserve the forest.

3. Materials and Methods

This study adopted descriptive survey research design which is necessary for obtaining numerical data. This design was appropriate because the study evaluated Community Participation approaches in forest conservation and management in Maasai Mau answering the fore mentioned what are. This design analyzes the dependence of the main player (stakeholder) on forest as a source of livelihood. The information obtained benchmark for development of a recommendation in this study and for future research in areas forestry and conservation.

The study was carried out in Nkareta ward, Maasai Mau Block of Mau Forest Complex. Mau forest is a wide forest complex in the Rift Valley of Kenya, with an estimated land surface area of 273,300 hectares (675,000 acres). Mau Complex is situated about 170 km north-west of Nairobi and stretches west bordering several counties: Kericho, Narok County on the southern side, Nakuru to the north and in south Westside it borders BometCounty. The forest was segmented from the larger Mau forest complex into seven blocs which includes; East Mau, Ol'donyoPurro, South-West Mau (Tinet), Transmara, Maasai Mau, Southern Mau and Western Mau.

The study only targeted registered CFA's around the Nkareta Ward, Maasai Mau Block in Mau forest Complex. According to the Kenya forest service report 2015 there are approximately 7,000 registered members of Nkareta CFA. In Nkareta area, about 90% of the population live within 0-5 Km range to the forest and use the forest directly and indirectly. From the target population of 7000, Taro Yamane (1973) sample size formula was used to select a sample size of 378 active members of Nkareta CFA.

The study thereafter employed simple random sampling technique in the selection of the sample. This selection method ensured that each member of the CFA had an equal chance of being included in the sample. The study used primary data collection method to obtain information from the sampled units. Primary data sources included using semi-structured questionnaires, key informant interviews and direct observation. Focus group discussions were also carried out.

A CFA questionnaire for the collection of pertinent socio-economic data was developed and administered to the 378 out of the 7000 CFA'sfrom the Nkareta CFA. Questionnaires were the main data collection method. Questionnaires were used because the instrument is appropriate for a widely distributed population, and respondents are able to provide their answers more objectively. In addition, with questionnaires, a researcher is not in a position to influence responses of a participant. The questionnaire had 28 statement items which were easy to code and therefore allow for easy data analysis and interpretation. After a detailed discussion with the chairman of the Nkareta CFA Mr. Kantau Ole Nkuruna, he assigned the researcher five research assistants who had helped other people in their research and had adequate knowledge of the process. The research assistants asked the respondents questions and filled the relevant spaces in the questionnaire. Five motorcycles were hired to help the research assistants reach the CFA members with ease considering the number of questionnaires they had to fill. The questionnaires were divided equally among the five research assistants.

Key informant interviews were conducted to gather expert opinion information on the status and potential of various Activities within and outside the forest, forest management, conservation and livelihoods dynamics. The key informants in this study comprised, Head of KWS (Kenya wildlife service) Mau and Head of Kenya forest service Nkareta station. These key informants were purposively selected on the basis of their expertise on issues the study sought to address. They were expected to provide the roles and responsibilities of various stakeholders and actors in the conservation, management and implementation of community participation methods. They were also expected to highlight possible and existing conflicts and potential causes of conflicts in the implementation of the participatory methods.

A pilot study based on the objectives of the research was undertaken. This was done prior to the actual process of data collection. According to Mugenda and Mugenda (2003) a sample size of 10% of the sample is considered appropriate for the pilot study. The researchers sample size was 378

therefore the pilot study required 38 people for pilot study. Validity of the research instrument was done in two different ways; one way was to apply randomized procedures in selecting sample units. Randomization helped in eliminating any biasness in the selection of the sample and therefore, all responses reflected the true image of the targeted population. The results from the two sample instruments were compared and using the formula by Amin (2005) the coefficient of validity was computed. And a value of 0.8 which was much above the recommended CV of 0.6 was appropriate for the study therefore the research instrument was considered valid.

After data collection, the items from the questionnaire were coded and scored to yield quantitative responses which assisted the researcher to generate answers to the research question. The responses from interview schedule analyzed, and organized into appropriate themes and discussions made appropriately, to give a meaningful inference of the study phenomenon. Data analysis involved computation of descriptive statistics. Descriptive statistics analysis involved calculation of frequencies and percentages of the responses without giving detailed explanation of the values computed. Descriptive analysis therefore provides a general description of the collected responses. The findings were depicted in tables, graphs and charts. Qualitative data was organized into themes and topics of discussion and described qualitatively.

The study ensured confidentiality of information provided by each respondent by making sure that it is not passed to third party or not used against him or her. Before conducting the research, an introduction letter was obtained from the University to ensure that the respondent understands fully the purpose of the study.

4. Findings of the Study

Out of 378 questionnaires only 366 questionnaires were correctly filled giving a response rate of 96%. According to Mugenda and Mugenda (2003) a response rate of 70% and above is considered appropriate for the study analysis. The background information was important in understanding the respondents more and it was of significance in interpreting their responses. The background information that were of significant to this study were; gender of the respondents, age, level of education, occupation, income and number of years of stay in that locality.

4.1 The Local Community's Dependence on Forest Resources

The objective of the study was to establish the local community dependence on forest resources. Since most forest communities utilize forest land for agricultural purposes such as planting crops and grazing livestock. The researcher sought to know the size of land owned by the respondents. The study established that majority of the respondents 239(65.3%) owned between 0.25- 1 actress of land, 110(30.1%) owned less than 0.25 acres, 6(1.6%) owned between 1-3 acres, similar proportion owned between 3- 5 acres, 2(0.5%) owned between 5-8 acres, and 3(0.3%) owned over 8 acres. Agriculture is the major economic

activity of the local communities in this area; hence land size is the major determinant of their economic status. Koenig *et al.* (2011) stressed that it was socioeconomic status of the locals surrounding the conserved forested area which determine the extent of timber harvesting in Australia. Hence, in this case if the local community is not involved in the forest conservation efforts, and management practices that allow the community to benefit from the forest adopted, the conservation efforts could proof difficult. Sanchez *et al.* (2005) and Geist and Lambin (2002) pointed out that farming in forest peripheries is mainly subsistence characterized by slash and burn, accounting for two thirds of deforestation FRA , FAO (2010).Palm *et al.* 2010 notes that the deforestation is caused by poor farmers who have limited resources who have to move to other pieces of land to grow food crops.

The researcher further inquired from the respondents whether the proceeds from their farms satisfy their food requirements. Majority of the respondents 199(64.0%) said that the proceeds from their farms does not satisfy their food requirements while 112(36.0%) meet their food requirements from their farm proceeds. This is supportive of the works of Sayer and Campell (2003) which found out that the small parcels of land owned by farmers do not satisfy their food requirements hence need to look for alternative means to survive. There is need for the government to make it possible for people to discover the large number of options that are accessible for alternative sources of livelihood. This means building an environment where knowledge and science assist people to expand and broaden their survival skills. Glimour (in Odoi 1999) believes that it cannot be anticipated that communities with high poverty levels cannot be engrossed in conservation if they have not been able to satisfy their basic needs.

4.2 Products they obtain From the Forest

The respondents were asked the products they obtain from the forest. The researcher wanted to find out the benefits they derive from the forest. This was intended to gauge what the community considered very important and how it affected conservation initiatives in Maasai Mau forest. The majority 184(50.5%) said they cultivate in the forest so as to satisfy their food requirements. 89(24.3%) said they obtain firewood from the forest. 67(18.3%) said they obtain fodder for their livestock from the forest. This could be due to the fact that most of the people who live in the Maasai Mau are pastoralists and therefore they are mainly cattle keepers. 13(3.6%) and 12(3.3%) of the respondents obtain timber /poles and charcoal respectively. Despite the strict rules and regulations by the government regarding burning charcoal, some people still do it. This shows that the local community greatly depends on the forest for a source of living and if they are given adequate training on how to take good care of it, they will gladly do it so that they can keep the forest alive for future benefits to coming generations. Although farming and cultivation done in the forest is mainly subsistence, (FAO 2010) most farmers practice shift cultivation which may be due to loss of soil nutrients and lack of resources needed to increase crop productivity thereby increasing deforested land (Palm, *et al* 2010). They number of people who obtain timer and burn charcoal in the forest is in

conformity with the (FAO 2009) report that indicated that wood products from tropical countries are used as fuel and charcoal making. Charcoal is also sold to earn money. If these activities are not carried out sustainably, it not healthy to the forest. The IBRD/WB in Odoi (1996) notes that poverty and dependence on the environment by the local community has a direct link and that reducing poverty is mutually crucial and indispensable for environmental sustainability.

4.3 Poverty is the Key Driving Factor in Forest Destruction

The respondents were asked if they think that poverty is the key driving factor to the destruction of the forest. 227(62%) of the respondents agreed that poverty is the key driving factor to forest destruction while 139(38%) disagreed. This study established that when the local community engages in these activities as mentioned earlier, they would be able to earn some income from these activities which would improve their living standards. When these activities are sustainably managed it would be able to enhance the economic conditions of the of the members of the local communities which would help reduce poverty in the long run. From this study, it is clear that those who do not participate in the management of the forest have low income. A greater number (56%) of those who are not actively involved in the conservation of the forest are low income earners. However, for conservation initiatives to be successfully undertaken, the community members would need more education as to the areas in which they can participate in and how to manage it sustainably.

As earlier found out in this study most of the respondents have low education and with the majority being farmers. For communities of this nature, land is of great priority to them. One of the respondents commented that they should be given some portion of the forest to farm on because that part is very fertile. It is however, necessary for them to be made aware of the importance of conserving the forest and the areas where they can participate to derive some benefit. It is through this that sustainability in forest use can be achieved. (Sayer and Campbell, 2003). According to (UNDP, EU, DFID & WB 2002) the conservation and management of the environment cannot be discussed independently without linking it with other economic issues the most prime and important idea is that , those who are poor should be considered as a component and not as a problem . The needs and concerns of the poor should be incorporated.

4.4 Do your Activities Aim at Forest Conservation

The respondents were asked if the activities they carry out in the forest aim at conservation as they try to improve their standards of living. 223(61%) of the respondents said No while 142(39%) said Yes. Berkes *et al.* (1999) propose that in order to have a successful resource conservation and management, there should be a provision of economic enticements intended for local people to safeguard the resource. This study established that people do not mind whether their activities are detrimental to the sustainability of the forest resource or not. Their main objective is to satisfy their daily needs. It is essential for the local

communities to engage in activities that aim at conserving the forest as they struggle to enhance their living standards. These include creating their own conservation norms in line with that of the national policy, embark on community education to create awareness of the importance of the forest and sanctioning community members whose activities damage the aim of the creation of the forest reserve (Domfeh 2007).

During the key informant interview the head of KFS it was revealed that the major economic activity of the people living around the forest is farming. He was of the opinion that there is a really close relationship between poverty and environmental degradation. He went further to explain that people were forced to cut down trees for timber, firewood, and farmland. He explained that community participation can bring about poverty reduction because people can sustainably use the forest resource without depleting it. He also said that funds are generated through selling the seedlings and people are being encouraged to venture into commercial forestry. The farmers benefits from such ventures without necessarily harming the forest. The funds obtained also can be used to sponsor forest conservation by empowering the local community. During the focus group discussion, members of the local community aired their views that poverty among the locals is the major cause of forest destruction and it can be reduced by empowering the local community to engage in other economic activities.

4.5 Conclusions

Majority of the people of Nkareta CFA are not active members of Mau forest conservation. Most of them did not want to be more involved in conservation initiatives due to lack of direct benefits from conservation initiatives. The perception held by the members of Nkareta ward is positive in relation to the efforts to conserve the forest. Since they are the major stakeholders, they should be championing the conservation initiatives. Community members who have joined Mau Forest Conservation participate in various forest conservation activities such as; reforestation activities, seedlings production, coppice production, pruning forest trees, pruning forest trees and thinning. Community members also participate in forest management, forest governance and sustainability and increase in forest cover. These initiatives are important in enhancing local community to feel that they are part of the project, since they are not only involved in forest conservation activities but they also take part in decision making process.

Most members of Nkareta ward are farmers, hence they derive their livelihood from land, the major challenge is that most of them own small parcel of land that could not sustain their food requirements. To supplement food supply from their farms, majority of the respondents' dependent on forest land to cultivate food crops, obtained fodder for livestock, obtain firewood and building materials. Since members of Nkareta ward derive benefits from the forest, the conservation effort succeeds since the community around see the initiative to be of important to them.

4.6 Recommendations

The researcher made the following recommendations based on the findings; Since local communities majorly depend on agriculture as a source of living, improved agricultural practices need to be introduced to the farmers in Maasai Mau which will go a long way in solving problems related to low yields which are a result of nutrient exhaustion which causes them to move to new land. To reduce their dependence on the forest, the government can introduce alternative sources of livelihood to the people For example, boosting small business enterprises by providing low interest loans.

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