COMMUNITY PARTICIPATION IN NATURAL RESOURCES MANAGEMENT: A CASE OF NATURAL FOREST MANAGEMENT IN MANYONI DISTRICT

By

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A Dissertation Submitted to the Institute of Development Studies in Partial Fulfillment of the Requirements for the award of Master of Science in Development Policy (MSc DP) of Mzumbe University

2015

CERTIFICATION

We, the undersigned, certify that we have read and hereby recommend for acceptance by Mzumbe University, a dissertation titled **"Community Participation in Natural Resources Management: A case of Natural Forest Management in Manyoni District"** in partial fulfillment for the award of the degree of Master of Science in Development Policy of Mzumbe University.

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DIRECTOR, INSTITUTE OF DEVELOPMENT STUDIES

DECLARATION

I **Kidenya Eliutha Augustino** declare that this dissertation is my own original work and that it has not been presented to any other University for a similar or any other degree award.

Signature _____

Date_____

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DEDICATION

I would like to dedicate this work to my parents, my beloved wife and my children.

LIST OF ABBREVIATIONS AND ACRONYMS

AMCOS	Agricultural Marketing Co operatives
ATTT	Association of Tanzania Tobacco Traders
CBFM	Community Based Forest Management
CBNRM	Community Based Natural Resources Management
CFR	Community Forest Reserves
CIFOR	Center for International Forestry Research
CRDB	Cooperative and Rural Development Bank
ELCT	Evangelical Lutheran Church of Tanzania
FAO	Food and Agricultural Organization
FBD	Forest and Bee Keeping Division
IUFOR	International Union of Forest Research Organization
IUNC	International Union for Conservation of Nature
JFM	Joint Forest Management
LAFRs	Local Authority Forest Reserves
MNRT	Ministry of Natural resources and Tourism
NFP	National Forest Programme
NFRs	National Forest Reserves
NGO	Non-Governmental Organization
PFM	Participatory Forest Management
SLEP	Sustainable Livelihood and Environmental Program
SOFO	State of World Forestry
TFCG	Tanzania Forest Conservation Group
TLTC	Tanzania Leaf Tobacco Company
Tshs.	Tanzanian currency (Shillings)
UNCED	United Nations Conference on Environment and Development
UNEP	United Nations Environmental Programme
USD	United States currency (Dollar)
VECs	Village Environmental Committees
VEO	Village Executive Officer
VLFRs	Village Land Forest Reserves

VNRCs	Village Natural Resources Committees
WEO	Ward Executive Officer

ABSTRACT

This study on community participation in natural resources management was carried out in Manyoni District. Specifically the study focused at community involvement in natural forest management, the practice of participatory planning in the lower local governments, and the factors that influence community participation in natural forest management in the study area.

The study was a cross-sectional design. A total of 85 community members and 15 key respondents were selected for the study drawn using purposive and random sampling techniques in the selected wards. Interviews, questionnaires, personal observation, focus group discussions were used to collect primary data, whereas documentary review was used to obtain secondary.

Data analyses used computer aided programs MS Excel and a Statistical Package for Social Sciences (SPSS) for quantitative data, whereas content analysis was used to analyze qualitative data.

The study found that participation in natural forest management was low as it was driven by the tobacco companies with only two small community groups involved in natural forest management; there was a relationship between demographic characteristics, economic activities, institutional set-ups, enforcement of rules and regulations and participation of the community in natural forest management.

On the other hand, lack of incentives to the community members involved in natural forest management, uncontrolled immigrants, limited training and information flow, shortage of qualified staff, ineffective institutional frameworks were some of factors that influence community participation in natural forest management.

This study recommends regular training to the local leaders at Village and Ward levels, collaborative programs by the government, NGOs, FBOs to facilitate participation in planning, monitoring and evaluation of natural forest management activities as well as devolvement of forest extension services to the ward and village level in order to enhance participatory natural forest management.

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CHAPTER ONE
INTRODUCTION TO THE STUDY

1.1 Introduction

This chapter introduces the study in seven parts namely; background to the problem, statement of the problem, objectives of the study, research questions, significance of the study, scope of the study and the study limitations.

1.2 Background to the Problem

Since the 1992 Rio de Janeiro Conference on Environment and Development, the United Nations Environmental Programme (UNEP) Governing Council noted with great concern of spreading desertification which reduced nearly 21 million hectors of fertile soil to near zero productivity each year, while 6 million hectors became total desert (UNEP, 1989).

In sub-Saharan Africa forests are rapidly declining due to pressure from population increase and other land uses, although most of the East African countries have enabling climatic system for forest growth, only about 10% of land is forested(Cotula *et al*, 2009). This puts much strain on the natural forests that are supposed to support over 50 million people all depending on the natural resources emanating from them (ibid,2009).

FAO, 1990 contended that the Forestry Resource Assessment put Uganda as one of the countries with reasonable forest cover compared to her East African neighbors. However, FAO warns that this state is quickly dwindling due demand for more farmland, increasing population, and the need for forest resources to maintain both rural and urban lives (FAO, 1990)

In Tanzania, estimates by the Ministry of Natural Resources and Tourism showed that there are 35.2million hectors of forests and woodlands (URT,2012); this is about 39.9% of the total land area; and 18 million hectors of this total forest area have been gazetted as forest reserves and protected areas (ibid,2012)

Community Based Natural Resources Management is an approach under which communities become responsible for managing natural resources (forests, land, water and biodiversity) within a designated area (CBNRM Net,2008). The community often assisted and monitored by outside technical specialist utilizes and protects natural resources within established guidelines according to a detailed, mutually agreed plan. The active participation of stakeholders in natural resources decision making and use increases economic and environmental benefits (ibid, 2008).

In this management approach the critical investment areas include introduction of viable management systems, securing legal control over resources and resource utilization, improving environmental governance and information management (CBNRM Net, 2008).

Zulu, 2012 articulated that population growth and economic development increase pressure on resources (land, water, forest, and biodiversity) in most developing countries; limited government capacity to enforce laws and regulations has compounded to management problems particularly regulations which are inappropriate to social, cultural and ecological context thus leading to failure of the government attempts to conserve resources through top-down regulatory frameworks (Zulu, 2012).

Alternatively; participation gives the community partial or full control over decisions regarding natural resources like water, pastures, forests, communal land, protected areas about fisheries; natural resources managers have found that increasing the role of the local people in managing their natural resources is the most appropriate solution (FAO,2013).

Community forestry is believed to be associated with South and South East Asia; however, the legal, political and cultural settings for community forestry vary widely and the terms cover a wide range of experiences and practices (Wily, 1997).

Participatory forest management in Manyoni district was formerly planned to be carried on through involving the communities in the selected wards within which about 3,051Ha was set for community Forestry. The forests targeted were in Magasai and Makanda villages with 627.1ha and 554.7 respectively both in Makanda ward (H.Omari, [Personal interview] January, 2014)

The other community forestry were meant to be established at Sasilo village (820.8 ha) and Mpola village in Nkonko ward (591.2) all of which are in Manyoni East constituency, whereas for Manyoni West constituency Mbugani village (457.2 ha) Idodyandole ward was considered for the program (ibid, 2014).

1.3 Statement of the Problem

Following the failure of centralized resource management, community based natural resources management is widely seen as the solution to deliver both the ecological sustainable resource use and social goals of poverty reduction; and more relevant equitable ,efficient, and inexpensive environmental governance (Agrawal,2005).

Community participation in forest Management has existed in Tanzania for a long time but in small scale. Trees of certain species have been protected and managed in some regions like Tanga, Rukwa, Kilimanjaro and Shinyanga for traditional reasons and small patches of forests are commonly retained by various tribes and are used as venues for traditional rituals such as initiations, prayers, and fortune telling (FRMP, 1995).

Despite the rapid ascendancy, discursive appeal and saying power of community based natural resource management approaches in developing countries; a paradoxical gap persists between theory and practice/reality (Blaikie, 2006)

The fact that nothing has been documented on the practice of community participation in conserving and managing natural resources in Manyoni District where natural forests are vulnerable to tobacco growing, livestock keeping and the pressure exerted by immigrants from Shinyanga, Tabora and Simiyu regions, a study to assess community participation in natural forest management could not be avoided.

1.4 Objectives of the Study

1.4.1 General Objective

To assess the participation of the community in natural resources management particularly natural forests.

1.4.2 Specific Objectives

i. To examine how the community participate in natural forest management in the study area.
ii. To assess the practice of participatory planning by the local levels of government in forest management in the study area.
iii. To identify factors that influence community participation in natural forest management in the study area

1.5 Research Questions

i. What are the ways in which individuals and the community members involve in natural forest resources management?
ii. How do the local levels of government practice participatory planning in forest management?
iii. What are the factors that influence community involvement in natural forest management in the study area?

1.6 Justification of the Study

The study sought to ascertain the enhancement of sustainable natural resource management, natural forest management in particular as one of the most promising options of combining community based natural resources management with rural development, community empowerment and poverty reduction objectives.

The study will provide suggestions to the local authorities, planners, policy makers, and institutions on how community participation should be improved and thus increase the contribution of natural forests to local livelihoods, poverty reduction, and the national economy.

1.7 Scope of the Study

The study focused on community participation in natural forest management with respect to access to information, involvement in the practice and the factors influencing the community and the lower local authorities in enhancing community based natural resources management. The target population was the community (aged 18 years and above) in selected wards of Mgandu, Mitundu, and Mwamagembe that are endowed with natural forests.

1.8 Study Limitations

This study encountered some limitations; some respondents hesitated to respond to the interviews as their activities are a threat to the sustainability of natural forests; for examples charcoal makers due to the fear of legal measures against them. This made the researcher spare more time to be friend with them as a customer in order to collect data from this group.

Some respondents asked for money in order to participate in the study, the researcher had to explain that the study is meant for academic purposes therefore he asked for their cooperation in order to accomplish the purposes.

Time constraints is another limitations, the researcher study leave elapsed before the completion of the work this necessitated a seek for extension of submission of dissertation by the researcher which was granted upon payment of extension fees to facilitate the completion of the study report.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction:

This chapter forms the literature relevant to the findings of the study; the reviewed literature is presented in two major parts, the theoretical part and the empirical part.

The theoretical literature review conceptualizes basic terminologies mainly, natural resources, common pool resources, Community participation and participatory forestry. The part also provide a brief review on the state of the world forest in recent years, forest management and community participation, the institutional framework for forest management in Tanzania, and a brief description of community participation in Forest management in Tanzania.

The empirical part provides information depicted from community involvement in natural resources management from various corners related to the study, it also includes a review of empirical facts obtained from other areas, the challenges of community participation in Natural Resources Management, and thereafter presents the conceptual frame work of the study.

2.2 Theoretical Literature Review

2.2.1 Conceptualization of Key Terms

2.2.1.1 Participation

According to the Business Dictionary (2015) participation refers to the consultation in decision making, goal setting, profit sharing, team work and other such measures through which a firm attempts to foster or increase its employees' commitment to collective objectives.

Kallabaka (1989) defined participation as involving the empowering of people to determine, decide, plan, implement, control and evaluate all actions that affect their life. The World Bank (1995) defined participation as a process through which stakeholders influence and share control over development initiatives, and the

decisions and resources which affect them; the World Bank's Learning Group on Participatory Development (1995: 3).

A descriptive definition of participation programs would imply the involvement of a significant number of persons in situations or actions that enhance their well- being, for example, their income, security, or self- esteem (Chowdhury, 1996).

The World Bank further defines participation as a process through which stakeholders influence and share control over the development initiative, decision and resources.However the amount of literature and popularity and wide spread use of concept that would cover all its different ways of conceiving and applying it (World Bank, 2001).

Therefore in the development context, participation is a process through which all members of a community or organization are involved in and have influence on decisions related to development activities that will affect them. That implies that development projects will address those community or group needs on which members have chosen to focus, and that all phases of the development process will be characterized by active involvement of community or organization members.

The term participation is modified with adjectives, resulting in terms that can be used interchangeably such as community participation, citizen participation, people's participation, public participation, and popular participation. In their modern form, the concepts of community development and community participation took shape in the 1950s (Chowdhury, 1996). Kaufman and Poulin (1996) concluded that the utilization of non-professionals through citizen involvement mechanisms to address social problems has become more common in various places.

2.2.1.2 Community participation

The term community participation means some form of involvement of people with similar needs and goals in decisions affecting their lives. Hamdi (1994) defined, community participation as the process by which professionals, families, community groups, government officials get together to work out something preferably in a formal or informal partnership.

2.2.1.3 Participation and Empowerment

Post Marxian groups have viewed empowerment as a strategy for fighting the disempowering activities of both the state and the markets through collective mobilization of the marginalized groups (Stokke, 1998)

Laclan and Moufee (1996) cited by Kinyashi (2006) provided that empowerment of the marginalized requires transformation of economic and political relationships towards radically democratized society; in view of the above literature it can be argued that empowerment is all about providing ability to an individual or groups of individuals. On the other hand participation is about using the ability gained during the empowerment process.

Ibid, (2006) developed a link between empowerment and participation; he described empowerment as giving power or authority. Power therefore means ability, knowledge, and skills or capacity to do something according to the law or rules. Empowerment therefore means the process where in communities are equipped with the knowledge, skills, and resources sufficient and necessary for changing and improving the quality of their lives.

Cornwell (2002:28) cited by Kinyashi (2006) argued that enhancing citizen participation requires more than including people to participate, it further requires giving people access to information on which to base deliberations or mobilize to assert their rights and demand accountability. This study considered training and access to information as one of the important aspects to be taken into account in order for the community to participate in natural forest management, all the same accountability by the local institutions in enforcing by laws, rules and regulations to facilitate the process; in addition partnership was also a key aspect as it assures the availability of resources that are not within the reach of the community.

Ibid,(2002) asserts that empowerment is not only about the ability of the poor to go through all planning stages, use locally available resources and identify what external resources they need for the development process; but rather, in order to achieve genuine participation empowerment should help them to, understand the

rules and tactics that provide basis for development. The weaker participants need popular education, assertive training, building skills of argument, providing people with information about rights and policies they are being consulted of.

2.2.1.4 Common Pool Resources

Common pool resources are natural or human made resources where one person's use subtracts from another's use and where it is often necessary but difficult and costly to exclude other users outside the group from using the resource. Some common pool research areas include the forest, fisheries, wildlife, grazing systems, irrigations; agriculture systems as common pool resources. These resources can be managed and governed by a wide variety of institutional arrangements that can be roughly grouped as governmental, private, or community ownership (Ostrom, 2008).

Ibid (2008) sees common-pool resources as sufficiently large that, it is difficult but not impossible, to define recognized users and exclude other users altogether. Thus the resources are also referred as open -access that anyone can enter and or harvest and are therefore likely to be overharvested and potentially destroyed.

2.2.1.5 Community based Natural Resources Management

According to CBNRM Net (2008) Community Based Natural Resources Management refers to the management of natural resources under a detailed plan developed and agreed to by all concerned stakeholders where by the communities managing the resources have the legal rights, institutions and economic incentives to take substantial responsibility for sustained use of these resources and become the primary implementers assisted and monitored by technical services.

Community Based Natural Resources Management (CBNRM) is a term that describe the management of resources such as land, forests, wild life and water by collective, local institutions for local benefits (Roe and Nelson,2009).CBNRM takes many different forms in different locations and different socio-political and bio-physical contexts; it may be based on commercial uses of natural resources, such as managing wildlife for local tourism or hunting enterprises, or may be based on primarily subsistence uses of resources such as non-timber forest products. Ibid (2009).

Based on the above definitions, it can therefore be concluded that there has been a shift from highly centralized natural resources management towards more devolved models known very broadly as community based natural resources management; these CBNRM models focuses on strengthening locally accountable institutions for natural resources use and management, enabling local groups of people to make better decisions about the use of natural resources.

The involvement of the community in the management natural resources has several purposes such purposes include:

- Reducing the degradation of marine and terrestrial biodiversity,
- To address resource use conflicts,
- To improve the community's quality of life and provide opportunities for economic activities.
- It also seeks to improve governance through building stronger community institutions and increased community capacity,
- Ensures empowerment and voice to the communities which in turn provide a vehicle for strengthening local governance in other spheres of social and economic development.

2.2.1.6 Participatory forestry:

The processes and mechanisms which enable people with a direct stake in forest resources to be part of decision-making in all aspects of forest management, including policy formulation processes.

Participatory forest Management falls under two major types namely; joint forest management and Community based forest Management (Blomley and Said, 2009)

2.2.2 Theoretical Framework

The study is guided by the theory of community participation and empowerment put forward by (Wilcox *et al*, 1994); the theory provides a guide on effective participation and offers a comprehensive thinking about involvement, empowerment

and partnership. This theory further provide key issues and practical techniques for effective participation as it asserts that many attempts at community level fail because of two important reasons; organizations dealing with participation being unclear about the levels of participation on offer together with limited consultation with few options presented opportunities for active participation.

The theory therefore put forward the idea of ladder of participation with rungs ranging from information and consultation to substantial support for community initiatives. It further describes that participation is most likely when different interests are involved in project or program are satisfied with the level at which they are involved.

This study considers empowerment as instrumental in enabling the community to get power needed for them to participate in development initiatives. Participating individuals have opportunities to be empowered as they participate in certain development activities whether by being invited or by self-mobilization; in other words participation is another way of empowering the participating individuals.

2.2.3 The state of World Forests

FAO, (1997) report of the Global Forest Assessment 1990 updated to 1995 shows that deforestation in Tropical countries stood at the rate of 13.7million ha in developing countries. Nevertheless, it has been reported that there have been some improved trends in Forest utilization and products as well as forest management (ibid, 1997).

After the United Nations Conference on Environment and Development (UNCED) the Food and Agricultural Organization Committee on Forest reported that the International community was struggling to reach consensus on how to move forward through the Tropical Forest Action Plan and many countries were trying to find ways of halting increased deforestation rates (FAO, 2012).

The state of the World's Forests stresses that effective partnerships are the key to making progress toward sustainable development by partner organizations like the Center for International Forestry Research (CIFOR), the International Union for

Conservation of Nature (IUCN) and the International Union of Forest Research Organizations (IUFRO) CIFOR contributed a chapter addressing the critical issue of forests and poverty alleviation in developing countries (SOFO, 2003).

Some strategies with potential for contributing to poverty alleviation were identified that includes; people-centered forestry; removal of tenure and regulatory restrictions, return of public forests to local control; partnerships; integration of forestry into rural development and poverty reduction strategies (ibid,2003).

SOFO (2003) addresses several other important issues in depth, including chapters on the role of forests in sustainable use and management of freshwater resources; how the sustainable use of forests can contribute to conserving biological diversity; fiscal policies in the forest sector in Africa.

2.2.4 Forest Management and Community Participation

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 (Wily, 1997).

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 (Roche and Dourojeanni, 1984).

2.2.5 Institutional Framework for Forest Management in Tanzania

The Forestry and Beekeeping Division (FBD) of the Ministry of Natural Resources and Tourism (MNRT) is the government agency responsible for forest management issues on mainland Tanzania. Its primary role is to support implementation of the Forest Policy (1998) and Forest Act (2002). It has a mandate to manage and supervise national forest reserves (NFRs); collect revenue on forest operations and harvesting; issue licenses and permits and, thereby, regulate harvesting of forest

products nationally; promote forest development; provide training in forestry; and undertake forest research through the Tanzania Forest Research Institute.

In 2001, the National Forest Programme (NFP) was launched as an instrument for implementing the National Forest Policy and related legislation, using the principles of sustainable forest management (URT, 2001).

2.6 Community Participation in Forest Management in Tanzania

The Forest Policy and the Forest Act both provide a strong foundation and legal basis for community involvement in forest management. Loosely described as participatory forest management, two primary approaches have emerged since passage of the policy and legislation; Joint forest Management (JFM) and Community Based Forest Management (Blomley and Ramadhani, 2006).

According to the Forest Act (2002), there are six different kinds of forest tenure categories. National Forest reserves owned and managed by the central government through the FBD in the MNRT for conservation and productive purposes, Local authority forest reserves (LAFRs) forests managed at the level of District Councils under local governments as production and protection forests(The Forest Act,2002).

Village land forest (VLFR), occur on village land and are managed by the village councils on behalf of village residents. They are managed for both production and protection purposes, depending on their location, size, and composition.

Community Forest Reserves (CFRs) are found on village land and are similar in all respects to VLFRs, apart from the fact that their management is delegated by the village council to a group of persons within the community (such as a women's group or a group of charcoal producers). Private forests (PFs) are those forests owned by individuals or companies that have acquired land title deeds from the government (ibid, 2002).

TFCG (2011).Stresses that participation by local people is essential to any conservation effort.Forests are better managed when the women and men who live around them are involved in their management This signifies that the participation of

the community in management of natural forests and the environment at large can enhance environmental conservation and sustainable natural resources use at large

Table 2.1 The distribution of Community Based Forest management in Tanzania Mainland

Region	Number of Districts with CBFM	Number of villages with CBFM	Number of declared VLFRs	Number of gazetted VLFRs
Tanga	4	94	22	1
Morogoro	3	38	2	0
Iringa	7	122	82	50
Mbeya	3	37	0	0
Lindi	4	31	0	0
Tabora	3	22	22	0
Kigoma	3	32	9	0
Kilimanjaro	1	58	8	0
Mwanza	1	101	14	0
Shinyanga	4	348	45	0
Mara	2	45	37	0
Manyara	2	55	28	0
Arusha	1	10	3	0
Pwani	6	20	19	2
Kagera	1	15	8	0
Mtwara	1	25	0	0
Dodoma	2	0	12	0
Singida	1	35	4	0
Rukwa	1	14	14	0
Totals	50	1,102	329	53

Source: Forest and Bee keeping Division, (2006)

Table 2.2 PFM Spread in Tanzania Mainland

Total area of forest covered by PFM arrangements	3,672,854 hectares
Percentage of total forest area under PFM	10.8%
Number of villages involved in PFM	1,821
Percentage of total villages involved in PFM	17.5%
Number of villages with approved management plans or signed Joint Management Agreements	531
Number of districts with ongoing PFM processes	57

Source: Forest and Bee keeping Division Survey of PFM, (2006)

2.3 Empirical Literature Review

Across sub-Saharan Africa natural resources remain central to rural people's livelihoods where local norms and customs shape peoples everyday forms of resource use (Roe, Nelson, and Sandbrook, 2009).

A study by Roe and Nelson (2009) further found that the form of outreach and benefit sharing is also a characteristic of some protected area management in East African Countries. Nevertheless similar studies identified that in Southern Africa CBNRM is most clearly defined in terms of the devolution of rights, to make management decisions and capture benefits in relation to resources located on communal land. On the other hand the commercial use of natural resources often remain centralized, conditioned by government policies of colonial and post-colonial eras.

Topp-Jorgensen (2005) contended that data from similar studies undertaken by Tanzania researchers over the past decade indicated that a total of thirteen (13) forests sampled, recorded increase in basal area and volume in sites managed under community based forest management; and decline in the same variables in forests under government or open access.

This implies that community involvement in resource management is an important aspect in the efforts to enhance sustainable resource use for development.

Pfliegner and Moshi (2007) conducted a comparison of three matched pairs of similar forest under joint management and found to have higher numbers of live and

naturally dead trees, poles or withies and fewer cut timber tree compared with forests exclusively managed by the state.

In a study carried out in West Usambara Montane forests of Lushoto District in Tanga region (Blomley and Persha in press) the focus was to compare human disturbances, forest structure and species composition among the neighboring under varying forms of centralized and devolved management the findings portrayed that the communal forests operating outside of the state sponsored devolution reforms showed greater institutional autonomy and tenure security. Significantly, less recent illegal logging and marginally more effective monitoring and rule enforcement than both the co-managed and centrally managed forests (ibid).

This further stresses that community based resource management is a fundamental aspect in addressing illegal logging, helps to promote and enhance effective monitoring and rule enforcement as well as institutional autonomy which are the major pillars for enhancing effective community participation in development thus community involvement in natural resources management for this matter.

MNRT (2005) assessed the impact of the Hifadhi Ardhi Shinyanga (HASHI) project that worked in Shinyanga region with the objective of restoring the pasture lands locally known as '*ngitili*' enclosure among the Wasukuma pastoralists, it was found that the system of land management at individual, group, and village level resulted in rapid regeneration of pastures and re-establishment of large numbers of acacia woodland patches of between 378 000 and 472 000 ha of degraded land across the region.

The study further showed that the total monthly value of benefits from the re-establishment of '*ngitili*' per person was USD 11.7 a figure higher than the average consumption per person of usd7.1 per month in the rural areas of Tanzania at that time (Blomley and Said, 2009).

The study therefore implies that the involvement of the community in resource management through participatory approaches not only emphasize on delegation of management rights, responsibilities and returns to local institutions but also would

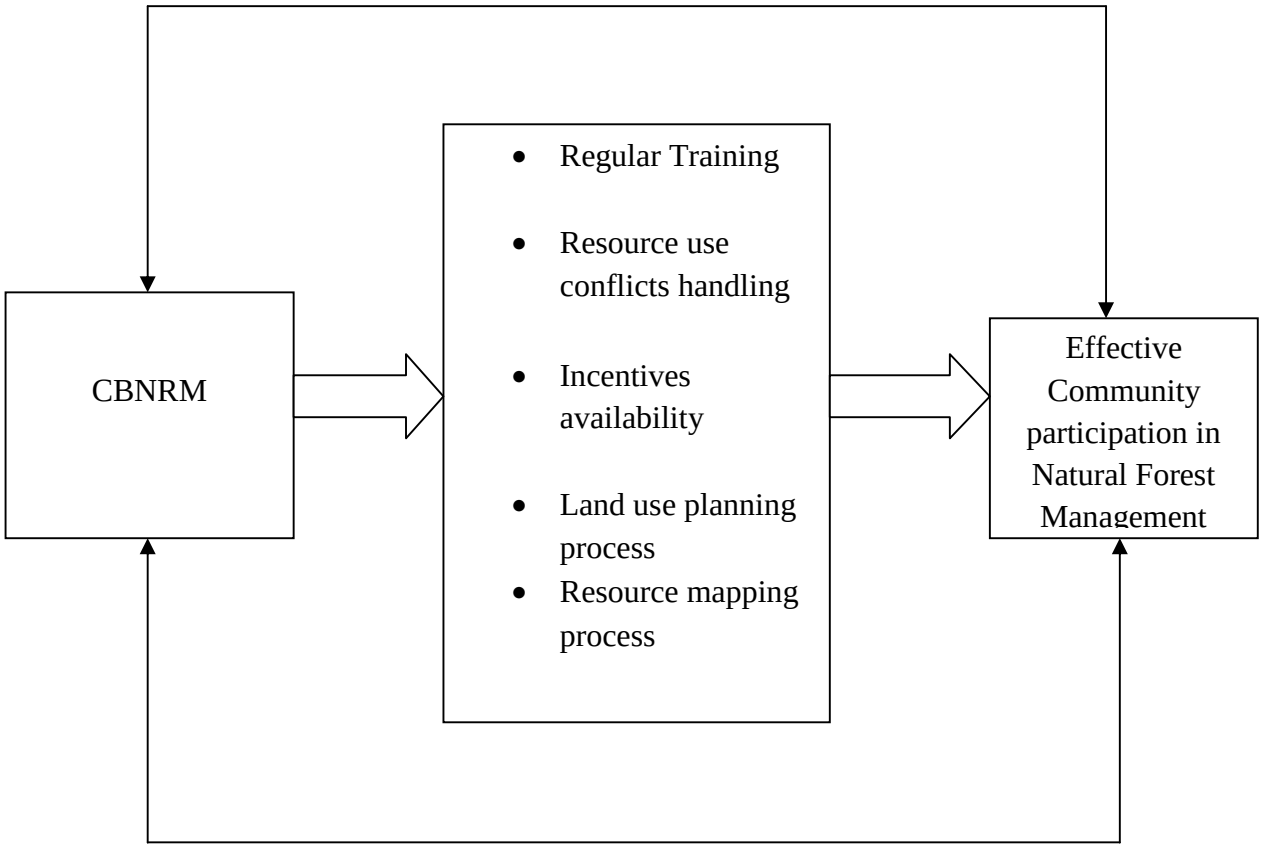
provide greatest opportunities for generating tangible and sustainable livelihood impacts.

Massawe, (2000) reported on the management of Mgori forest 44,000 ha in Singida District which before 1995 was government land, following its demarcation, the District Council failed to manage it. The government then turned to the community for help; through the 1995-1997 collaborative management between the District Council and the community, illegal harvesting, clearing for short term millet production, and illegal hunting of elephants were also contained.

2.4 Conceptual Framework

Conceptualization of the conceptual frame work illustrates the influence of CBNRM to effective community participation in Natural Forest Management. With the presence of strong Institutional setup at the local community level can enhance effective participation of the community members in managing natural forest. Also it is assumed that, constant Technical support in terms of regular training and facilitation services can equip the community with new knowledge, skills and tactics required for the management of Natural forests. CBNRM can improve organization of the diverse interest thus offset biasness among community concerns and ensure self-help spirit and sense of togetherness among community members in natural forest management. Community participation in Land use planning and resource mapping through joint efforts with other development actors can ensure the community capacity in setting and passing out by-laws, regulations, and enforcement of rules deemed desirable for effective natural forest management.

Figure 2.1 conceptual framework



Source: Researcher's own construct, 2014

CHAPTER THREE
METHODOLOGY OF THE STUDY

3.1 Introduction

This chapter presents the methodology used in the gathering and analysis of the study data, the research methodology shows how the study was conducted. It also provides the description of the study area, research design, study population, sample size, sampling techniques, data collection and analysis techniques.

3.2 The study Area

3.2.1 Location

Manyoni District is among the five (5) Districts in Singida region on the Central plateau of Tanzania, other districts are Ikungi Iramba, Mkalama and Singida; the district lies $6^0$20" South of the Equator and $34^0$35" East of Greenwich, with a total land area of 28 620 km^2 of which 28 619.4 km^2 and the remaining 0.96 km^2 are water sources; about 6 095.43 km^2 of the district is forest cover of which large part is natural forest, where as 0.48 km^2 is a fishing area and the game controlled area covers 16 199 km^2.

3.2.2 Administrative Set Up

The District is administratively divided into 5 divisions which are further sub-divided into 32 wards and 109 villages. Politically the District has two electoral constituencies namely Manyoni East and Manyoni West and each represented by an elected member of parliament (Manyoni District Council, 2011 as updated from time to time).

3.2.3 Demography

Manyoni is a multi ethnic district where the major tribes are the Wagogo and Wanyaturu; however there are some other ethnic groups like the Wataturu, Wakimbu, Wanyamwezi and Wasukuma. According to the 2012 Population and Housing census the district has a total of 296 763 people by which 146 030 were males and the remaining 150 733 females (URT, 2013).

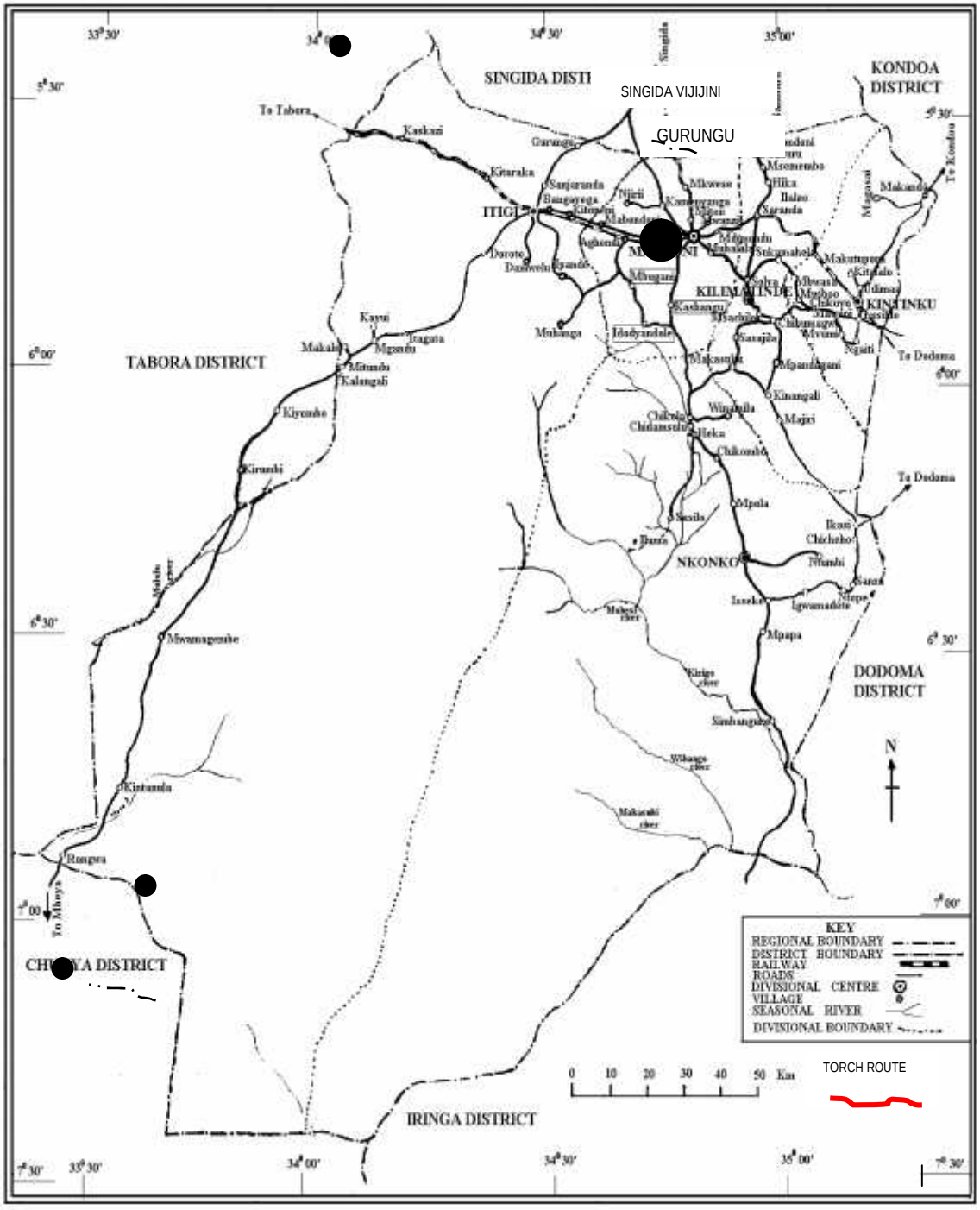
3.2.4 Main Economic Activities

The residents of Manyoni district mainly depend in subsistence farming and livestock keeping as their major sources of income (Manyoni District Council, 2011).The main crops are maize, groundnuts, sorghum, millet, sweet potatoes, rice and beans. Honey, Sunflower, tobacco, and sesame constitute the main cash crops. There are also some small scale quarrying and gypsum mining at Itigi area, the district has vast thickets well known as *Itigi Thickets* which provide a valuable source of high quality bee honey and building material.

Manyoni district has other numerous small and medium enterprises and a myriad of informal activities especially petty businesses such as food vending mainly occupied by women, shops, and guest houses, there is also an emerging sector that has absorbed many youth the motor cycle riding commonly known as '*Boda-Boda'* .A small section of the population are employed in the formal sector like the District council, Faith Based Organizations, Non-Governmental Organizations, and Banks.

The study chose Mitundu, Mgandu, and Mwamagembe wards that are located over 100 kms away from the district headquarters with a total population of 45 331 (15.27%) of the district total population by which males constitute 21 577 and the remaining 21 754 are females based on the 2012 National Population and Housing census. The wards are endowed with natural forests most of which is miombo woodland where subsistence farming and livestock keeping are increasingly growing.

Figure 3.1 Map of Manyoni District



Source: Manyoni District Council Profile,2011

3.3 Research Design

In this study a cross sectional design was used because it allows collection of data in more than one case at a single point in time and detection of patterns of association among variables (Bryman, 2004). The design also allows collection of qualitative and quantitative data at minimal cost (Agresti and Finlay, 2009); the design is flexible and economic (Kothari, 2004).

3.4 Study Population

Crowl (1993) defined the study population as a group of study units which the researcher is interested in gathering the information from as well as drawing conclusion on. The population under study included the community in villages within the selected wards aged 18 years and above, officials of the District Council especially in the department of Natural Resources and Environment, Local leaders (the Ward Councilors and the Village Chairpersons), Ward Executive Officers, Village Executive Officers, Tobacco growers' primary societies, as well as extension officers from tobacco buying companies.

3.5 Sample Size and Sampling Techniques

3.5.1 Sample Size

A sample size is the exact number of items selected from a study population to constitute a sample (Adam and Kamuzora, 2008).The sample size comprised of 85 respondents selected using simple random sampling community members from the villages under study, and 15 key informants purposively selected. [n= N/1+N (e) 2] where N=study population, n=sample, e=marginal error (10%).The key informants were mainly local leaders, and officials. This sample size represents the total population as it is larger than 30 and less than 500 thus sufficient for analysis (Akhtar, 2009).

The tables 3.1 and 3.2 respectively show the distribution of respondents from the study area.

Table 3.1 Key Informants involved in the Study

Key informants	**No:**
Agricultural Extension Officers	01
Councilors	03
Forest officers	01
Village chairpersons	03
Village Executive Officers	03
Ward Executive Officers	02
Others Actors	02
Total	**15**

Source: Survey Data, 2014

Table 3.2 Respondents by Ward

Ward	**Farmers**	**Herders**	**Staff**	**Charcoal producers**	**Primary society members**	**Others**
Mgandu	18	07	05	03	02	02
Mitundu	10	05	07	05	03	07
M'Gembe	08	06	03	03	03	03
Total	**36**	**18**	**15**	**11**	**08**	**12**

Source: Survey Data, 2014.

3.5.2 Sampling Techniques

The study employed two sampling techniques, purposive and random sampling.

3.5.2.1 Purposive Sampling

Purposive sampling was employed to choose Key Informants, officials and local leaders for the study; purposive sampling enables the researcher to choose respondents based on the desirable characteristics and variables related to subject being studied (Kothari, 2004).The researcher used this technique to obtain the 15 key informants which were the Natural Resources/forest Officers, Agricultural extension Officers, the traditional chiefs, the village and ward Executive Officers.

These were selected based on their expertise and the roles they play in the enforcement of rules and regulations and coordination of development activities.

3.5.2.2 Simple Random Sampling

Random sampling was employed to select community members who are basically the forest users. The sample focused on equal representation of various actors and the responsible department at the District Council. This includes 08 local leaders of the three wards, 29 crop growers and livestock keepers, 5 respondents from Non-Governmental Organizations, 5 Natural Resource Officers and Agricultural Extension Officers, 14 representatives from Tobacco growers Primary societies, as well as 2 traditional chiefs from the two wards.

3.6 Methods of data collection.

The study considered both primary and secondary data for the purpose of its accomplishment. Different data collection methods applied in this study are as explained here under;

3.6.1 Interview

This is a data collection method that involves the presentation of verbal or oral stimuli which is in turn replied orally/verbally (Kothari, 2004).It is a communication method in which the interviewee gives the needed information verbally during a face to face interaction. This method was preferred because the researcher aimed to obtain additional information to supplement to the information obtained through other methods.

A total of fifteen (15) key informants were interviewed to obtain detailed information, these were government officials who are involved in natural resources management, local leaders who are involved in the making and enforcement of by laws and regulations at the local level, traditional chiefs as well as representatives NGOs and FBOs, opinions on the factors influencing community participation and how to address the challenges were sought to these respondents.

3.6.2 Questionnaire

This is a data collection instrument that comprises of series of predetermined structured questions administered to the respondents that can either be filled in writing by the respondent or by responding to an enumerator (Kothari, 2004).In this

study closed and open ended questionnaires were administered to the respondents mainly the community members involved in diverse economic activities (livestock keepers, beekeepers, crop cultivators) and those who take part in resources management.

3.6.3 Observation

Adam and Kamuzora (2008) describe observation as a method by which data is obtained by the use of sense organs that is seeing by eyes, hearing through ears, smelling, testing and touching through the use of nose, tongue and hands respectively. The researcher employed a non-participatory observation to obtain data on the natural forests managed by the community by visiting the sites; participant observation was used by attending meetings of the village council and village environmental committees.

3.6.4 Focus Group Discussion

This is another method of data collection used in this study, this is a group discussion guided by the researcher which comprise of 6-12 participants. The researcher used this method to gather information from specific group of respondents, the study found a self-mobilized group which is involved in natural forest management and beekeeping (Upendo Group).

A discussion with a group of 6 youths 18-35 years to capture their perceptions and views on their participation in natural forest management and the challenges they face was conducted. Another group discussion was with 5 members of the steering committee of the self-mobilized group and 5 key informants; issues relating their activities, and the challenges they face were discussed and their suggestion on community participation in natural forest management were sought.

3.6.5 Documentary Review

The study obtained secondary data by consulting various relevant documentary materials as National Census and Ministerial reports, Manyoni District Council profile, journals, internet materials, and other literatures both published and unpublished.

3.7 Data processing and analysis

The data collected from primary sources were edited to identify errors and facilitate entry, later were coded, summarized and analyzed. Quantitative data were analyzed using computer aided programs- Microsoft Excel and a Statistical Package for Social Science (SPSS).The assessment of data from key informants was carried out using content analysis. The technique is systematic and applicable for compressing many words of text into few categories based on explicit rule of coding (Stemler, 2001).

3.9 Data Presentation

The study data are presented in tables, figures, plates, and text to facilitate interpretation and discussion of the findings.

CHAPTER FOUR
FINDINGS AND DISCUSSION

4.1 Introduction

The main aim of the study was to assess the participation of the community in the management of natural resources particularly natural forests in Manyoni District in order to suggest the measures for enhancing participation and sustainable resource use. The chapter is divided into five sections including introduction, demographic characteristics, activities related to natural forest management, local institutions practice of natural forest management, and the factors influencing natural forest management.

4.2 Characteristics of the Respondents

The characteristics of the respondents considered in this study included sex, age, marital status, educational level, and occupation. These variables were considered important in assessing community participation in natural forest management.

4.2.1 Age

The respondents were grouped into groups of 18 and 25 years of age, 26 and 25, 36 -45 years,46 and 55 years, as well as those above 55. This aimed to capture the attitudes, perceptions, and the influence they have on participation in natural forest management since they are segments of the population regarding with marked difference their activeness. The respondents were asked to locate themselves between the groups and the findings were as summarized in Table 4.1.

Table: 4.1 Age distribution of the Respondents

Ages	Number.	Percent
16- 25	19	22.4
26 -35	15	17.6
36-45	21	24.7
46-55	23	27.1
56-65	7	8.2
Total	**85**	**100.0**

Source: Field data, 2014

Table 4.1 provides that 22.4 percent of the respondents were of the age between 16 and 25 years of age, the following group was that of between 26 and 35 years with 17.6 percent, the group between 36-45 years constituted 24.7 percent of the respondents. Most of the respondents were of the age between 46 and 55 years, these comprised 27 percent of the respondents, only 8.2 percent of the respondents were above 55 years of age.

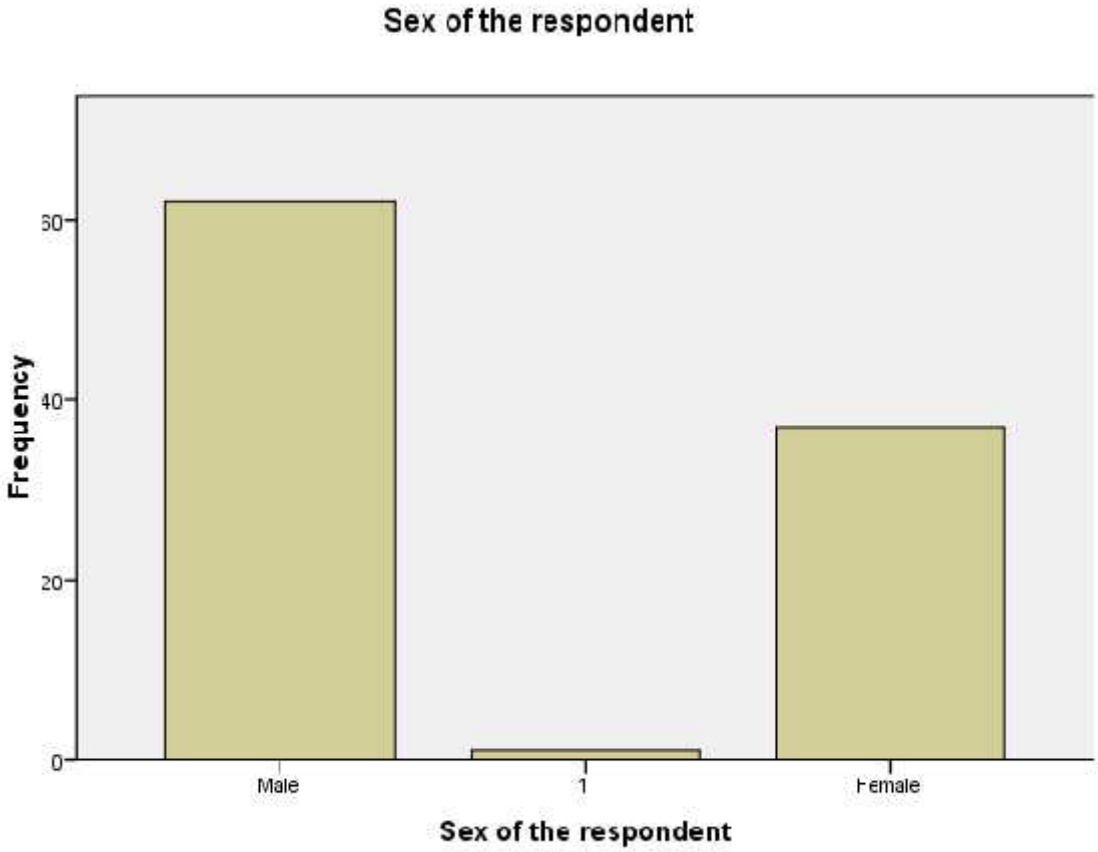
The findings show that respondents between 16-25, and 26-35 years were relatively a small group compared to those between 36-45 and 46 years while it was expected to be the opposite because it has been revealed that population structures in developing countries are broad based thus more people for young ages and small number of people for the aged groups of population. This was due to movements of those with 18-35 years to urban centers in search of opportunities to earn their income and living; the emerging transport (Boda Boda) might also have contributed to this.

This implies that community involvement in natural forest management in the study area is dominated by the people between 46 and 55 years most likely because they are the responsible group in the community and have different experiences on management of natural resources and their sustainable use.

4.2.2 Sex

This study considered that both men and women significantly influence the initiatives for enhancing involvement of the community in natural forest management in the wards of Mgandu, Mitundu, and Mwamagembe in Manyoni district in a different way which need to be captured. The findings on sex were as summarized in figure 4.1

Figure 4.1: Distributions of Respondents by Sex



Source: Field data, 2014

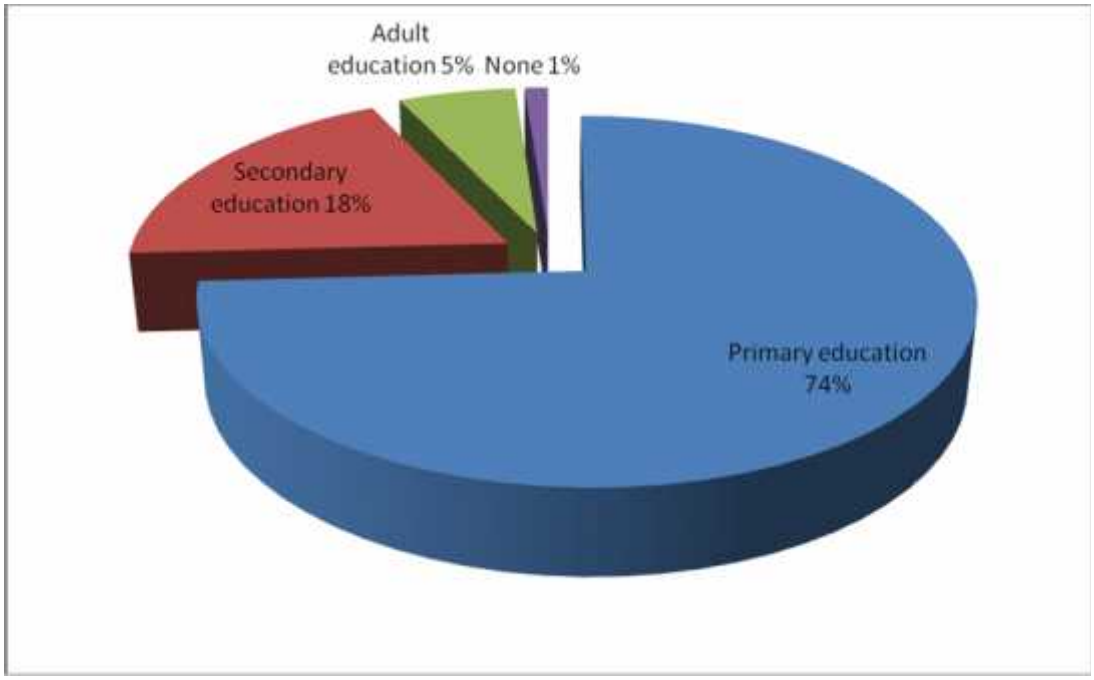
Figure 4.1 shows that 37 percent of the respondents involved in the study were women while the remaining 63 percent were men. Observations from the villages of Itagata, Kayui, Makale, Mitundu and Mwamagembe have shown that among the Wasukuma communities according to the traditions and customs women and men cannot sit together and discuss common issues, thus most of the decisions pertaining to natural forests management were dominated by men with few women involved. This was due to the multiple roles that women have both at the family and community levels. The findings are in line with a study done by Dauda *et al,* (2009) who reported that males dominated the irrigation activities by 75 percent due to cultural factors in a study done in Nigeria.

The socioeconomic characteristics of the respondents considered in this study were mainly educational level as well as the occupation of the respondents.

4.2.3 Educational Level of the Respondents

This study considered the educational level of the respondents who represented the population under study, respondents were asked to indicate their respective level of education in the questionnaires provided**.** Data on education aimed to ascertain if educational level has any influence on the participation of the community in the practice of natural forest management. The findings on educational level of the respondents were as summarized in figure 4.2

Figure 4.2 Educational Levels of the Respondents



Source: Field data, 2014

Figure 4.2 shows that 74 percent of the respondents had attained primary education, where as 18 percent of respondents had secondary education. This indicates that a large proportion of the respondents possess basic education, although there were some few respondents with secondary education. This may mean that the community members in the study area may have limited knowledge and skills on natural forests management. In his study on irrigation activities January (2010) reported that increase in education level leads to increase the knowledge on the management of irrigation activities, thus the educated people have more knowledge of management approaches that would result to sustainability of traditional irrigation canals.

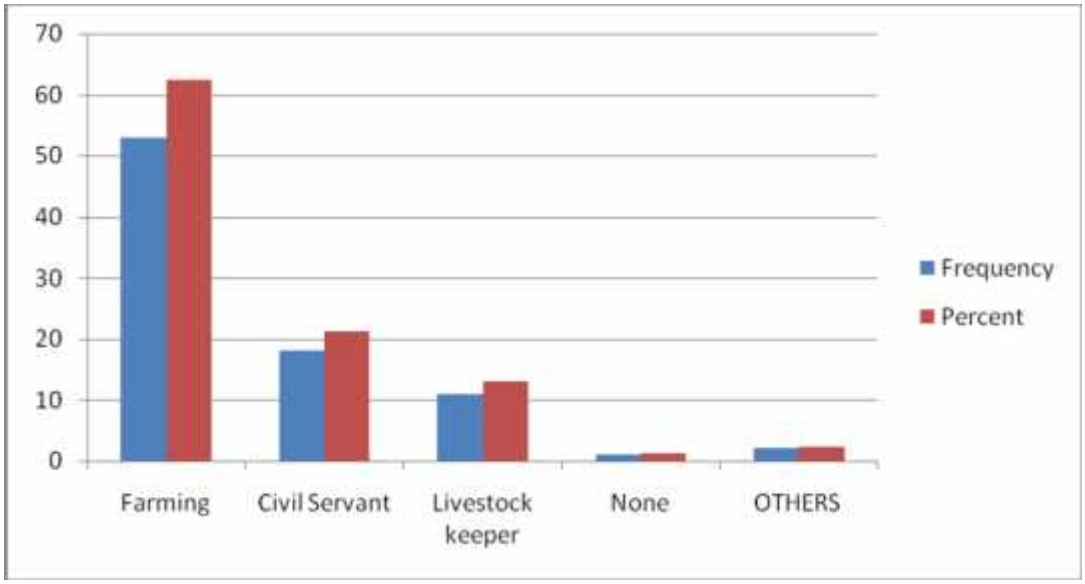
Also the findings are in line with those of Liberio (2012) who reported that most farmers in Tanzania have primary education and rely on traditional farming practices including irrigation.

The results further concurred with Okunlola et al (2011) who reported that education level is one of strong factors that influence the adoption of new techniques and technology by farmers. Thus formal schooling enhances the farmers' ability to perceive, interpret, and respond to new events in the context of risks. A farmer with more education level could be more likely to adopt new technologies than less educated farmer.

4.2.4 Occupation of the Respondents

The study respondents were asked to state their occupation in order to identify how their occupations influence their participation in natural forest management. The findings it was as summarized in figure 4.3

Figure 4.3: Distribution of the Occupation of the Respondents



Source: Field data, 2014

Figure 4.3 shows that 62 percent of the respondents were farmers, 12 percent of the respondents were the pastoralists, whereas civil servants and some local leaders most of who were the key informants constituted 29 percent and 2 percent of the

respondents were involved in other activities than farming, civil service and livestock keeping. Only 1 percent of the respondents represent a person who was not involved in any formal economic activity.

Observations showed that shifting farming and livestock keeping were dominant; small and medium tobacco farms were spotted indicating that there were demands of fuel wood for tobacco curing, while the slash and burn methods of farm preparations were common in the study area. These threaten natural forests as they lead to the development of patches of cleared land within the forest land, and the methods of farm preparation lead to extensive natural forest depletion.

It can therefore be concluded that the major occupation in the study villages of Itagata, Kayui, Makale, Mitundu and Mwamagembe is farming mainly subsistence farming and livestock keeping.

4.3 Community Participation in Natural Forest Management in the Study Villages

The researcher wanted to know whether the community participates in natural forest management in Mgandu, Mitundu, and Mwamagembe wards respectively. The criteria used check community participation included:

4.3.1 Natural forest Management Activities in the Study Area

In order to capture information on the initiatives that contribute to community participation in natural forest conservation; the respondents were asked to mention the activities that are related to natural forests management in the study area. The findings are summarized in Table 4.3.

Table 4.2 Activities relating to natural forest Management (N=85)

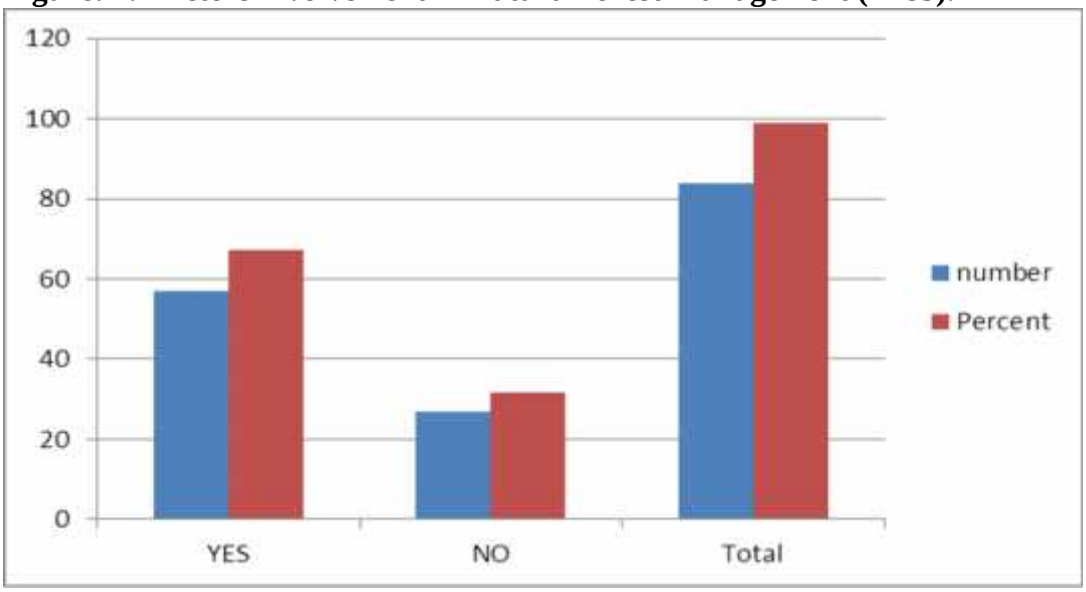
Activity	Number	Percent
Afforestation	24	28.2
Reforestation	13	15.3
Natural trees regeneration	38	44.7
Bee keeping	10	11.8
Total	**85**	**100.0**

Source: Field data, 2014

Table 4.3 shows that 44.7 percent of the activities related to natural forest management were natural trees regeneration, afforestation 28.2 percent, while reforestation activities constituted 15.3 percent, and the rest 11.8 percent comprises the beekeeping activities.

The researcher went further by asking respondents whether there were other actors involved in the management of natural forests by ticking “yes” if they are aware of the actors and “no” if they are not aware on the presence of such actors. The findings were as summarized in figure 4.4.

Figure: 4.4 Actors involvement in Natural forest Management (n=85).



Source: Field Data, 2014

Figure 4.3 shows that 68 percent of the respondents acknowledged the presence of other actors whose activities enhance natural forest management; while 32 percent of the respondents were not aware about the actors involved in the management of natural forests. Respondents who acknowledged the contributions from other actors in natural forest management were asked to mention the actors, they mentioned the tobacco companies (that is ALLIANCE ONE, ATTT, DIMON, and TLTC); on the other hand the AMCOs, ELCT, and Grassroots Tanzania were also mentioned.

4.3.2 Primary Associations and Natural forest Management in the study Area:

The study found that in all the villages visited during the study there was a primary association mainly the tobacco growers' Agricultural Marketing Cooperatives (AMCOs).An analysis conducted on the primary associations mainly the tobacco growers marketing cooperatives, the findings were as summarized in table 4.4

Table 4.3 Distribution of Primary Association in the study Villages.

Village	Association	Members			Total Population
		2012	2013	2014	
Itagata	AMCOs	152	137	126	6812
Kayui	"	126	150	52	7 333
Makale	"	434	434	231	4 396
Mitundu	"	270	265	100	9 289
M'Gembe	"	232	160	40	4 357
Total	**05**	**1 214**	**1 146**	**549**	**32 187**

Source: Field data, 2014

Table 4.4 shows that the primary associations (Agricultural Marketing Cooperatives) were dominant in all the villages under study. The findings indicate that there were 1 214 members of the primary associations in 2012, there was a slight fall in the number of the members to 1 146 in 2013, while the number of members of the associations fell down from 1 146 to 549 in the year 2014.Crises within the associations and between the associations, companies and the financing institutions might be one of the reasons for the growing decline in number of members.

This implies that few people participated in natural forest management; there has been a steady fall down of the members of the associations in the study villages. Thus contributing to low participation in natural forest management, since by virtue

of being members of the associations, tobacco growers were instrumental in natural forest management. Furthermore, in an interview with the ATTT Field Manager it was articulated that:

The members of the tobacco growers associations participate in the management of natural forests by undertaking such activities as conservation of natural trees, planting trees, conducting patrols in the conserved forest, establish fire breaks around the forest, and identifying any other illegal exploitation like pit sawing, illegal charcoal burning as well as indiscriminate cutting down of trees.

This implies that tobacco growers associations under the coordination of tobacco buying companies ATTT, TLTC, ALLIANCE ONE and DIMON dominated and greatly influenced the reforestation and afforestation initiatives in the study wards, with only three (03) notable exceptions in Makale and Mwamagembe and Kayui villages where the ELCT, the Grassroots Tanzania, Upendo Group were recognized by the local authorities and the community as being involved in the initiatives.

Nevertheless, in an interview with one of the respondents who was found raising a private tree nursery bed it was revealed that lack of incentives have contributed to little involvement by the local community in the initiatives. This is evidenced by his statement that:

"*We expected to be given money for raising the tree nursery beds, but up to this moment there are no signs of being provided with money from the AMCOs"*.

Observations have shown that the primary associations in collaboration with the tobacco companies were instrumental in natural forest conservation. One of the sites where natural trees are managed by the tobacco growers association under close supervision of the ATTT field officers was noted in Makale village. A picture taken was as shown in Plate 4.1

Plate 4.1:A section of Natural trees Forest Reserve in Makale village

Source: Field data, 2014

Plate 4.1 shows a section of the natural forest reserve managed by tobacco growers' primary association in collaboration with the Association of Tanzania Tobacco Traders in Makale Village. The community is cautioned not to exploit the natural forest reserve by putting signboards that identify the forest, in some other sections of the forest there are signboards restricting the community from setting fire and cutting down trees within the forest.

On the other hand, the records obtained from the two villages of Makale and Kayui noted a decline in community involvement in natural forest regeneration and afforestation through the Agricultural Marketing Cooperatives (AMCOs).In Makale village where the population was estimated to be 4 396 people in the year 2013, there were about 434 members of the primary association that is equivalent to only 9.8 percent of the total population. Similarly, the records obtained from Kayui village with a total population of 7 333 described that there were about 150 members of the primary association that is 2.04 percent of the total population in 2013, as of late the number has declined to only 52 (0.71%) active members in 2014.

This was assumed to have been caused by crises within the primary associations and the crises between the parties namely the associations, buying companies, the lending institution the Co-operative and Rural Development Bank (CRDB).

In addition; the study observations found that there were other undertakings that contribute to the management of natural forests in the sampled villages, one of such undertakings was the bee keeping site in a natural forest managed by the ELCT Mitundu Parish in Makale village, and part of it is seen in plate 4.2

Plate 4.2 The ELCT Bee keeping at Makale.

Source: Field data, 2014

Plate 4.2 shows a beekeeping undertaking in a section of an 80 hectors of natural forest land that is under the management of ELCT in Makale village along the Kayui- Mitundu road. The church members are involved in the Bee keeping project; they are instrumental in activities like hanging the bee heaves, pruning the trees, clearing the fire break, inspecting the boundaries of the forest. It is expected that the

techniques learned from the project would be replicated at individual towards ensuring the sustainability of the forest.

It was further found that the ELCT Mitundu Parish introduced an alternative project(dairy cattle keeping) under the umbrella of the Sustainable Livelihood and Environmental program (SLEP).The program aimed at improving the income of the community, to raising their standard of life and reduction of poverty through provision of dairy cattle to the villagers in the neighboring villages of Makale, Kayui and Mitundu; about 30 villagers that is 10 from each of the three villages were trained on controlled grazing as one of the alternative ways to conserve the natural forests.

In an interview with one of the beneficiaries of the program it was found that the program has enabled some beneficiaries to shift from relying on tobacco growing which is a threat to the natural forests and switch to milk business, she articulated that "*I have stopped from growing that laborious tobacco, as I can earn15- 20 liters of milk daily, and each is sold between Tshs 500 to 700 depending on the demand"*. If majority of the villagers will get such training and get involved in controlled grazing relying on forest through high dependency on tobacco growing will be reduced, thus an indirect involvement in forest management.

In Kayui village, a sense of self mobilization and functional participation was learned where the community form groups taking on different activities for specified purposes. The members of the community group in plate 4.3 as seen during a visit in the village.

Plate 4.3: A community group (UPENDO GROUP) at their forest site

Source: Field data, 2014

Plate 4.3 shows members of a community group (UPENDO GROUP) at their forest site. In April, 2013 the local community members mobilized themselves in order to overcome their socioeconomic problems by forming a group for management of the natural forest and beekeeping.

The members collected shares and entry fees and formed a group of 34 members (22 men and 12 women) with a steering committee made up of 10 members. Their central objective was to improve their income through honey sales (bee keeping) and arousing community awareness on natural forest management and environmental conservation. Their steering committee sought for an area approximately 80 hectors of natural forest for conservation and bee keeping.

Rules and regulations have been set up in order to ensure protection of the forest, that anyone found in the forest making charcoal will be confined to Tshs.100 000 penalty, for the one who is found cutting trees will be liable to a Tshs 50 000 penalty, the latter applies for anyone found grazing animals and the group sought for support from the village, ward authorities as well as the nearby primary court in enforcing the rules. This is a typical functional participation in which the communities participate by forming groups taking on different activities for specific

purposes. However, the study observed one challenge that the group faced was the use of traditional bee heaves that are made from tree barks thus leading to the debarking of trees which threaten the sustainability of natural forests.

In an interview with the Field Manager for ATTT at Makale sub-office the researcher was informed that there were about 500 000 tree seedlings waiting to be distributed to the AMCOS and the entire community for planting in the 2013/2014 season in all the villages of the two wards of Mgandu and Mitundu. He further articulated that according the principles of these associations every tobacco grower was obliged to plant 550 trees in every season; however, the turn up by the community especially registered tobacco growers was not promising.

The study therefore found that community participation in natural forests management is existing through a number of initiatives including natural forest conservations, reforestation/afforestation, controlled grazing, and bee keeping most of which were driven by the primary associations, one identified community group, the tobacco companies, one religious institution and as well as notable individuals.

4.4 The Practice of Participatory planning in Natural forest Management

4.4.1 Institutional set up for Natural forest Management

The study posed a question to ascertain the institutional set up for the management of natural forests in the study wards; when asked on whether there is any specific institution dealing with natural forest management at the village level, observations found a summary of the institutions provided in Table 4.4

Table 4.4: Distribution of social institutions in the study wards

Ward	Villages	Village Councils	Community Groups	AMCOs	Faith based Org.
Mgandu	Itagata	01	-	01	-
	Kayui	01	01	01	-
Mitundu	Makale	01	-	01	01
	Mitundu	01	-	02	-
M'Gembe	M 'gembe	01		01	-
Total	**05**	**05**	**01**	**06**	**01**

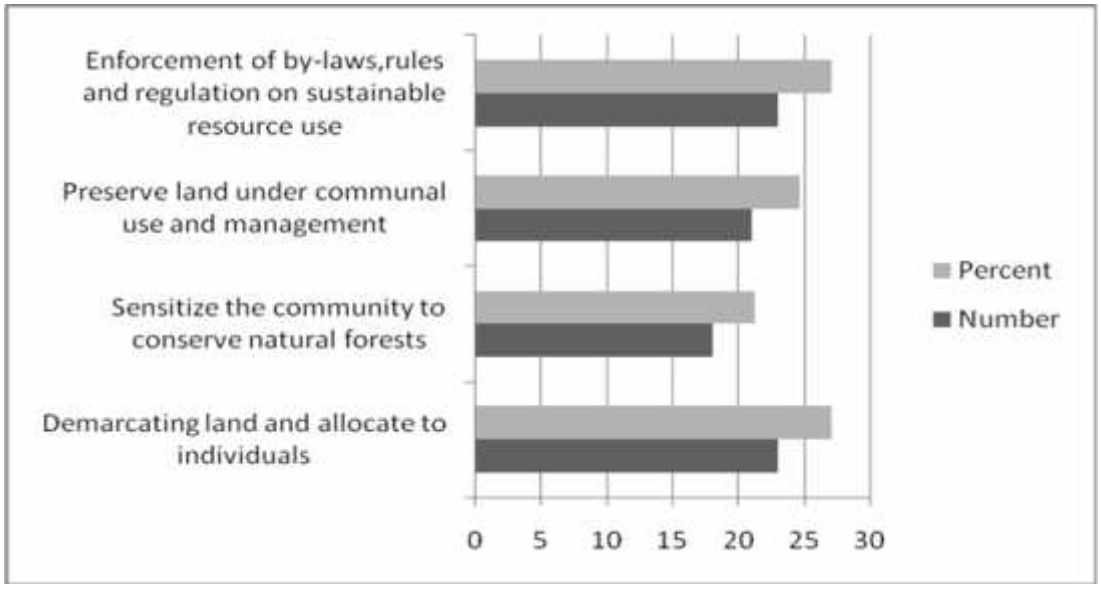
Source: Field data, 2014

Table 4.3 shows that the institutions ranged from the Ward level and devolved to the village and community level. Respondents identified the Village Councils (VC) Agricultural Marketing Cooperatives (AMCOS) a religious institution of the ELCT, and a Community Group (Upendo Group) as the institutions involved in natural forest management in the study villages.

4.4.2 The Village Council and its role in Natural forest/resources Management:

The study wanted to know the usefulness of the village councils in the management of natural forests in the study villages. In order to capture this, respondents were asked to state if there were specific committees and their functions in natural forest/resources management. The findings were as summarized in figure 4.4

Figure 4.5 Functions of the Village Council towards Natural forest Management



Source: Field Data, 2014

Figure 4.4 show that 18 (21.2%) respondents reported that the village committees sensitized the community to conserve natural forests. There were 23 (27.1%) respondents who pointed out that the committees were responsible for the demarcation and allocation of land to individuals. Furthermore 21 (24.7%) contended that the committees were responsible for the preservation of land for

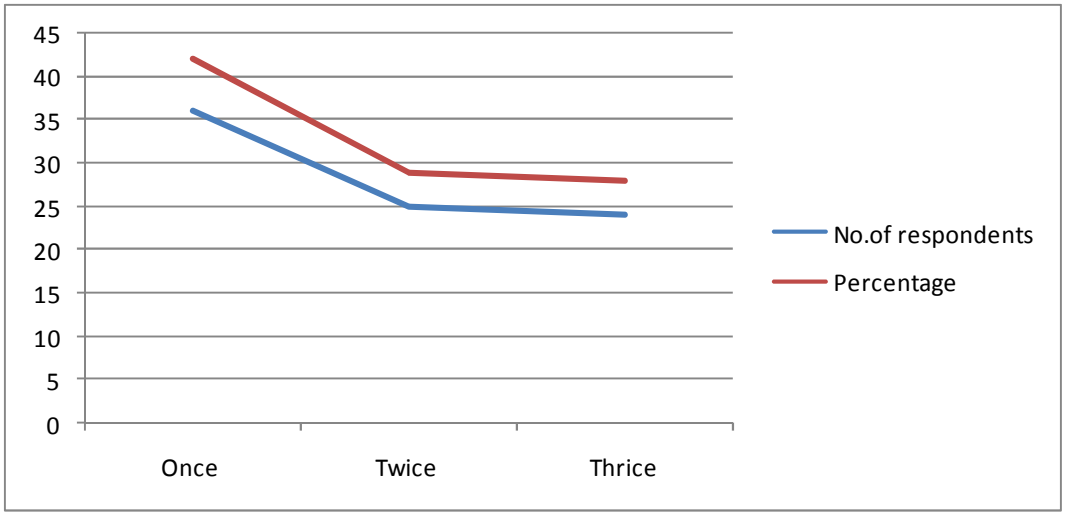
communal use while another 23 (27.1%) respondents articulated that the committees enforced by-laws, rules and regulations.

This implies that there were mixed perceptions among the respondents on the functions of the committees. Despite the fact that 46 (54.2%) reported that the committees were useful in demarcation of land and enforcement of by-laws, rules and regulations all together. It was further revealed that immigrants exploited the forests without the consent of the Village Environment Committees. In some instances respondents in the study villages confused the functions of the villages committees responsible for the natural resources management with those of the ward tribunal, and the council that resolve land disputes at the village level.

The role of the Village Councils through the formation of Village Forest Committees (which are generally now known as either Village Environmental Committees (VECs), or VNRCs is to develop forest management by-laws as provided in the Forest Act; these elected bodies are defined as accountable sub-committees of the overall Village Council and wider Village Assembly (URT, 2002).

The study further sought to examine if the community members were sensitized on natural forest management especially by the village council through its environmental committee; respondents were asked to state the frequency at which the committee conducted meetings on natural forest resources management, findings were as portrayed in figure 4.4

Figure 4.6 Meetings held the VECs (n=85)



Source: Field data, 2014

Figure 4.4 shows that 42 percent of the respondents said that the meetings were held only once in three months, 29 percent contended that meetings were conducted twice in every three months, while 28 percent of the respondents said meetings were held once in every month that is equivalent to thrice in a three months' time.

This implies that the local institutions, the village Natural Resources Committees for that matter have not been conducting meetings as provided by the local government authorities regulations that they should meet at least once in every month. Only 24 (28%) respondents contended that the meetings were on as per the regulations, unfortunately there were cases where even records of the meetings were not found. It seems that the 28 percent did not want to show that their village was not doing well.

It was further found that the village councils through the natural resources committee were only in a position to discuss applications made by the AMCOS,Community Groups, and the Religious Institutions that have been involved in natural forest management;

Besides, the AMCOS through the Management Board discussed with the tobacco companies on the amount of trees they expect to plant in a particular season and the size of the area for natural trees regeneration. Through interviews with representatives of the parties involved; it was found that there is the sharing of the

number of trees that are to be planted by the companies, the Associations, and the members of the associations who are the tobacco growers in a particular season.

The Tobacco companies have to plant 25 percent of the total number of trees agreed to be planted in a season, the associations take 35 percent, and the tobacco growers work on the remaining 40 percent of the total trees to be planted in the season.

In an interview with the Field Manager for the tobacco companies and the chairpersons of the AMCOS the researcher was also informed that:

The tobacco growers are either encouraged to conserve natural trees (natural regeneration) or to plant trees (afforestation); the participation of the community (tobacco growers for that matter) is through afforestation and natural regeneration.

The AMCOS management board estimate the number of trees to be planted by each member based on the number of active members, contract a group or an individual to develop a nursery bed, monitor the preparation of the nursery bed, ensure every concerned actor observe the seasonal calendar, and oversee the distribution of the trees seedlings to the members for transplanting; it was further contended by the field officer that; "*The monitoring of tree planting and natural regeneration is conducted by the tobacco company's officials and the AMCOS board; we would like the government to be involved in this"*

The researcher held a group discussion with the community group (Upendo Group) and found that; the group is divided into the Steering committee, the Finance committee, the security committee and the general assembly. The group conducts its activities under the close coordination of the steering committee.

The steering committee plan for the meetings, the meetings are held to discuss various issues related to the management of the forest. The study found that the group members take on different roles in the management of the forest; the security committee conducts patrols around the forest reserve on weekly basis every Thursday. Other members have a monthly routine of the bee heaves hanged within

the forest furthermore the chairperson asserted that: "*We have a special day for clearing the fire break around our forest reserve"*

The study found that the social institutions involved in the management of natural resources were conducting their activities in the manners that every member had a role to play towards meeting the objectives streamlined by the organization thus there was a sense of ownership of the processes by community members and thus participatory management identified.

4.5 Factors that influence Community Participation in Natural forest Management

In order to capture information on this, the respondents were asked to list the factors that influence natural forest management in the study villages, the factors were compressed into six major factors and the findings were as summarized in table 4.5

Table 4.5 Factors influencing Natural forest Management(n=85)

Item	Frequency	Percent
lack of incentives	18	21.2
shortage of qualified staff	14	16.5
lack of training and information flow	12	14.1
uncontrolled immigrants	15	17.6
malpractices(pit-sawing, charcoal making, bush fire setting)	13	15.3
ineffective institutions	13	15.3
Total	**85**	**100.0**

Source: Field Data, 2014

Table 4.5 shows that lack of incentives was a pressing factor for the community to participate in natural forest management, about 21.2 percent of the respondents pointed out that lack of incentives made community members fail to involve in the management of natural forests. 15 (17.6%) said that uncontrolled immigrants were another factor that negatively influence community participation in natural forest management. Furthermore 14 (16.5%) respondents said that shortage of qualified

staff contributed to low involvement by the community in natural forest management, while 12 (14.1%) respondents mentioned lack of training and information flow as a factor that negatively influenced participation in natural forest management by the community. Moreover, ineffective institutions and mal-practices also negatively influenced the participation of the community in natural forest management each with 15.3 percent of the respondents.

Uncontrolled immigrants were one of the factors realized to have negative influence on community participation in natural forest management in the study area; it was observed that there was an influx of immigrants from the neighbouring regions of Tabora, Shinyanga and Simiyu who are mainly the Wasukuma. These exerted pressure on forest and land resources due to greater demands of settlement areas, farm lands, and grazing lands. This was evidenced by the extensive clearing of the forest land for settlement and farming as spotted by the researcher presented in plate 4.3

Plate 4.3: Section of the Natural Forest cleared for Settlement & Crop growing

Source: Field data, 2014

Plate 4.3 represents a part of several acres of unrecognized natural forests depletion emerging as a result of uncontrolled immigrants in Kayui village. Similar cases were observed in the villages of Itagata, Mitundu, and Mwamagembe.

Population and Housing Census reports show that the population has been increasing over time in the study wards. There was an increase from 7 615 in 1978 to 26 126 in 2002 to 45 331 in 2012.The annual increase rates in Manyoni district rose from 2.2% in 1978 to 2.9% in 1988, and 3% in 2002 while the rate stood at 2.9% in 2012 (URT,1978,2003,2004,2013).This is in line with the findings by Ludovick, (2012) who observed that in the sub-catchments of Uluguru Mountains-Tanzania; high population density ensures that many water bodies are under severe and direct pressure from human activities in the catchments.

This implies that if not checked, population pressure resulting from immigration will result into enormous natural forest depletion in the wards of Mgandu, Mitundu, and Mwamagembe which are endowed with natural forests.

Ngalande (2002) reported that human population growth and density in Lusitu area, Siavonga district, Zambia have direct relationship with natural resources (woodland) degradation and deforestation. There appears a close relationship between a growing population and a growing demand for agricultural land and forest resources.

The study also found that lack of training and shortage of information flow influence the involvement of the community in the management of natural forests; the researcher administered some questions to the WEOs,and VEOs as to whether they have been trained on the management of natural forests, it was found that none of them has had attended any training. Similarly, the researcher held interviews with the village Chairpersons and the Ward Councilors; they all articulated that they did not attend any training on natural forest management.

This has an implication that community sensitization on natural forest management at these local levels of government were low, as the local leaders, Ward Executive Officers, and Village Executive Officers contacted all together were 18 that means 100 percent of this group had no training on the management of natural forests.

Lack of incentives for the community members involved in natural forest management also influenced the natural forests management initiatives in the study area. It was found that no incentives were provided to the community members to

arouse the spirit of participating in natural forest management. Interviews with some youth from the study villages provided that:"*the youth opted for casual works like construction works, and many others switched to Motorcycle riding rather than participating in natural forest management initiatives that do not pay"*. However, the researcher learned that plans were underway to provide incentives to registered tobacco growers involved in afforestation and natural forest regeneration.

During a seminar to AMCOs members by the TLTC in Mwamagembe village it was stated that every tobacco grower was obliged to plant 550 trees in every season; the environmental officer for TLTC articulated that: *"A registered tobacco grower who raises a tree nursery bed was to be paid US$ 11 per every surviving seedling, and those who transplant and take a good care of the seedlings be paid US$ 50 per a tree;*

She further asserted that:

The primary societies were to be provided with loans for raising nursery beds, more over the tobacco growers who undertake natural forest regeneration by preserving natural trees in a well demarcated area were to be given incentives of US$11 per a tree.

Therefore it can be concluded that the incentives are only meant to the registered tobacco growers, while it is not clear about the incentives for the local community participants in natural forest management, and yet the registered tobacco growers have not capitalized on the opportunity

Land tenure was another factor that influence community participation in natural forest management, in the rural communities of the study area land ownership is based on inheritance. This has been a source of conflicting interests when the village authorities try to identify, declare, own and manage forest resources on village land in ways that are both sustainable and profitable as per the legal basis provided by the Village Land Act (1999), The Local Government Act (1982) and Forest Act (2002).For example in Mitundu village a traditional chief contended that, "*There is an area which was previously set aside for natural forest conservation but*

reportedly became transformed into farm land". In line with this, Monela and Abdallah (2007) reported that the communal use of land was one of the contributing factors to forest resources depletion and deforestation.

In his study Ngalande (2002) reported that in Lusitu area, Siavonga District, Zambia most of the grazing land was communally owned which led to lack of sense of ownership by settlers. This resulted into overuse of the land in terms of overgrazing, over enthusiastic removal of fire wood and logging for house poles and illegal charcoal burning hence forest resources depletion and degradation.

Moreover, lack of qualified staff is one of the factors influencing community participation in natural forest management in the study area; the study found that most of the respondents when asked as to whether they receive technical services they seemed to have no access to such services. Over 70 percent of the respondents contacted during the study raised their concern on lack of extension services in the forestry sector both at the ward and village level. This implies that the community has been provided with appropriate skills and techniques necessary for undertaking forestry conservation activities; in an interview with the District Forest officer it was described that:

The villages under study are located over 100 kilometers away from the district headquarters, there is a great challenge on how to serve such geographically isolated areas with limited human, financial resources, and facilities; this has made it difficult for the department to serve the villages in terms of technical advice and extension services effectively with such limited resources.

Therefore the factors that influence community participation in natural forest management ranged from technical, institutional set up, ineffective by-laws, rules/regulations enforcement, uncontrolled immigrants, problems within the primary associations, and the absence of joint efforts between the local authorities and other actors involved in the management of natural forests.

CHAPTER FIVE
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the findings, conclusions, policy recommendations and lastly pointing out areas for further research. The chapter begins with a summary that highlights the major findings of the study, followed by conclusions drawn from the study that provide the main arguments developed. The policy recommendations section provides policy directions towards mitigating the challenges of community based/ participatory natural resources management, and the final section develop suggestions on the areas for further research.

5.2 Summary

The objective of this study was to assess the participation of the community in natural resources management in Manyoni district with a focus on natural forest Management in selected villages of Makale, Kayui, Mitundu, Itagata, and Mwamagembe in Mgandu, Mitundu, and Mwamagembe wards in particular. The study specifically aimed to examine how the communities participate in natural forest management, assess the extent to which the lower local authorities practice participatory forest management and identifying the factors that influence community participation in natural forest management.

The study found that community participation in natural forests management is on practices though in a small scale in Manyoni district especially in villages of Itagata, Kayui, Makale, Mitundu and Mwamagembe within the three sampled wards where by the practice is undertaken by the primary associations which are mainly Agricultural Marketing societies (AMCOs) formed by tobacco growers, the Religious Institution the Evangelical Lutheran Church (ELCT) Mitundu Parish in particular, Community groups, the Grassroots Tanzania and some few individuals have started replicating the management of natural forests.

The practices were mainly identified in Makale and Kayui villages where primary associations(AMCOS) are involved in managing natural forests under the close supervision of tobacco trading companies that provide extension services through their field Managers and extension officers.

The study revealed that community participation in natural forest management is being practiced in a small scale; it found that demographic characteristics were contributing factors towards community participation in natural forest management. It was found that respondents between 18-25 and 26-35 years were relatively a small group compared to the group with 46-55 years, therefore in the study area is dominated by this group.

This may be due to the fact that the people between 18-35 years are mobile moving from rural areas to urban centers in search for employment; not only that but also because of lack of incentives for them to participate in natural resources management. On the other hand many people in this group might have been attracted by the emerging sector of motorcycle riding commonly known as (*Boda-Boda)* that has attracted a quite a number of youth in various places of the country.

The study also found that few women participate in the natural forest management initiatives as 37 percent of the respondents were females, while males dominated with 63 percent of the respondents. Men were the dominant group in natural forest management initiatives in the study villages. This may be due to the influence of traditions and customs especially among the Wasukuma communities where men and women do not seat together and discuss various issues.

Also the findings showed that 74 percent of the respondents had attained primary education. This indicates that the majority of the respondents possessed basic education, thus community members in the study area are likely to have limited knowledge and skills on natural forest management.

Furthermore, it was found that about 62 percent of the respondents were famers, mainly involved in subsistence farming and livestock rearing. Observations showed

that shifting farming, tobacco growing, the slush and burn method of preparing farms threaten the sustainability of natural forests.

On the other hand it was found that the major economic activity in the study area was farming constituting 62 percent of the respondents' occupation, where as 12 percent were livestock keepers thus findings suggest that the major occupation in the villages of Itagata, Kayui, Makale, Mitundu and Mwamagembe was farming supported by livestock keeping.

This study further revealed that the community members in the study area undertake afforestation, reforestation, natural trees regeneration, and bee keeping activities in the management of natural forests. It was found that natural forest regeneration constituted 44.7 percent of the natural forest management initiatives followed by afforestation 28.2 percent, while reforestation and bee keeping comprised 15.3 percent and 11.8 percent respectively.

In another development the study found that community members acknowledge the presence of other actors in natural forest management, about 68 percent of the respondents said that there were other actors involved in the management of natural resources while the remaining 32 percent were found to be unaware about the actors involvement in natural forest management.

Further findings of the study showed that the primary associations of the tobacco growers (Agricultural Marketing Cooperatives) were dominant in the management of natural forests in the study villages. However, it was indicated that the number of active members of these associations has been decreasing in recent years from 1 214 in 2012 to 1 146 in 2013 and down to 549 by the year 2014 thus the number of community members participating in natural forest management by virtue of being members of the primary associations was steadily decreasing.

Natural forest management activities were the other aspect taken into account during the study, observations from the field found some activities like natural trees/forest regeneration, afforestation and bee keeping undertaken in the villages under study. It was found that reforestation initiatives were almost carried on in all the villages

involved in the study and were mainly influenced by the tobacco companies and namely the ATTT, TLTC, ALLIANCE ONE and DIMON operating in the villages of Makale, Kayui, Mwamagembe, and Itagata.

All the same there was a notable exception in Kayui village where there was a community group (Upendo Group) which manages a natural forest and conduct Bee keeping in the forest they manage. However, in this group the study identified a challenge as the bee heaves used were made of tree barks; that might accelerate tree debarking which is a threat to natural trees.

On the other hand, observations found an individual initiative by the Grassroots Tanzania at Itumba emerging sub-village-Mwamagembe village conserving a natural forest and raising a small natural tree species nursery bed. The common natural species found were the East African Satin wood (*Zanthroxylum Giletii*), the Wild Plum (*Ximenia Americana*) and Falsandal wood (*Afzelta Quanzesis*).

More over the study glanced on the practice of participatory planning in natural forest management in the sampled study; observations showed that there were village councils (VCs) to which the village Environmental committees (VECs) or the Village Natural Resources Committees (VNRCs) had to be responsible, the AMCOs, the ELCT, the Community Group all practicing natural forest management in own following taking their approaches.

The findings showed that the village councils with their respective VECs; these were to hold meetings to discuss issues related to natural forest management and issue permits on various undertakings that are geared towards sustainable natural resources use. It was found that 42 percent of the respondents contended that the committees held meetings once in every three months, while about 29 percent of the respondents provided that the committees held meetings twice, where as 28 percent articulated that the meetings were held in every month for three consecutive months. However, in most of these villages the records of the committee meetings were not properly kept and some were not available.

The study further found that the village committees were important in sensitizing the community to conserve natural forests. The study focused on four main functions of the VC through the VECs, the findings showed that 27.1 percent of the respondents pointed out that the VECs were responsible in demarcation of and allocation of land to individuals and another 27.1 percent responsible for enforcement of by-laws, rules, and regulations. Despite the fact that 46 (54.2%) reported that the committees were responsible for the demarcation of the land and enforcement of by-laws, rules and regulations all together, it was revealed that immigrants acquired land and exploited the forests without the consent of the VCs and the VECs.

Besides it was found that AMCOs in collaboration with the tobacco companies plan the number of trees to be planted in a particular season, the amount is distributed among the actors that are the primary societies, the tobacco companies, and the tobacco growers. They spell out the amount of trees for each actor that is 25 percent to the companies, 35 percent by the AMCOs and 40 percent by the tobacco growers.

Nevertheless, interviews with ATTT Field Manager and extension officers showed that although the tobacco Companies have been striving to extend reforestation and afforestation initiatives to replace the natural trees cut down during tobacco curing. The participation of the community especially tobacco growers has recently been declining, for example in Makale village in the year 2013 ATTT provided about 500 000 tree seedlings expected to be planted by the members of the AMCOS.

On the contrary only 100 members turned up for the program planting only 4 hectors (5 500 trees). There has been a decrease in the number of active members of the primary associations in the study villages; in Makale for instance the number declined from 434 in 2013 to 231 in 2014.Likewise in Kayui village the number of the members declined from 150 active members in 2013 to only 52 in the year 2014.

The study further found that the local community's involvement in the management of natural forests in the study area is still low it only owes much to one community group (Upendo Group) which was found in Kayui village, out of the five villages visited in the sampled wards of Mgandu, Mitundu and Mwamagembe.

The initiatives by the community group is a typical self-mobilization participatory approach where the members made a local analysis and came up with their idea to manage a natural forest where they can earn income through bee keeping hence honey sales.

The study conducted institutional analysis in the five villages visited and found that in one (1) out of five 5 (20%) visited wards had a steering committee responsible for the conduct of duties of the group involved in natural forest management; in the remaining four 4 (80%) communities were not well organized for participation in natural forest management thus natural resources management at large..

Generally, the study found that the tobacco growers' primary associations (AMCOS) were very instrumental in the management of natural forests and enhancing afforestation and reforestation in the selected wards under study; but the crises and management problems facing the associations have led to declining trend in the natural forest management initiatives.

Furthermore, some factors influencing the community participation in natural forest management were identified by the study. The factors were such as lack of technical advice/ services which were mentioned by 70 percent by which in all the villages and wards visited did not have the forest field officers, though only in some few instances the tobacco field officers served the purpose thus contributing to the 30 percent of the responses that responded that there were extension services.

Lack of incentives for the local community to participate in natural forest management was among the factors that negatively influenced participatory natural forest management; other factors were such as shortage of qualified staff, lack of training and limited information flow, uncontrolled immigrants, ineffective institutions, and malpractices(all illegal activities like pit sawing, bush fire setting, illegal charcoal burning, slush and burning) over 60 percent of the respondents described that the local community lacked incentives for participating in the natural forests conservation thus there was no motivation for the community to involve in managing natural resources.

The study also found that lack of training both to the community members and the local leaders influenced participation in natural forest resources management 14 percent of the respondents mentioned this. Interviews with local leaders also showed they have not been provided with any training related to natural resources management. Likewise, there were little or no training to the local community members on the management of natural forest resources.

Moreover, uncontrolled immigrants from the neighbouring regions have exerted pressure on available resources as 15 (17.6%) respondents pointed out especially land and forest resources due to the increased demands for farmland, settlements, pastureland. This if not checked will eventually lead to depletion of the forest.

On the other hand the rules and regulations might have not been well translated and spell out 15.3 percent of respondents found that the local authorities have not been effectively applying the rules and regulations to control the influx of new comers who did not follow the procedures.

From the study a number of human activities were identified to have devastating effect on the natural forest they constituted 15.3 percent, such activities were tobacco growing and curing, pit-sawing, charcoal burning, agricultural malpractices especially inappropriate farm preparation methods (the slush and burn method), nomadic farming as well as debarking of the trees to make bee heaves.

Finally the study sought views from the respondents and other actors on how to improve participatory natural resources management in the study area. All the actors involved in the study (that is the study sample) and the key informants provided that participatory natural forest management is fundamental in order to ensure sustainable natural resource use; 80 (95%) respondents considered community participation in natural resources management as relevant and important approach that will instill skills for protecting natural forests and improve the livelihoods of the community.

The major suggestions to improve community participation in natural forest conservation were increasing forest extension services, provision of regular training to the local leaders and the community at large, establish functional natural resources management committees at the village and ward level, enhancing the enforcement of regulatory frameworks pertaining to internal migrants and land acquisition, widening the scope and coverage of land use plan to the local authorities.

5.3 Conclusions

It is concluded by the study that; community participation in natural forests management in Manyoni district is low and to some extent has been practiced by some few identified community institutions and groups. Community members in the younger generation (18-45) have not fully participated in natural forest management; likewise women participation in natural forest management in the study area was low. The institutional set up for the management of natural resources in the study area was not effective, failure to articulate and reinforce by-laws, rules and regulation led to extensive natural forest clearing while establishing new settlements and farmlands by the immigrants.

Farming with 62 percent of the respondents has been a leading threat to the sustainability of natural forests with regard to fuel wood demands for curing tobacco as well as the slush and burn methods of preparing farms.

Natural forest conservation in the study villages was considered to be the work of tobacco growers associations, the tobacco companies and very few identifiable local community groups. Effective community participation in natural forest management would guarantee sustainability of forest and other natural resources; participatory approaches employed in natural forest management would also be replicated in various other community initiatives.

Involving people in decision making, implementing programmes, sharing of benefits of the programmes, and participating in evaluating the programmes would inculcate the community to take part in participatory programmes in order to improve livelihoods and poverty reduction in the three wards involved in the study.

5.4 Study Recommendations

This study put the following recommendations in order to improve community participation in natural forest management and sustainable natural resource use in the study area:

The government through the MNRT especially the Forestry and Bee Keeping Division has to employ forest officers who will serve as forest field officers at least at the ward level and provide them with transport facilities to facilitate the conduct of duties in the villages of each ward. This will help to ensure that the communities at the lower levels have access to knowledge, skills and technical advice on the management of natural forest and sustainable natural resource use at large.

Supporting self-mobilized Community groups involved in natural forest management by lobbying and mobilizing companies like ALLIANCE ONE, ATTT, DIMON, TCLTC and Banks operating in the area as part of their corporate social responsibility to contribute for the development of community group activities. The District authority through the Natural Resources Department should also recognize and provide support to the community group initiatives by providing training and financial or material incentives like modern bee heaves.

Lower local governments, tobacco companies, and the primary associations of the tobacco growers should establish a frame work for joint/ collaborative monitoring and evaluation initiatives in monitoring and evaluation of reforestation and afforestation activities in the study area. Similarly, these collaborative efforts should also focus on enhancement of tree planting programs in such a way that the local governments, the primary societies, and the tobacco companies coordinate the establishment of the nursery beds, transplanting trees, and the general management of the initiative.

Developing Community Based Natural Forest Conservation projects at the district level, devolving to the local levels with a focus on the sampled wards of Mgandu, Mitundu and Mwamagembe towards enhancing participatory natural forestry management commonly known as Community Based Forest Management (CBFM)

which is one of the ways to improve livelihoods and reduce poverty; as provided in studies by (MNRT,2006) in an assessment of the village forest incomes in Iringa district that showed an increase in revenues from USD 540 per year in 2002 to around USD720 per year in 2005 in the villages where Community Based Natural resources Management was in practice (1USD was equal to Tshs.1 212.26 in 2006).

Increasing the implementation of the village land use plan within the district, a special attention should be on the villages on the borders with the neighbouring districts and regions. This have to be accompanied with the articulation of the by-laws, rules and regulations in order to establish frameworks that give the local authorities the biting powers to enforce these by- laws and regulations.

The government has to create enabling environment for the villages to establish community based forest management in the study wards at least one community based forestry in a selected village in each of the wards namely Mgandu, Mitundu and Mwamagembe. The District Council should guide villages on the procedures of making applications from the Ministry of Lands and Human Settlements over the legal land tenure and transformation of general land into village land as provided by Section 7 of the Village Land Act of 1999, the redefinition of the limits and borders of the village.

Introduction of alternative income generating projects that will involve the groups of individuals whose daily activities entirely rely on forest resources thus threaten the sustainability of the natural forests. This can be done by conducting an occupational analysis in pilot villages to identify community members involved in such undertakings as charcoal making, pit-sawing, illegal logging, indiscriminate pole collection hence mobilize and involve them in planning for alternative projects like environmental friendly cooking stoves construction, improved bee keeping, carbon harvesting projects to mention a few.

Moreover, the government in cooperation with other stakeholders must establish consolidated regular training programs to the community on sustainable resource use; for instance training on sustainable fuel wood use through construction of local

cooking stoves that make use of small amount of fuel wood. The local leaders should also be trained on regular basis on the principles and practices of participatory natural resources management.

Facilitating the local community to institute local analysis, community based natural resources mapping, critical self –awareness and sharing of information and experiences on natural forest management between and among community members and other actors.

The village councils should ensure they have effective and functional natural resources committees that observe their legal responsibility for the management of village lands as per the Act No.4 and the Village Land Act No.5 of 1999.This will help to minimize the pressure on natural resources resulting from inter-regional migrations.

Besides, involving the community in identifying resource use conflicts to facilitate direct access to the benefits that accrue from the community participation in natural forest management intiatives.This will instill some necessary skills and techniques that can be replicated in other development intiatives.This will help to enhance sustainable resource use and improve the community livelihoods and reduce poverty.

5.5 Areas for further Research

Further research can be conducted to identify the role of Tobacco growers Associations in enhancing community participation in natural forest management in Manyoni district**,** Mgandu, Mitundu, and Mwamagembe wards in particular**.** The same study may also be conducted in other areas of Tanzania using a different design or similar design as a comparative study.

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APPENDICES

Appendix I

Questionnaire to Respondents

Age: _____

Sex: _____

Education: _____

Occupation: _____

1. Do you think it is important for the community to participate in natural forest management?

(i) Yes ☐ (ii) No ☐

2. If Yes mention the importance

3. (i) …….....

(ii)…….

(iii)……

4. What are the resources that you access from the forest?

(i)……..

(ii)…….

(iii) ……

(iv) ……

5. What methods do you/the community employ in management of natural forests in your area?

(i) _____

(ii) _____

(iii)_____

6. (a) Are there institutions / Organisations involved in sensitizing and managing natural forest and sustainable natural resources use in the village?

(i) Yes ☐ (ii) No ☐

(b) Mention

(i)……..

(ii)……

(iii)……

7. What are they involved in (mention their activities)

(i) Bee keeping ☐

(ii) Natural forest regeneration ☐

(iii) Afforestation ☐

(iv) Reforestation ☐

(v) Others (mention)_____

8. (a) Do the community members participate in decision making on the management of natural forests?_____

(b) How do you participate_____

9. Which of the following groups participate more in the management of natural forests? ☐

(i) Men

(ii) Women ☐

(iii) Youth ☐

10. Mention activities that you think threaten the sustainability of natural forests

(i)……

(ii)…….

(iii)……..

11. What do you think are the incentives for the community to participate in natural forest management?

(i)_____

(ii)_____

(iii)_____

12. List the factors that hinder community participation in natural resources management/forest resources in particular (mention)

(i)_____

(ii)_____

(iii)_____

13. What benefits may accrue from the participation of the community in natural forest management?

(i)_____

(ii)_____

(iii)_____

14. Have you been provided with training on the management and sustainable natural resources use?

(a) YES ☐

(b) NO ☐

B. What was the training about?

_____.

15. What should be done to protect natural forests?

(i)_____

(ii)_____

Appendix II

Questionnaire for the Key informants

Age: _____

Sex: _____

Education: _____

Occupation: _____

1. Which methods are employed in the management of natural resources (natural forest in particular)?

(i)_____

(ii)_____

2. How does the community in your ward participate in natural forest/ resources management?

_____

_____

3. Which social groupings get involved in natural forest management?

(i)_____

(ii)_____

5. Mention the activities they conduct? _____

_____

5. (a) Is there a specific committee responsible for the natural resources at the ward level?

(i) Yes ☐

(ii) No ☐

(b) If any, what are the roles/functions of the committee?

_____
_____
_____
_____

6. How useful is the committee to the community and the sustainability of the resources?

_____
_____
_____

7. What are the methods used in sensitizing the community to participate in natural forest management and sustainable natural resources use?

(i)_____

(ii)_____

(iii)_____

8. (a) Who are the other actors involved in the management of natural forest?

_____

(b)What are they involved in?

_____

_____

9. (a) Are there any by-laws, rules and regulations?

(i) Yes (ii) No ☐ ☐

(b) List them_____

_____

_____

10. What are the measures taken against illegal exploitation of natural forests?_____

_____
_____

11. What challenges have you been facing in the management of natural forests so far?

(i)_____

(ii)_____

(iii)_____

12. Suggest measure to be taken in order to promote and enhance community participation in natural resources management

(i)_____

(ii)_____

13. Have you ever been provided with trainings on natural resources management?

(i) Yes ( )

(ii) No ( )

14. How often does the village committee and Village Environmental committees hold meetings? Tick in the appropriate box;

village	Meetings held/three months' time			Total
	Once	Twice	Thrice	
Itagata				
Kayui				
Makale				
Mitundu				
M'Gembe				