POWER RELATIONS UNDERLYING KINGEGE VILLAGE LAND FOREST RESERVE, MUFINDI DISTRICT, TANZANIA.

BY

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ABSTRACT

Kingege Village Land Forest Reserve (KVLFR) was formed from general land forest, fundamentally under open access regime which led to change in power relations over the forest resources use. At present in Tanzania, Villages which have responsibilities to manage Village Land Forest Reserves are facing management problems as they adjust to balance the new power relations for sustainability of the forest resources. Little is known about the broader institutional context underlying power relations in KVLFR. The overall objective of the study was to determine the power relations underlying KVLFR and their influence on forest governance. Data collection was done through Participatory Rural appraisal techniques, Focus group discussions, Participant observations and questionnaire survey. Data were analyzed through content analysis, stakeholder's power analysis and descriptive and inferential statistical analyses. Findings showed that users and regulators were key stakeholders identified in KVLFR. Users were interested on utilization of forest resources while forest conservation was the main interest of the regulators. Among the stakeholders, there existed complementary, cordial and conflicting relationships. The socio-economic factors enabling the strategic power include distance to the resource base ($p = 0.000$), wealth category ($p = 0.001$), household size ($p = 0.012$) and residence duration ($p = 0.073$), while education level ($p = 0.021$) was constraining the strategic power. Institutional factors enabling the strategic power includes gender equity ($p = 0.032$) and forest access rules ($p = 0.82$), while membership in VNRC ($p = 0.722$) and participation in politics ($p = 0.245$) are constraining the strategic power. The study concluded that complementary, cordial and conflicting relationships led to poor governance of KVLFR. The study recommended that more studies on power relations should be done in village land forest reserves and compare forests under Community Based Forest Management and forests under Joint Forest Management. The emphasis

should be on power regulation mechanisms to ensure the community surrounding the forests benefit from resource utilization regardless of their power relations.

DECLARATION

I, Joha K. Mrua, do hereby declare to the Senate of Sokoine University of Agriculture, that this dissertation is my original work and that it has neither been submitted nor being concurrently submitted for degree award in any other institution.

_____ _____

Joha Karagwe Mrua Date

The above declaration is confirmed

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DEDICATION

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CBFM	-	Community Based Forest Management
CBOs	-	Community Based Organizations
DFO	-	District Forest Officer
FAO	-	Food and Agriculture Organization of the United Nations
FBD	-	Forestry and Beekeeping Division
FUG	-	Forest User Group
JFM	-	Joint Forest Management
LGRT	-	Local Government Reform Team
MDGs	-	Millennium Development Goals
MNRT	-	Ministry of Natural Resources and Tourism
NGOs	-	Non-Governmental Organizations
NSGRP	-	National Strategy for Growth and Reduction of Poverty
PRA	-	Participatory Rural Appraisal
PFM	-	Participatory Forest Management
PO-RALG	-	President's Office - Regional Administration and Local Government
PMO-RALG	-	Prime Minister's Office - Regional Administration and Local Government
PRSP	-	Poverty Reduction Strategy Programme
SPSS	-	Statistical Package for Social Sciences
TBPA	-	Trans Boundary Protected Area
UN	-	United Nations
URT	-	United Republic of Tanzania
USAID	-	United States Agency for International Development
VG	-	Village Government

VNRC	-	Village Natural Resources Committee
WEO	-	Ward Executive Officer
WRI	-	World Resources Institute

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background

Power relations is defined as what enables who to do what to whom, or more explicitly, power relations is defined as a matrix of possible actors and their possible interactions (Rath, 1997; Nuijten, 2005). During the interaction, various powers affect each other, and the outcome is not simply that the most powerful acting upon the least but rather an outcome where each power has contributed. A key factor in the interaction, however, the power which is more dominant will have more negotiating influence. Power relations in many societies are embedded in a social control, social hierarchy and roles given to some individuals in a given society (Mbeyale, 2009). Understanding these power issues at a community level is useful for the achievement of more equitable forest resource management and distribution of benefits.

During the colonial periods in Tanzania, the German (1885-1916) and then the British (1918-61) some forests were gazetted, and local resource use rights and power were curtailed by the state. Traditional land use practices were regarded as detrimental to the environment and the state established protected areas, which restricted local people access to the natural resources upon which they depended upon for their livelihoods (Pendzich, 1994; Ylhäisi, 2003).

After independence in 1961, many forestlands in Tanzania were managed centrally, through Forest Department under the Ministry of Agriculture (Hurst, 2003). This type of management was characterized by extensive state control and less involvement of local communities. The system interfered and undermined the traditional institutions, hence

prevented them from playing their role in regulating resource use (Maganga, 1993). The main problem with centrally managed forests was that manpower and financial resources were thinly spreaded to the extent that the management of the resource became difficult. This kind of forest management has resulted into forest degradation and deforestation through illegal activities and increased human pressure on the resources (URT 1998, Wily and Dewees, 2001).

The government of Tanzania opted for decentralization and privatization policies in the 1990s to pave way for local people to participate in the management of forest resources by recognizing that local people are better placed to manage the resources efficiently (URT, 1998; Gombya-Ssembajwe and Banana, 2000). FAO (2007) stated that secure forest tenure and access to forest resources are a pre-requisite for sustainable forest management.

The recent forest policy reforms in Tanzania tried to readdress different forest management problems by promoting good governance through emphasizing a shift towards decentralization by devolution of government power to local government levels (Wily & Mbaya, 2001; Larson, 2004). Such devolution of power is expected to have positive impacts on the management of forest resources at district and local community level.

Decentralization in the form of Community Based Forest Management (CBFM) increases the decision- making power and influence of local communities on forest resource use. Also encourage communities to become more involved in decisions affecting their own livelihoods and the resources on which those livelihoods are based (Larson, 2004).

Forest Act No.14 (2002) recognizes three kinds of forest tenure categories including Reserved land (National Forest Reserves (NFRs), Local Authority Forest Reserves

(LAFRs); Village Land Forest Reserves (VLFRs) which includes Community Forest Reserves (CFRs) and Private Forests, and forest in general land. Recently there has been tenure changes in Tanzania from forest in general land to village land forest reserve. A change from forests in general land to village land forest reserve tends to lead to changes in power relations over the forest resources use. Power struggles can be manifested between different types of actors, for example between traditional authorities, political leaders and elected representatives, which disrupt community-based processes (Barrow *et al*., 2002).

Some studies have indicated that more powerful groups consistently attempt to seize any increase in authority or benefits created by devolution (Shackleton *et al*., 2002). Local elites may take over leadership of forest management committees from poorer forest users (Barrow *et al.*, 2002; Neupane, 2003).

Kingege Village Land Forest Reserve (KVLFR) was established from a general land forest in pursuit of the dual objectives of arresting forest degradation and furthering community development. The change in tenure and management of KVLFR also resulted into change in power relations at the local level making a major impact on the institutions that determines people's access and control over the forest resources (Shackleton *et al*., 2002).

The communities' conservation strategies are formally participatory, but the actual functioning of forest control is affected by other factors including economic and political interests of the actors involved, and the history of people-state relationships. The involvement of local people in forest conservation does not make it a smooth political process. Power relations between various actors intervene in the processes, and make forest resources control a complex, fragmented and dynamic issue (Larson, 2004). Evolving institutions should be able to deal with power dynamics within communities and guarantee

accountability and transparency for them to gain legitimacy among local people. Ultimately, the challenge is to ensure that decentralized authority is more accountable and transparent than centralized authority.

1.2 Problem Statement and Study Justification

1.2.1 Problem statement

During the last three decades, Tanzania, like many other eastern and southern African countries, experienced a number of policy reforms. The reforms were geared towards devolving forest resource management from the state to lower levels to arrest deforestation which has been going on unabated (Wily and Mbaya 2001). The National Forest Policy (1998) and subsequently the Forest Act No. 14 of 2002 recognize the role of community involvement in sustainable forest management and utilization of resources (URT, 1998; 2002).

Kingege Village Land Forest Reserve was formed from general land forest essentially under open access regime, where there were no property rights and no defined groups of users or owners, and the benefit stream was available to everybody. At that time, there was institutional vacuum, because those who had power strategically tended to exploit the resources and the poor were marginalized. The Forest Policy of 1998 and the Forest Act No.14 of 2002 has given institutional power to the village governments to work with Forest Officers in the management of forest resources around them (URT. 1998 and URT 2002). In this case, Kingege and Nyanyembe village governments through Village Natural Resources Committees (VNRC) are responsible to take care of KVLFR which is within their jurisdictions. The devolution of authority and responsibility over local forests to villagers implies a shift of power where the lower level has gained, and can accommodate more power than before (Jones & Mosimane 1999). It can be expected that such a shift of

power will be accompanied by competition for the benefits. This competition is likely to take place between people or organizations receiving devolved authority and existing power structures that believe that their position are threatened. Since there are different stakeholders involved in the utilization and management of forest resources with different interests and in many cases, this tends to lead to new power relations. Different stakeholders had to seek for new alliances and competing interests' strategies to exploit the forest resources (Barrow *et al.,* 2002).

At present in Tanzania, villages that have responsibility to manage Village forest reserves are facing management problems as they adjust to balance the new power relations for sustainable management of the forest resources. Village Land Forest Reserves have been formed and are in different stages of CBFM including Duru Haitemba in Manyara, Mgori in Singida, to mention a few (Blomey and Ramadhani, 2007; Kajembe *et al.,* 2004; 2005). Currently in Tanzania, about 2328 villages are under CBFM (URT, 2008). In spite of all these changes, few studies have been conducted on power relations but the studies did not examine the broader institutional context underlying power relations in village land forest reserves (Kajembe and Monela (2000); Barrow *et al.,* (2002),Wily (2002) and Dugilo (2009). This study is an attempt to address the gap.

1.2.2 Study justification

Kingege Village land forest reserve was formed from a forest in general land because of the ongoing institutional rearrangement which is going on all over Tanzania. Given the fact that CBFM is expected to be scaled up over time (Akida and Blomely, 2007), the study will shed light on how power relations underlying different CBFM initiatives can be recognized and balanced to avoid resource use conflicts. The study will contribute information on the existing power relations that have influence to governance of Village

Land Forest Reserves in Tanzania. The information on power relations should be linked in CBFM guidelines to enable the whole community to benefit from Village Land Forest Reserve in Tanzania.

1.3 Objectives

1.3.1 Overall objective

The overall objective is to determine power relations underlying Kingege Village forest reserve and their influence on forest governance.

1.3.2 Specific objectives

i. To identify key stakeholders in the management of KVLFR, their interests and spheres of influence.
ii. To assess power relations existing among the stakeholders adjacent to Kingege Village land Forest Reserve.
iii. To determine socio-economic and institutional factors influencing dominant power in the study area.

1.4 Research Questions

i. Who are the key stakeholders in forest resources management in the study area?
ii. What are the stakeholders' interests as well as their sphere of influence in the study area?
iii. What are the power relations existing in the study area?
iv. What are the factors influencing the dominant power in the study area?

1.5 Conceptual Framework

This study assumes that forest management change from general land to Village land forest reserve is influenced by socio economic and institutional factors (Fig.1). This transformation from open access regime to Village Land Forest Reserve status forced different users, regulators and facilitators into a new institutional set up. This results into new power underlying the management and utilization of resources in Kingege Village Land Forest Reserve. Whether strategic, institutional or structural power dominates in the community, depending on the stakeholders influence. The influence of the stakeholders is based on their social, economic and institutional factors. These powers as a subject to institutional rearrangement in management of forest resources may result in different power relations among stakeholders which influence forest governance positively to good forest governance or negatively to poor forest governance .

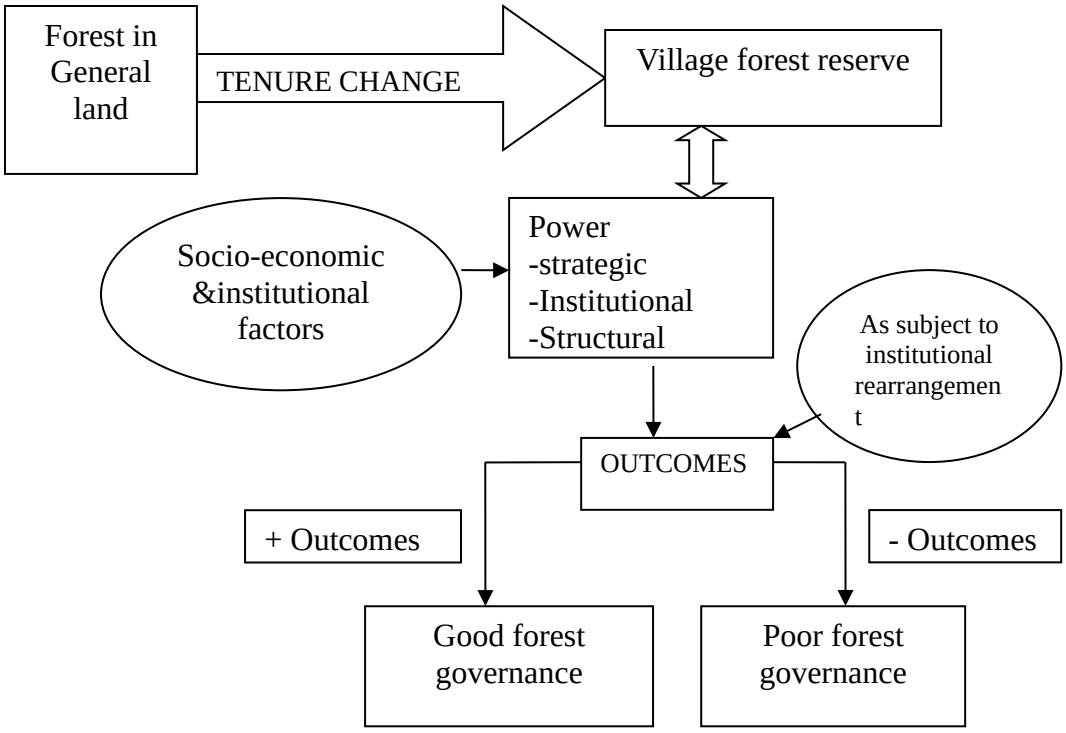


Figure 1: Conceptual Framework underlying the study.

1.6 Study Limitations

During the study, problems encountered included the fact that, most interviewed heads of households were unwilling to disclose who among the community members were obtaining more resources from KVLFR than others. They suspected the researcher to have a hidden agenda of representing government authorities who wanted to identify the persons who went against CBFM bylaws in their villages. This was sorted out to a great extent by making the respondents understand clearly the objective of the research. In addition, there were complications in collecting socio economic data especially household income because it was based on respondents' ability to recall.This was minimized through triangulation of information by using different methods of data collection.

Language barrier was another limitation, but this was resolved by using local people as interpreters, as they were conversant with both vernacular and Kiswahili and was also trusted by fellow community members.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Management of Forest Resources in Tanzania

Formal management of forests in Tanzania was initiated towards the end of the nineteenth century (1890) when the importance of conserving water sources was noted by the German colonial administration. Between 1890 and 1920, efforts were made to reserve as much as possible catchment forests. This brought about reservation of a chain of mountain areas in the northern and southern parts of the country with a total area of 0.5 million hectares (Hermansen *et al.,* 1985). The British administration (1920-1961) followed up by protecting the catchment forests and reservation of more catchment and other forests, bringing the total reserved areas to 1.3 million hectares.

After independence in 1961, efforts were made to re-survey and demarcate old forest reserves while new ones were created. It was estimated that by 2005, Tanzania had 35.3 million ha of forests, representing 39.9% of total land area. 14.3 million ha are found within gazetted Forest Reserves, 2.5 million ha are proposed Forest Reserves and around 2 million ha are in Game Reserves and National Parks. Forest Reserves falling under the legal authority of Central Government (National Forest Reserves-NFRs), District Councils (Local Authority Forest Reserves-LAFRs) or Village Government (Village Land Forest Reserves-VLFRs, Private and Community Forest Reserves) and are either designated for production (managed for timber production and other productive uses) or protection (managed for water catchment and/or biodiversity conservation functions). The remaining 16.5 million ha of forests, found outside the reserve network, lie on village and general land (FAO, 2007). Almost two thirds consists of woodlands in the general lands, which have no clear management plans.

2.1.1 National forest reserves

These are gazetted forests owned and managed by central government, have a total area of 12.3 million hectares (81.5% of the total area of forest reserves) .These constitute approximately 35 percent of the total area under forests. National forest reserves are either protection forest reserves (managed for conservation purposes such as biodiversity or water catchments) or production forests (including natural and plantation forests, which are harvested for timber, fuel wood and other purposes).

2.1.2 Local government forest reserves

District Councils manage local government forest reserves. By 2001, there were 169 forest reserves under local governments with an area of 1 588 000 hectares. This is only 5% of the total forest area in the country. Local government forest reserves are regarded as a major source of revenue from charcoal and timber extraction in the districts; most of them are therefore degraded, even those under protective status.

2.1.3 Private forests

There are of two main kinds of private forests. The first is small-scale production of trees on private land, usually as part of an agricultural system. These forests may be the result of agro forestry or more commonly the establishment of small woodlots ranging from 0.25 to 3 ha in size. Efforts to establish woodlots by individuals are significant, especially in Iringa region, where shortages of wood have encouraged farmers to plant woodlots and establish nurseries. These woodlots consist mainly of pines and eucalyptus, which are sold locally for timber and poles. In Tanga region, Muheza district, small plots of teak (*Tectona grandis*) are a common feature. Unfortunately, there is no information on either the legal status of ownership or the total forest area under individual ownership. The total

contributions of individual woodlots, including agro forestry systems, to household income and poverty alleviation are not known.

The second type of private forestry involves large-scale private forestry enterprises under leases on either village or general land for planting trees. Within this category, there are three known private forests: TANWAT in Njombe district, Escarpment Forest in Mufindi and Kilombero districts and KVTC in Kilombero district covering a total of 60 959 ha respectively. Trees are produced for a range of purposes, but mainly for timber, poles and wattle bark (Table1).

Table 1: Private forest plantations in Tanzania as of 2001

Region	District	Name of Reserve	Ownership	Area (ha)	Main products
Iringa	***Njombe***	(TANWAT)	(TANWAT)	17 800*	Wattle bark, firewood and logs for the factory, power station and sawmill
Iringa	Mufindi and Kilombero	Escarpment Forest	Tree Farms Cooperation	15 000**	Timber and poles; carbon trading
Morogoro	Kilombero and Ulanga	(KVTC)	(KVTC)	28 159	Teak
Total				**60 959**	

Source: Malimbwi (2002) *only 2862 ha planted by 2001; ** only 1446 hectares planted by (2001).

2.1.4 Village forest reserves

This is a new category of forests, which became legalized following approval of Forest Act No. 14 of 2002.Village forest reserves are forests under Participatory Forest Management (PFM) and they are categorized into two main entities Community Based Forest Management (CBFM) and Joint Forest Management forests (JFM). By 2001 there were

only 78 village forest reserves with a total of 186 292 ha in Tanzania. Recently, there are total of 994 PFM areas involving 2328 villages with a total area of about 4 million ha. CBFM are managed by local communities (Village Land Forest Reserves). This shifts the free access nature of forests in general land to the control of villagers for better conservation (Zahabu *et al*., 2004). Forests under JFM on the other hand are national or local government forest reserves, which are jointly managed by the villagers and the government (local or central government). Most forests under JFM are catchment forests. Village forest reserves are managed for both production and protection purposes, depending on their location, size and composition.

The majority of village forests are in Iringa region (Zahabu *et al.,* 2004).Others are in Arusha, Shinyanga, Costal (Pwani), Singida, Tabora and Mtwara regions. Because of the high cost involved in establishment of a village forest reserves, most of the village forest reserves have been established through donor support, for example by the government of Finland and the Government of Denmark. Although PFM is considered to be the most viable option to conserve Tanzanian forest land, plans to expand the strategy should address the cost element adequately (Zahabu *et al.,* 2004).

2.1.5 Forests in general land

The forests under general land, formerly known as forests in public land are none gazetted or none reserved. These forests constitute up to 51 percent of all Tanzania's forest land, and cover 16.5 million ha. These forests are "open access" characterized by insecure land tenure, shifting cultivation, harvesting poles and timber, and heavy pressure for conversion to other competing land uses, such as agriculture, livestock grazing, settlements, charcoal making, fuel wood collection and industrial development in addition to wild fires.

Deforestation in Tanzania was estimated at 412 000 ha per annum between 1990 and 2005 (FAO 2007) .This is equivalent to 1.1% of the country's total forest area and is mostly being felt in forests in general land. Efforts towards forest conservation aim at reversing this trend. While most of these unreserved forests are poorly managed, traditional and customary management practices have supported the conservation of forest cover for sacred, religious or social purposes in numerous localities across the country (Blomley and Iddi, 2009). Moreover, areas that are considered to have catchment, biodiversity or amenity values should be identified and managed under Joint Forest Management between village communities and central or local governments. Continuing conversion of forests under general land to village land forest reserves aimed at reducing the current destruction of the forest resources. The conversion was given impetus under the auspice of devolution of power to local people residing close to the forest reserves.

2.2 Decentralization of the Management of Forest Resources

2.2.1 Overview

Decentralization is defined as the formal transfer of power from the central government to actors or institutions at lower levels in an administrative and territorial hierarchy. It is democratization processes and endeavours to transfer powers closer to those who are affected by the exercise of those powers (Agrawal and Ostrom, 2001; Larson, 2004). Several definitions of decentralization emerge from the literature and it is generally accepted that it is impossible to standardize the concept of decentralization (Manor, 1999). However, in a broad sense, decentralization denotes the transfer of power, authority and responsibility for decision-making, planning, management as well as resource allocation from the central government to field units, district administrative units, local governments, regional or functional authorities, semiautonomous public authorities, parastatal organizations, private entities and nongovernmental private or voluntary organizations

(Rondinelli and Cheema, 1983). More often decentralization refers to the formal transfer of power to local decision makers (World Bank, 1999).

Decentralization can be either horizontal or vertical. Horizontal decentralization disperses power among institutions at the same level, while vertical decentralization allows some of the powers of a central government to be delegated downwards to lower tiers of authority. Four major types of decentralization are commonly described in the literature, namely delegation, privatization, deconcentration, and devolution (Rondinelli and Cheema, 1983; Ribot, 2002). Manor (1999) and Smoke (2003) emphasizes another type of decentralization referring to a fiscal transfer.

Delegation is the transfer of some responsibilities and decision-making powers to organizations that are outside the regular bureaucratic structures and are only indirectly controlled by the central government. Delegation has only rarely been attempted. When it has been tried it has either failed to facilitate a genuine decentralization of decision-making or it has impeded project implementation, or both (Manor, 1999; Oyono, 2002).

Privatization refers to the transfer of all responsibilities of government functions and services to private enterprises or non-governmental organizations independent of the government (Larson, 2002; Ribot, 2002). Critics argue that the private sector firms which take over the tasks from the state are themselves often quite large so that, far from being decentralized, power is actually passing from one major power centre to others. They also argue that user charges, which often come with privatization, exclude many poor people and thus do not necessarily increase choice (Manor, 1999).

Decocentration or administrative decentralization is the passing-down of selective administrative functions to lower levels or sub national units within central government ministries and agencies (Ribot, 2002). The central government is not giving up any authority. It is simply relocating its officers at different levels or points in the national territory. In such circumstances, it tends in practice to reconstitute centralization (Manor, 1999).

Devolution or democratic decentralization is the transfer of resources, tasks and decision-making powers to lower level authorities which are largely or wholly independent of the central government and which are democratic in some way and to some degree. As the best form of decentralization (Manor, 1999; Ribot, 2002), democratic decentralization is a process aiming at transferring powers to local governments and to authorities representative of, and accountable to, local populations. This includes financial power as well as the authority to design and execute local development projects and programmes (Hope, 2000).

Sometimes decentralization refers to down-ward fiscal transfers by which higher levels in a system cedes control over budgets and financial powers to lower levels. This authority can pass either to deconcentrated bureaucrats and/or unelected appointees on the one hand, or to elected politicians on the other. When the latter occurs, fiscal decentralization becomes relevant to democratic governance (Manor, 1999; Smoke, 2003).

2.2.2 Decentralization of management of forests in developing countries

Many developing countries have embarked on decentralization reforms in relation to forest resource management. The ultimate purpose of decentralization by devolution is to improve economic efficiency, social and economic equity, and sustainability in forest

resource management and conservation (Agrawal and Ostrom, 1999; Larson, 2004). The achievement of this purpose is based on a number of assumptions. On the efficiency aspect, it is assumed that participation in decision making and management of local resources allows local communities who bear the costs of resource use to make the decisions themselves instead of putting the decision making in the hands of somebody else (Ribot, 1999).

In addition, since the local people live in or around the resource areas, the administrative and management costs can be reduced and local skills and knowledge could be used. Furthermore, decentralization by devolution increases the effectiveness of coordination and flexibility among state agencies in the development and conservation planning and implementation (Agrawal and Ostrom, 1999; Larson, 2004). As of equity aspect, it is assumed that participation can increase equity through more equal distribution of benefits (Ribot, 1999). Overall, in order for decentralization by devolution to improve sustainability, equity and efficiency in forest management, it is assumed that local people have voice in and the control of significant decision-making and they take the role formerly taken by the state (Meinzen-Dick*et al.*, 1999; Larson, 2004).

The potentials of local government institutions can be realized more effectively where there is devolution of power. Accountability, transparency, participation, empowerment, equity and all other attributes of good governance can be in full play and become part of the daily work of the local government bodies when decentralization by devolution take place (Kumar, 2002). Without decentralization by devolution, local government bodies remain paper organizations without any effective role (Kumar and Shamim, 2002).

Studies of decentralization in Burkina Faso, Cameroon, Guinea, Malawi, Niger, Gambia and Zimbabwe, for example, showed that decision-making powers were transferred to various unaccountable local bodies, threatening local equity and the environment (Ribort, 2002). In several African countries, traditional leaders are sometimes selected to receive decentralized powers (Mapedza and Mandondo, 2002; Bazaara, 2003). Traditional leaders may be very important legitimate local institutions but they also may be completely exploitive, unaccountable and undemocratic. They may even base their authority on fear and terror. In Mali, even where powers to chiefs have been reduced, they tended to remain in important places, capable of undermining elected authorities (Kassibo, 2003). There is also often a generalized lack of knowledge of the law. Local governments may not know their rights and responsibilities; civil society unaware of the responsibilities for their elected leaders has toward them, which affects citizens' ability to demand effective representation and accountability. Legal ambiguities and contradictions make laws difficult to interpret even when the content is known and understood (Larson, 2004). In India, the most empowering laws go unimplemented, and, while national policies protect livelihoods and conservation, specific laws only exist to ensure the latter (Sarin *et al.*, 2003). In some countries, such as Costa Rica, Indonesia, Uganda (Bazaara, 2003) and Cameroon (Oyono, 2003), powers have been given to local governments and then taken away again, leading to the instability of institutional arrangements (Bazaara, 2003).

2.2.3 Decentralization of forest management in Tanzania

In Tanzania decentralization is being done mostly through Participatory Forest Management (PFM).Villagisation ("*ujamaa*") created the basis for revisions in law under the Local Government Act of 1982, empowering and recognizing village councils as independent and fully functional governments. Additional revisions in legislation relating

to land tenure, vested the power to manage and adjudicate local land rights in village governments (including communally managed areas such as forests and rangelands).

PFM include Joint Forest Management (JFM) which is a collaborative management approach dividing forest management responsibility and returns between the forest owner (usually central or local government but occasionally the private sector) and forest adjacent communities. Community Based Forest Management (CBFM) takes place in forests on "village land" (land which has been surveyed and registered under the provisions of the Village Land Act (1999) and managed by the village council). In CBFM, villagers take full ownership and management responsibility for an area of forest within their jurisdictions and they are "declared" by village and district government as a Forest Reserve (Blomley, 2006; Blomley and Iddi, 2009).

Decentralized forest management took off in the 1990s when elected village councils gained far-reaching powers over forest resources on unreserved land through declaration of village land forest reserves (Wily & Dewees, 2001). There are several reasons for the paradigm shift to people-centered forest management. The failure of the state agencies to manage protected areas effectively, the potential for cost-effective local management of forests, relevance of local knowledge of ecological dynamics to proper management, increased motivation for local communities to conserve forests following recognition of their critical role in the management. And eventual increase in tangible benefits from the forest (economic incentives) and sense of ownership regained over their forest resources (empowerment) (Kajembe *et al.,* 2000).

Decentralization is both political and economic processes because it involves the redistribution of power. Decentralization to local governments could provide a stronger

institutional basis for CBFM (Larson, 2002; Ribot, 2002). Decentralized management of forest resources may lever good governance at the local level if meaningful powers are transferred to democratically elected and downwards accountable decision makers (Larson, 2004; Ribot, 2002). However, empirical studies show that outcomes of forest decentralization at the local level are mixed and rather disappointing (Meizen-Dick *et al.*, 1999; Shackleton *et al*., 2002; Edmunds *et al*., 2003; Larson, 2004).

Studies of the village land forest reserve management have discovered problems regarding representation of various social groups in forest management activities. Bildsten (2002) found that the different groups within the village were not identified properly in the planning process of a Village Forest Reserves. Moreover, Platteau and Abraham (2002) observed that the local elites are not accountable to the poorer members of community as state agencies, because the forest resources are being "captured" by local elites in participatory programmes. Therefore, individual power is always part of wider institutions and structural processes, (Lemke, 2003 cited by Nuijiten, 2005). For that reason, power relations can be studied and analyzed in the context of institutions being practised in management of village land forest reserves.

2.3 The role of Institutions in Management of Forest Resources in Tanzania

2.3.1 The concept of institution defined

The term institution can be defined as "organized or recognized procedures" These procedures are presented as constituent rules of the society, or "rules of the game". An institution is a social order or pattern that has attained a certain state or property, implies that institutions serve the purpose of shaping and stabilizing human actions (North, 1990). Institutions set the ground rules for resource use and establish the incentives, information, and compulsions that guide economic outcomes. Institutions can be both formal and

informal. The formal rules include the written laws, regulations and procedures while the informally established procedures, norms, mores, myths, practices, and patterns of behaviours form the institutional framework (Kajembe, 2000). With time informal practices also become rules in their own rights when they are accepted by the society (Bandaragoda, 2000). Both formal and informal institutions define and fashion the behavioural roles of individuals and groups in a given context of human interaction, aiming at a specific set of objectives. The key characteristics of institutions are that they are patterns of norms and behaviour that persist because they are valued and useful (Merrey, 1993).

2.3.2 Institutional Arrangement in Forest Resources Management

Institutional arrangement provides governance structure that shapes actions and interactions in a given community (Saleth and Dinar, 1999). Institutional rearrangement is management process that involves a bottom up approach, which includes user groups in decision-making. This approach is oriented more towards the forest user communities, and seeks to involve the users and other stakeholders in the decision making process. This form of management arrangement is more likely to be met with a higher degree of acceptability and compliance by the user groups as tend to increased participation and may lead to the formulation of more workable regulations (Mbeyale, 2009). Such efforts to include user groups in decision making in forest have, during the last decade frequently been labelled as co-management. However, having co-management is one thing and having in place principles that guide all the undertakings is quite another

Historically, traditional authorities and lineage leaders were responsible for resource management and land allocation under systems of customary tenure and law. Past political processes, and pre and post independent governments undermined the authority and

legitimacy of traditional leaders and caused distrust and disrespect (Keulder, 1998 in Barrow *et al.,* 2002). However, in most rural areas they have continued to remain the primary decision-makers in communal land and resource management, even though their role was not acknowledged or understood by the government. In some areas this has resulted in the dissolution of existing institutional arrangements for forest resource management such that open access systems are becoming a norm (Ainslie 1999; Pollard *et al.,* 1998).

Traditional structures have been replaced by non-statutory civic organizations such as residence associations, for example in Peddie district of Ciskei in South Africa (Cocks, 2000). Most of these new structures have taken on the issue of land, but have rarely actively addressed forest resource management responsibilities, though the various residents associations in Nairobi, Kenya took up the fight against the allocation of Karura Forest. A consequence is that an institutional vacuum exists at the local level regarding the regulation and control of forest resource use, for examples in Uganda where most of the forests are on private lands have no formal management regimes. This lapse has resulted in damaging opportunistic exploitation of the resource base in both communal woodlands and in forests by both locals and outsiders (Barrow *et al.,* 2002).

Traditional structures remain important politically and administratively and should not be ignored or underestimated. If too much power is given to either local government councils or to customary authorities for instance, then problems may arise relating to the participation of community members, particularly women, in decision-making and in the distribution of benefits. This is a particularly important issue where the roles and responsibilities of the institutions and members thereof have not been discussed and agreed beforehand. This often relates to personal power, where new institutions, apparently for the

common good, are formed as a result of a project intervention, for example, shift the power balances at a community level, and may create new elites and leaders. In such cases, traditional institutions will usually be the losers.

Local institutions often have little real authorities to decide on how to manage the forest resources, as there is often a lack of political will to give power to such groups in the first place (Kajembe *et al.*, 2000). Furthermore, benefits need to be significant enough to warrant the community level investment in such local institutions. As a result rural communities are undergoing rapid social, economic and political changes as development, modernization and decentralization trends spread and become more embedded.

Community forest management, decentralization and participation are more likely to work better if they are well-suited with the traditional power and authority structures. It is only then that local communities may accept long-term accountability, because of local people's long term support and understanding for such institutions. The whole issue of local governance and the division of responsibilities and functions between traditional authorities and local government needs to be resolved if development and the introduction of enhanced systems for forest resource management are to move ahead effectively. Traditional and administrative systems need to be mutually supportive, not antagonistic, and need to balance and provide synergy to each other. In spite of the rhetoric in their favour, these institutions are yet to receive the legal and administrative recognition they deserve and as a result their potential in expediting shared forest management has not been harnessed This lack of official recognition of customary institutions is often related to a perceived loss or reduction of official administration power for official recognized institutions (Barrow *et al.*, 2002).

In some situations, traditional institutions can play a strong and proactive role, for example the manner in which the Kaya forests in Kenya have been gazetted and the "Ngitiri" grazing and browse reserves in Tanzania (Barrow and Mlenge, 2004). In a similar manner, a dramatic restoration of *Acacia tortilis* woodland was noted in Turkana Kenya when traditional rules and regulations were instigated (Barrow *et al.,* 2002).

2.3.2 Institutional arrangement in community based forest management

Understanding the institutional arrangement at community level is key to improving sustainable forest resource management. The rules and regulations, norms and procedures for community based forest resource management govern access, establish the mechanisms for responsible use, and enable communities to have the power to include or exclude users. Many of the institutional arrangements are often hidden, unseen and unheard by development agencies, yet are vital for community cohesion, social responsibility and forest resource management (Barrow *et al*., 2002).

Tenurial arrangements and dynamics underpin this discussion where *de facto* or statutory rights to land and resources determine who has rights and responsibilities. Such institutional mechanisms may be at the individual or family level, or at the community level, or a combination of all the three. Trees and forests may be seen as private or community property. Determining who has such rights and responsibilities, even if time consuming, is essential and can only be understood when there is trust between and within communities, and between communities and external agents of change. Tenure on its own is not enough, as resource users and communities need to have the power to include and exclude outsiders, a power that tenure may not actually be able to provide in real terms. Such power relates to a person's, a community's or a group of users ability to enforce its will, be able to make and enforce decisions, and have the legitimacy, both at a community

level and in law, to do so in the first place. Some strong communities have such power, while many clearly do not. This is likely to be stronger in the more traditional communities with a strong sense of identity and cohesion, than in those that are more fragmented. Defining the appropriate institutions and ensuring that some resource users are not marginalized can be difficult, and time consuming. However, if the institutions were not analyzed properly, the real managers may lose their institutional power either to government administrative structures or to outsiders. Many of these institutional arrangements survive, not by statutory decree, but by the ability of their proponents to maintain and negotiate for such rules, norms and procedures with other community members and outsiders (Gordon, 2000).

Commercialization has added a further threat to the building up of customary and local institutional arrangements. Strong commercial interests often override local level institutions. Commercial interests are more likely to relate to government administrative structures, rather than the forest resource management institutions, thereby further reducing the power of such local institutions .Institutional performance can be measured in terms of effectiveness (does the right thing), efficiency (at least cost), and accountability (to stakeholders). Effectiveness depends on identifying needs and concentrating on areas of importance, while participation is key to public sector accountability (Gordon, 2000).

Government administrative structures moderated by the externally sponsored institutions in that they are set and established by the government for administrative purposes. Externally sponsored institutions influence implementation of different forest resource management interventions and resolving resource use conflicts (Mayeta, 2004). The institutions include national policies and regulations governing access and use of various resources by different users. For sustainable Community Based Forest Management there must be good governance structures.

2.4 Governance of Forest Resources

2.4.1 Definition of the concept of governance

Governance of forest resources is defined as the interactions among structures, processes and traditions that determine how power and responsibilities are exercised, how decisions are taken and how citizens or other stakeholders have their say in the management of forest resources (Kajembe, 2006). Governance is the exercise of authority through formal and informal institutions for the common good of society. In short governance is about who has influence, who decides and how decision makers are held accountable (Grazia *et al*., 2003).

Oyono (2002) argues that if the powers transferred by the state through decentralization are used democratically at local level, environmental justice should emerge in turn and should generate a high sense of ecological responsibility at the community level. If on the other hand, local governance is detrimental there is environmental injustice and local communities will contribute to accelerated and irreversible degradation of forest resources. The result of good governance is development that gives priority to the poor, advance the cause of women, sustains the environment, and creates needed opportunity for employment and other livelihoods (UNDP, 1997; 2004).

Good governance has the following major characteristics participatory, consensus oriented, accountability, transparency, responsiveness, effectiveness, efficiency, equity and inclusiveness and rule of law. It assures that corruption is minimized, the views of minorities are taken into account and that the voices of the most vulnerable in society are heard in decision-making. It is also responsive to the present and future needs of society.

2.4.2 Accountability

Accountability is a key requirement of good governance. For not only governmental institutions but also the private sector and civil society organizations must be accountable to the public and to their institutional stakeholders. Who is accountable to who varies depending on whether decisions or actions taken are internal or external to an organization. In general, an organization is accountable to those who are affected by its decisions or actions. Nuijiten (2005) pointed out that organizations or officials who do not operate according to principles of accountable management are normally labelled as corrupt; they are not supposed to be trusted by the government or the community. Accountability cannot be enforced without transparency and the rule of law.

2.4.3 Rule of law

Good governance requires fair legal frameworks that are enforced independently. It also requires full protection of human rights, particularly those of minorities. Impartial enforcement of laws requires an independent judiciary and an impartial and incorruptible Police Force.

2.4.4 Transparency

Transparency means that decisions taken and their enforcement are done in manners that follow rules and regulations. It also means that information is freely available and directly accessible to those who are affected by such decisions and their enforcement. It also means that enough information is provided and that it is provided in easily understandable forms and media.

2.4.5 Participation and responsiveness

Participation by both men and women is a key foundation of good governance. Participation could be either direct or through legitimate intermediate institutions or representatives. Participation needs to be informed and organized. This means freedom of association and expression on one hand and an organized civil society on the other hand. Furthermore, good governance requires serving all stakeholders within a reasonable timeframe.

2.4.6 Consensus oriented

There are several actors and many view points in a given society. Good governance requires mediation of the different interests in society to reach a broad consensus in society on what is the best interest for the whole community and how this can be achieved. It also requires a broad and long-term perspective on what is needed for sustainable human development and how to achieve the goals of such development. This can only result with good understanding of the historical, cultural and social contexts of a given society or community.

2.4.7 Equity and inclusiveness

A society's well being depends on ensuring that all its members feel that they have a stake in it and do not feel excluded from the mainstream of society. This requires all groups, but particularly the most vulnerable, to have opportunities to improve or maintain their well being.

2.4.8 Effectiveness and efficiency

Good governance means that processes and institutions produce results that meet the needs of society while making the best use of resources at their disposal. The concept of

efficiency in the context of good governance also covers sustainable use of forest resources and protection of the environment.

2.4.9 Governance in context

Governance can be used in a number of contexts such as, global (international), state (national) and local governance.

2.4.9.1 Global governance

Global governance refers to intervention aiming at changes in environment related behaviour of global actors (Solórzano, 2007). These interventions or governance mechanisms used by global actors may include policy requirement or policy inducement to recipient countries of financial aid and technical assistance. Likewise, global actors, particularly NGOs and corporations, through the diffusion of ideas and information, can foster different value systems that result in social awareness and public pressure for changes in policies and institutions. If successful, global actors influence social behaviour worldwide without having legal authority to do so. Global environmental governance is the political interaction of transnational actors aiming at solving problems that affect more than one state or region when there is no power of enforcing compliance. Global actors, such as donors and NGOs active world wide and Intergovernmental Organizations –United Nations or World Bank-, are interested in the conservation of biodiversity given that it represents a global common heritage or at least a global common concern (Hunter *et al*., 2002 cited by Solórzano, 2007). Beyond interest, these actors also have the power to govern by steering social actions (Lipschutz, 1996 cited by Solórzano, 2007). Global actors can influence decision making processes made by nation states as well as by communities.

2.4.9.2 National governance

National governance refers to the governance mechanisms implemented within the Trans Boundary Protected Area (TBPA). These are mainly associated with policies for Tran boundary natural resources management, regulations for the use and allocation of property rights (Solórzano, 2007). These governance mechanisms can be implemented individually by each nation state sharing the TBPA or jointly. In a narrow sense, there are three main goals of governance, mostly pursued by governments on the state level (Solórzano, 2007); these are (1) to provide the population with physical security, (2) to guarantee the stable reproduction of their natural environment, and (3) to ensure their livelihood, i.e. the production and distribution of needed goods and services.

2.4.9.3 Local governance

Local governance refers to governance at the local level. According to Lutz and Linder (2004), local governance is defined as governance which contains a set of institutions, mechanisms and processes, through which citizens and their groups can articulate their interests and needs, mediate their differences and exercise their rights and obligations at the local level. It requires partnership between local governmental institutions, civil society organizations and private sector for participatory, transparent, accountable and equitable service delivery and local development. It necessitates empowering local governments with authority and resources and building their capacity to function as participatory institutions that are responsive and accountable to the concerns and needs of all citizens. At the same time, it is concerned with strengthening of grass roots democracy and empowering citizens, communities and their organizations such as CBOs and NGOs to participate as equal partners in local governance and local development process.

Successful local development has been identified as essential to meet the Millennium Development Goals (MDGs) outlined at the UN Millennium Summit in 2000, and the World Bank Poverty Reduction Strategy (PRSP) (Lutz and Linder, 2004). This implies a stronger focus on decentralization, community empowerment and local governance in development work. Due to the growing interest and support for local development in recent years, many countries have passed legislations to decentralize governmental structures and this has been supported by many international agencies. The way in which decentralized structures are organized and how decentralization policies are implemented determines the resources available at the local level and the functions of local governments.

It is clear that successful decentralization is not just about building good political institutions, it is also essential to improve overall governance at the local level. This includes meaningful participation of the local population and their inclusion into decision making processes to foster transparency, accountability and responsiveness, and to guarantee efficient and effective policy implementation. Meaningful inclusion of all relevant actors at the local level is decisive for successful local development, to ensure that different local power structures work with each other.

The shift in focus from the national to the local level makes a closer look at the social, political and economic dynamics in communities as more important. In developing countries the state is often weak, and the penetration of the state in rural areas has been poor. Decentralization in these cases is not only about shifting power and resources to the local level and making local authorities more effective. It is often the case that the capacity for good local governance also has to be built in areas where governmental activities in general have been very limited (Lutz and Linder, 2004).

It is increasingly realized that local governance system plays an important role in improving environment (King, 2005). However, at the local level there is interplay between formal and informal governance structures, which sometimes can lead to resource use conflicts.

2.4.10 Formal and informal governance structures

2.4.10.1 Formal local governance structures

Formal local governance structures have been the dominant mode of governance. They are based on Western philosophy and are backed by written law, implying enforcement of rules by the state (Leach *et al.*, 1997). Formal local governance structures in this study refer to the professional working rules that govern the sustainable management of particular area with respect to forestry. They encompass all the rules and regulations governing management and utilization of forest resources. Forestry Department provides capacity building to the local forest management committees, including training on record-keeping and bookkeeping to enhance financial management by the committees. Example of formal local forest governance structure includes Village Natural Resources committees.

24.10.2 Informal local governance structures

Informal governance structures are those governance structures that are not part of a written legal framework and include private mechanisms that guide everyday transactions. These governance structures can be defined as social norms, customs, attitudes, and beliefs that define a way of life within a given area. This includes religion, ideas about right and wrong, and rules of enforcement. In order to qualify as governance structures these measures need to be persistent over time and show depth and durability (Glaeser *et al.*, 2004).

Informal local governance structures have always played an important role and still do in many countries. In the rural areas of many developing countries with a weak presence of the state, informal local governance structures survived the colonial as well as the post-colonial periods. Informal local governance structures remain important in organizing life of the people at the local level despite the emergence of modern state structures.

2.5 Power Relations in the Management of Village Land Forest Reserves

2.5.1 Definition of power

A basic definition of power that is still rather broadly used was developed by one of the founding fathers of modern sociology. Max Weber: “Power is the probability that one actor within a social relationship will be in a position to carry out his own will even against resistance, regardless of the basis on which this probability rests” (Weber, 1922). This understanding is also reflected in a more recent definition of empowerment as the ability to make effective choices i.e. to choose and to achieve what one has chosen (Alsop *et al.*, 2003). Dugan, (2003) defined power as the capacity to influence others' behaviour, to get others to do what challengers want, rather than what the initial parties themselves want. It is, however, important to recognize that change can be within rather than without, or that it may be a combination of the two. This recognition is important in concerns about empowerment; beyond this, it opens up additional strategies to consider in combating injustice and seeking social change.

Alsop and Henson (2005) also point that the power of the individual rests both in his or her agency (the individual capacity to make a choice) and opportunity structure (the institutional context in which this decision is made). Power is a social construct that only materializes in the interaction of people. Therefore, power is relative; it characterizes relationships between individuals or groups. It is not a fixed characteristic of a person

(or organization) thus it cannot be said that one individual has a certain absolute “amount” of power. The power of one actor is assessed by finding out how strong or weak this actor is in relation to others within a certain social setting and concerning the achievement of a certain set of goals. To cater for this fluent nature of power, some scholars have developed concepts of domains of empowerment or spheres of power (Alsop and Heinsohn, 2005). This takes into account that one person or organization can be very powerful in a certain sphere and not so in another. The different approaches to measure power empirically rely on indicators that reflect the power of actors. The probably most common single indicator for power relations between actors is the distribution of material resources (Platteau and Gaspart, 2005).

Social Network Analysis is concerned with the difference between formal and informal sources of power. While the formal understanding often assumes that the strongest power sits on top of a hierarchy, network analysts claim that the position of actors in a network is crucial for determining their informal power. Krebs (2004) sees the closeness (distance to all other actors in the network) and between ness (degree to which an actor links others who are not otherwise linked) as crucial in determining the power of actors.

The type of power is determined by pre-existing institutional, organizational and ideological configurations. It can either take voluntary environment or through force to compel others to act in one’s interest or accept one desire. This can be achieved through altering incentives of others through rewards or penalties (Nuijten, 2005). There are three categories of power which are embedded in people’s livelihood namely strategic, institutional or governmental and structural or domination (Lemke, 2003; Nuijten, 2005).

2.5.1 Strategic power

Strategic power is a ubiquitous feature of human interaction, insofar as it signifies structuring possible fields of action of others. This can take many forms, e.g. ideological manipulation or rational argumentation, moral advice or economic exploitation. Power as strategic can be perceived in the many daily interactions between individuals and groups. Strategic power is observed where power is derived from ones' endowments and entitlements. In Nepal a number of women of the Musahar tribe said that; although they were allowed to go inside the forest to collect firewood after paying the fee like all women members of the Forest User Groups (FUGs), their group was instructed not to collect large branches, while women from more wealthy groups collected large branches with impunity (Parasai, 2006).

2.5.2 Institutional power

Institutional or government power refers to more or less systematized, regulated and reflected modes of power (a technology) that go beyond the spontaneous exercise of power over others, following a specific form of reasoning (a rationality). It refers to the regulation of conduct by the more or less rational application of the appropriate technical means. These political rationalities help 'to create a discursive field in which exercising power is rational.

Forest Policy of 1998 and the Forest Act No.14 of 2002have given institutional power to the village governments to work with forest officers in the management of forest resources around them (sections 4.1.1 and 4.1.2 of the policy and part 5 section 23 of the Act). The village governments through Village Natural Resources Committee (VNRC) have to be concerned to the forests within their jurisdiction.

2.5.3 Structural or domination power

This is refers to a particular type of power relationship that is stable, hierarchical, fixed and difficult to reverse. Domination refers to those asymmetrical relationships of power in which the subordinated persons have little room for manoeuvre because their margin of liberty is extremely limited.

Power relations influence the way communities are involved in the management of forest resources (Mbeyale, 2009). Local communities are embedded in a complex arena of interacting stakeholders and are positioned differently with respect to their relative power (Larson, 2004; Nuijiten, 2005). This in turn leads to an increase in competition among stakeholders and contributes to the degradation of the natural resources and to resource use conflicts (Beeler, 2005). Socio economic differentiate the communities based on their economic activities, age, education and wealth. Their claims to forest resources are also positioned differently based on their socio-political positions and power relations.

Competition is also likely to take place at an intra-community institutional level where interest groups are trying to take control of a community-based process to further their own interests. As a result conflict is common. At an individual level, social inequities and more devolved authority can lead to differential power balances (Barrow *et al*., 2002).

Power and power shifts can be differentiated in a number of ways. If rural people and communities are to be empowered or to regain lost power, then those holding the power have to devolve it, which may result in a loss of benefits, access to bribes etc. It is for these reasons that such power shifts may be resisted, regardless of participatory rhetoric to the contrary. Community based forest management is a continuous battle requiring not simply policy and legal support, but real power devolution so that the rights and responsibilities

are clear, unambiguous and linked. In addition, the roles of those losing power have to be acknowledged as still important, as is established in many of the case studies (Murphree, 2000).

2.6 Stakeholders and Power Relations in Forest Management

The term stakeholder refers to a person or group with an interest in forest resources; include those with rights to, claims on, and/or responsibilities for forest goods and services. They can be categorized into resource users (those found using the resources for their subsistence or profit making), regulators those organizations found regulating resource utilization such as the central and local Government officials) and facilitators, those found facilitating the communities in different ways mainly Non Governmental Organizations (NGOs) and Community Based Organizations (CBO). State, Private sector and community within this focus are stakeholders which may have different interests in forest resources in Tanzania. The strength of that interest is determined by their power to negotiate (Barrow *et al.*, 2002).

In Tanzania, changing policies and practices of post colonial governments have continued to shape stakeholder relations. The current forest policy (1998) recognizes clearly the role of the government, individuals and local communities as stakeholders in forest resource management and conservation (Shackleton *et al.*, 2002). Following the recognition that various stakeholders play a role in forest management, the current outlook is more on decentralized management. Consequently, the central government is concentrating more on facilitation and enabling functions of local governments, communities and the private sector at the local level, including providing access to and taking part in planning and management of forest resources. Under this set up, roles within the forest administration are provided in three levels, namely the national, regional and council levels. FBD's role is

to facilitate the local government authorities in their responsibility to provide services. This involves policy making, quality assurance through setting of management standards, and regulatory framework, monitoring accountability and supportive and facilitative functions such as provision of adequate human and financial resources (URT, 2004).

The President's Office - Regional Administration and Local Government (PO-RALG), through the Local Government Reform Team (LGRT) is charged with the task of spearheading implementation of local government reform process meant to clarify sector specific roles. Relevant areas as regards to forest management include; guiding the implementation of forest management by providing technical support to local government authorities; setting national minimum standards of forest services and monitoring quality attainment for the necessary management interventions in the local level; advising on capacity building for the forest sector at local level and facilitating dissemination of forest information. Many NGOs are also involved and sometimes work in collaboration with the government institutions in creating awareness and poverty reduction activities like income generating activities e.g. (facilitation of beekeeping groups) in communities around forests reserves. Reforms introduced in the late 1990s and early 2000s provide the legal basis for communities to own and manage forest resources in village lands. Further more under CBFM villagers retain all rights to use, harvest and sell forest products within their forest reserve in line with their approved management plan (URT, 2004).

The management of forest resource draws the participation of different stakeholders ranging from local and international partners. However, mechanisms for effective consultation and coordination are not yet in place and the sector is inadequately capacitated be in sectoral and inter-sectoral co-ordination. There is also weak institutional linkage and unclear mandates between the central and local levels of the government, local

communities, the private sector and civil society organizations on conservation and management of forest ecosystems.

Some stakeholder are close to the resource, but they may have little power or control over who uses or can use such forest resources. Other more distant stakeholders, such as urban dwellers and government policy making institutions, may have little direct interest in the resource, except as a source of, for instance, charcoal in the market, but they may have an economic power and administrative control over that resource out of all proportion to their proximity (Barrow *et al*., 2002; URT, 2004).

Shackleton *et al.* (2002) argues that, in almost all African states, traditional authorities continue to play a role in forest resources management with varying degrees of legitimacy and control. In Zambia and Lesotho, chiefs assert disproportionate power as chairpersons of sub-district forest resources management structures and tend to divert some community-based benefits to building their own power bases. On the other hand, the exclusion of traditional leaders from conservancy committees in Namibia was seen to be counterproductive, resulting in conflict and delays, until these leaders were co-opted onto the committees.

Gender is an obvious means of dividing up different types of interest in forest products that various stakeholders have. In rural settings, men and women often have different perspectives on the relative importance and use of certain tree species and products. Simplistically, men tend to have a more cash-focused interest, while women have a greater interest in trees to meet household and contingency needs. Therefore men have more power to the resource utilization than women (Barrow *et al.,* 2002). The interests and interest groups are influenced by many factors including subsistence and cash needs and

determined by the nature and value of the resources and people's dependency on them, a dependency which increases with poverty, aridity and isolation. Consequently, a range of rights of access to certain resources evolved within and between communities, helping people secure their rights and livelihoods (Barrow *et al.,* 2002).

2.7 Influence of Power Relations on Community Livelihood

Livelihood refers to access that individuals or households have to different types of capital (natural, physical, human, financial and social), opportunities and services (Ellis, 2000). The livelihood could be sustained when people can cope with and recover from stress and shocks and maintain or enhance their capability and assets both now and in future while not undermining the natural resources base (Scoones, 1998; Carney, 1998) Chambers (1987) cited by Dugilo (2009) argued that sustained livelihood refers to the maintenance or enhancement of resource productivity on a long term basis. Forests represent an enormous valuable resource in terms of diverse economic products and environmental services they provide. Due to that fact, forest resource can be the source of livelihood to people who live within or surrounding it. The contribution that trees make to household livelihoods varies from family to family. This is supported by World Bank (2002), which argues that forests are the source of livelihood for millions of the world's poorest people.

The construction of livelihood is an ongoing process in which it can not be assumed that the elements remain the same from one season, or from one year to the next. Assets can be built up, eroded, or destroyed. Available activities fluctuate seasonally and across years, especially in relation to larger economic trends in the national economy and beyond. Access to resources and opportunities may change for individual households due to shifting norms and events in the social and institutional context surrounding their livelihood (Ellis, 2000).

Some research findings have shown that poorer households depend totally on forest products due to limited access to alternative sources of income, while the more wealthy households mainly use the forest for larger commercial activities. The poor are likely to be more dependent on forest products than richer groups, yet may not have the decision making or negotiating power to claim and secure their rights (Barrow *et al.*, 2002). The link between forest resources management and poverty reduction depends on the systems of governance. Pro-poor growth and forest resource management require a fundamental change in governance. In general, the wisest and most equitable decisions about forest resource use must be made openly and transparently because those who are most affected by these decisions should have access to information, be able to participate in decision-making processes, and have access to recourses (USAID, 2006). For sustainable forest management and people's livelihood to be successful there must be good governance structures.

Gender and equity considerations are vital to understand, as there are significant differences in the type of assets, and amounts of resources used. Gender considerations may be easier to understand than other equity issues concerning the poor and marginalized groups. Understanding intracommunity rights and benefits is essential in order to avoid the further marginalization of less powerful groups (Barrow *et al.*, 2002).

Restrictions on the use of resources have an impact on the people who depend on them. Consumptive uses are essential for the people's welfare and any restrictions may lead to conflict, unless properly understood, negotiated, and agreed. It is the level of dependence on the resources in a specific ecosystem, and the extent to which access is allowed that determines the type, magnitude and form of conflict and overall social impact of a given forest reserve. The various social units within a local community are affected differently by

restrictive measures and have to be considered separately. Proximity to the resource is not the only consideration in determining rights and responsibilities .This is particularly so with extensive land use systems, for example pastoralists, where the land users may only use forest resources at certain times , as a resource to meet contingencies or as part of seasonal grazing patterns. Other cases are more difficult to manage, especially where there are cultural linkages, where the people have cultural ties to areas of trees may be widely dispersed, not cohesive as a group, and may not be even an administrative group.

Most communities are stratified according to wealth, education, power, ethnicity, political affiliations, livelihood strategies, access to land, use of resources, access to patronage, allegiance to traditional structures and engagement in the formal economy. Some are strongly divided by factionalism. All these result in multiple interests that can influence which, and how different groups participate in a project and what their specific objectives are. It is often the more educated, political and social elites who take a leading role. This is a problem in South Africa (Fabricius, 1999), and often defeats the fundamental aims of a community-based approach by excluding less powerful groups such as women.

Participatory approaches can present a veil behind which power can be consolidated and used more effectively (Malan, 1999). On the other hand, socio-economic differentiation can result in weak incentives to contribute to resource management initiatives especially for people with access to non land-based sources of livelihood (Ainslie 1999; Shackleton *et al.*, 1998). People with little dependence on the resource base will show little interest in managing it, while the very poor for whom the resource base is critical may not be able to afford the costs of restrained use in the interests of long term sustainability. The same would apply to entrepreneurs who depend on resources to remain viable.

The more differentiated a community is, the less likely it is to share common interests and norms, and the more individual and sub-group interests will predominate (Shackleton & Willis, 2000). Within a community, different stakeholders have different rights and responsibilities relating to forest resources. Some groups, while important users of forest resources, may have little or no decision making power with respect to those forest resources. Conversely some powerful decision-makers may have little actual interest in the resource. In village based natural resource management in Somaliland where the main resource users (women, pastoralists and poor farmers) are not those who dominate decision making processes (religious and external leaders, elders, and village elites).

Recent case studies on the value of woodland resources for rural households in northern South Africa demonstrated that households in isolated, and less developed villages do make use of a wider diversity of resource types and species. They procure these resources more frequently than people living in less isolated, more developed settlements (Shackleton *et al*., 1999b; Shackleton & Willis 2000; Shackleton *et al*., 1999c). A much higher proportion of households in isolated rural villages use and depend on locally harvested resources for subsistence, while external traders tend to be more predominant in the more developed settlements. Isolation can be a great conserver, allowing local and customary forest resource management and their embodying institutions to dominate, and help ensure long term sustainability, due to resource dependence.

In most cases health care provision and education facility development are not mobile, and are site specific. This serves as a centre and an attraction for increased settlement, as well as attracting outsiders, which may increase forest resource pressure beyond that which is sustainable. Providing greater access to such services without an increased ability of local people to be able to manage their forest resources in the face of increasing external

pressures can, as so often happens, result in degradation, over use and expropriation by such outsiders (Barrow *et al.*, 2002).

CHAPTER THREE

3.0 STUDY AREA AND METHODOLOGY

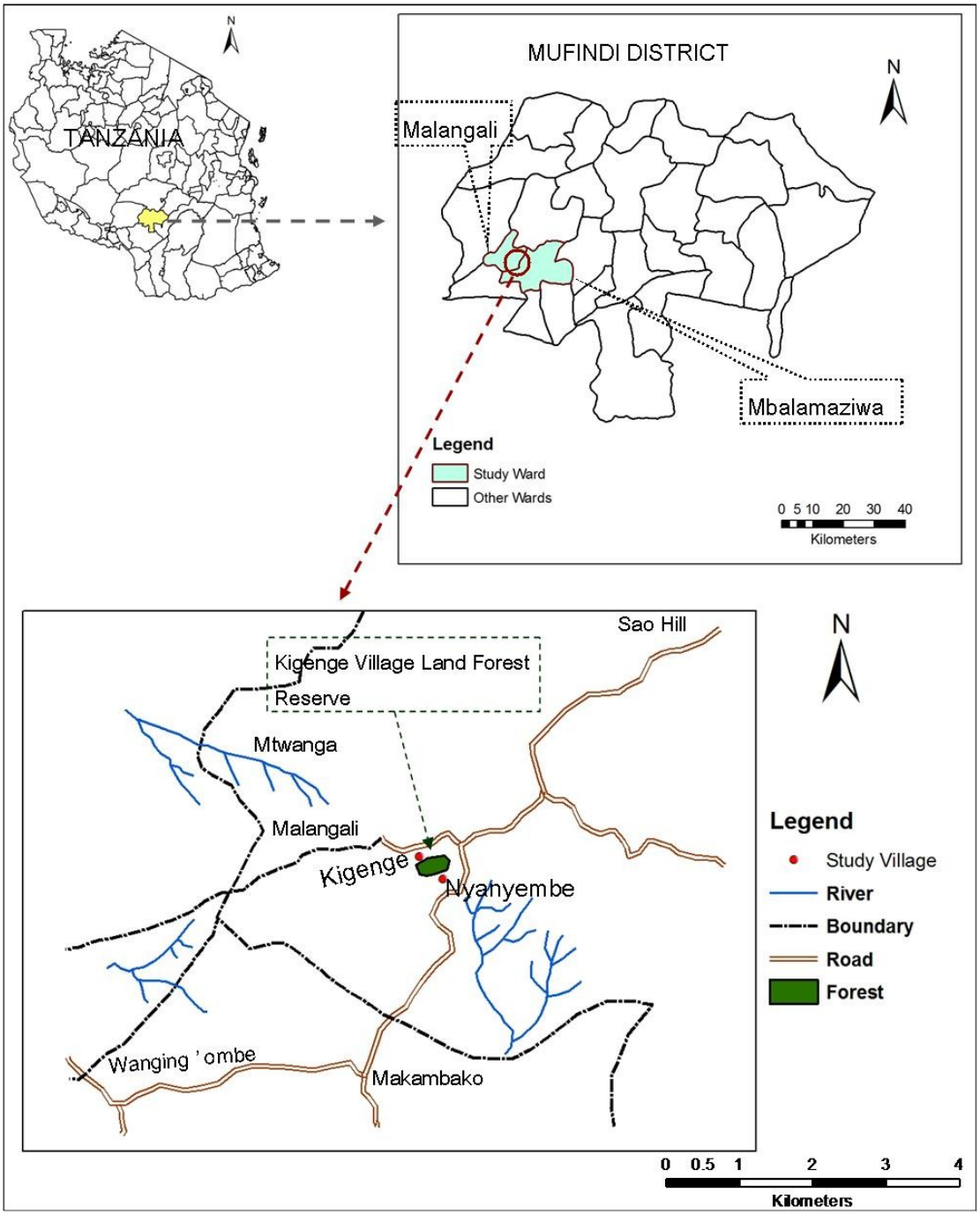
3.1 The Study Area

3.1.1 Geographical location

This study was carried out in Kingege and Nyanyembe villages adjacent to Kingege Village Land Forest Reserve (KVLFR). The forest reserve is located at 60 km from Mafinga Township, South West of Mufindi district (Fig. 2) along Mbeya –Dar es Salaam highway. KVLFR is miombo woodland which lies between 28°52’52’’and 34°54’45”E and between 8°35’22’’and 8°36’56”S.The forest reserve is bordered by Nyanyembe village to the East, Kingege village to the North, Irangi hamlet of Nyanyembe village to the South and to the West the forest is surrounded by agricultural land.

3.1.2Climate and soil

The rainfall pattern of the study area is unimodal with single rain season from November to April. It receives an average of 750 mm of rainfall annually and dry season during the rest of the year that is from May to October. The mean monthly minimal and maximal temperature are18°C and 25°C, reaching close to freezing point between June and August. The soils are generally red clay and sand.



Source: Kingege Village Land Forest Reserve map 2000.

Figure 2: Map showing Kingege and Nyanyembe villages where KVLFR is located

3.1.3 Vegetation

The natural vegetation is characterized by miombo woodland with trees and shrubs dominated by species including *Brachystegia, Combretum* and *Julbernadia.* Kingege Village Forest Reserve covers about 50 ha. Wildlife present in the forest reserve include *Madoqua kirkii, Papio anubis, Aepyceros melampus, Oryctolagus cuniculus,*and *Sus scrofa domestica* and birds like *Numida meleagris.*

3.1.4 Population

According to the 2002 population and housing census, Mufindi district had total population of 282 071 people of whom 133 150 were males (47.2 %) and 148,921 females (52.8%). The district has a growth rate of 1.5% annually during 1988 to 2002.The population in the two study villages is 2577 people with 657 households (Table 2).

Table 2: Population size in the study villages

Village	Population	Males	Females	Number of Households
Nyanyembe	1796	839	957	465
Kingege	781	380	401	192
Total	**2,577**	**1219**	**1358**	**657**

Source: Population census 2002 (URT, 2002)

3.1.5 Socio-economic activities

Crop production is the major socio-economic activity of the communities' adjacent to Kingege Village Land Forest Reserve followed by livestock keeping and petty business. Maize, Irish potatoes, beans and sweet potatoes are the main crops grown. Other crops include cassava, sorghum and ground nuts .The livestock kept include cattle, ducks, goats and chicken.

3.1.6 Social services

Social services available in the study villages include primary and secondary schools, churches, water tapes, dispensary and roads that facilitate transportation of agricultural crops.

3.2 Methodology

3.2.1 Data collection

Both primary and secondary data were collected in this study, whereby varieties of data collection techniques were applied (Appendix 3). Socio-economic data were collected through Participatory Rural Appraisal (PRA) approaches, Focus Group Discussions (FGD), questionnaire survey and key informants interviews. Besides, participant observation approach was used as a means of triangulating the data.

3.2.1.1 Primary data collection

(a) Participatory Rural Appraisal (PRA)

This is an exploratory method that aimed at creating a dialogue with stakeholders and getting necessary information from them through participatory communication and analytical methods. Mbwambo (2000) argued that the approach allows local people to apply their indigenous knowledge, experience and capacity to share information. PRA tools that were applied include, transect walk, pair wise ranking and matrix scoring.

(i) Transect Walk

Transect walk involved physical observation of forest resource condition and identification of products useful to the villagers. A group of 5-7 members were used in order to have control of the group; gender and age balance was considered in the transect walk.

(ii) Pair Wise Ranking and Matrix scoring

These techniques were used to rank the power types in the study communities. The process-involved identification of power types presented in the study villages, in management and utilization of forest resources from KVLFR i.e. institutional, strategic and structural power. A pair wise ranking chart was prepared showing the three types of power on both axes. The researcher then worked through the combination of pairs by asking the participants to nominate and explain their preference, i.e. Do you consider strategic or institutional power to be a dominant power and why. The researcher then writes the chosen power in the appropriate space in the table. Once the table has been complete, correlate the number of times a power appears on the table can then to its rank, i.e. the more times the type of power appears the greater its choice and the higher it ranked.

(iii) Focus Group Discussions (FGDs)

Focus group discussion is defined as a discussion in which a small number usually of 6 to 12 of respondents, under guidance of a moderator (facilitator), talk freely about topics that are believed to be of importance to the investigation (Kayunze, 2005). Checklists (Appendix 2) were used to guide FGDs with key informants who were the stakeholders and knowledgeable about the forest reserve. A key informant is an individual who is knowledgeable, accessible and willing to talk about the issues under discussion (Mbwambo, 2000). In this study, FGDs involved village government leaders, Village natural Resources Committee (VNRC) members, District Natural resources officer and Division Forest officer. FGD was used to collect information about stakeholders, who have power and influence in the community and the socio economic and institutional factors influencing power relations.

(b) Participant observation

During participant observation, the researcher had an opportunity to compare the reality with what the respondents reported. This technique was used as soon as the researcher arrived at the study area in order to overcome the problem of isolation. The researcher tried to be part of the community being studied. This method was used to tie together the discrete elements of the data collected by other methods and permitted these elements to be examined within the perspective of the social context (Kajembe, 1994). Mettrick (1993) argued that it is important to keep an eye open when visiting a study area in order to check for what is being reported against what you see. The main tools that were used include curiosity, willingness to learn from other people and ability to adapt to their rhythms and lifestyles.

(c) Questionnaire survey

This method was used to collect information from households whereby the cross-sectional design was used, which involved collection of data at a single point in time from a selected sample of respondents to represent the population. The technique used face to face interviews with a questionnaire that contained closed and open ended questions (Sample questionnaire in Appendix 1). Whereby open –ended questions helped to get the respondents' views regarding the problem under the study while in closed-ended questions, respondents were provided with alternative answers. Open-ended questions served the purpose of disclosing the system of knowledge and structuring of ideas central to respondent's own view of the study problem. While in closed or forced questions, a number of alternative answers were provided.

A sampling unit for questionnaire survey was a household. The household is defined as a unit consisting of one or more persons related or unrelated who live together in one or

more housing and have a common catering arrangement (Wold Bank, 1995). Village registers were the sampling frame. A random sampling technique was used to select heads of households in the study villages and a minimum of 30 households were interviewed in each village whereby Nyanyembe had a total of 465 households and Kingege had 192 households. This sample size was recommended by Bailey (1994) cited by Mbeyale (2009) who argued that a sample of at least 30 units is statistically sufficient irrespective of the population size.

3.2.1.2 Secondary data collection

Secondary data were collected through documentary reviews of both published and unpublished documents from Sokoine University of Agriculture library (text books, journals, and pamphlets), village offices in the study area and different websites.

3.2.2 Data analysis and presentation

3.2.2.1 Qualitative Data analysis

a) Content Analysis

Content analysis was used to analyse the information collected through PRA, FGDs, participant observation and document reviews. According to Stemler (2001), content analysis technique is a systematic, replicable technique for compressing many words of text into fewer content categories based on explicit rules of coding. The qualitative data obtained during PRA exercise were analysed in collaboration with the communities.

b) Stakeholders Power Analysis

Stakeholder power analysis was the analytical approach used for the identification of key stakeholders in the management of KVLFR, the assessment of their interests and other relevant attributes, and their relationships within or outside the system, which describes

human and their relationship with forest resources. In stakeholder power analysis a realistic picture of the range of stakeholders and their interests, influence, roles and power relations was obtained.

3.2.2.2 Quantitative data analysis

The Statistical Package for Social Sciences (SPSS version 12.0) was used in quantitative data analysis. Both descriptive and inferential statistical analyses were applied. Descriptive statistical analysis involved determining measures of central tendency and dispersion. Inferential statistical analysis included the following:-

a) Socio-Economic and Institutional Factors Influencing Dominant Power in the Community

The dominant power obtained based on the scoring during PRA exercise (Appendix 4) which was used in the linear multiple regression model. Dominant Power was measured as a surrogate of governance, therefore the power was measured by weighing characteristics of good governance which include accountability, transparency, equity, rule of law, responsiveness, participation, effectiveness and efficiency that was combined into a "composite measure index" as shown in Appendix 5. In order to measure the dominant power, characteristics of good governance were given scores, which range from 1 to 5 and the average score was computed for each household(Appendix 6). Whereby, cut point was 3.5 i.e. below 3.5 was regarded as poor while from 3.5 to 5 was good. Multiple regression model was developed to find out the relationship between independent variables (wealthy category, residence duration, household size, participation politics, distance from the resource base and education level), which influence the dependent variables Y_{dp} (dominant power).

$Y_{dp} = \beta_0 + \beta_1 X_1 + \beta_n X_n + e$………………………………… (1)

Therefore,

Y_{dp} = dominating power in the community which influence the performance of local governance structures.

X_1-X_n = independent variables

e = error term

The β_1 to β_i are the beta weights, representing the amount the dependent variable y changes when the corresponding independent unit changes. The β_0 is the constant, where the regression line intercepts the y axis, representing the amount of the dependent variable y when all the independent variables are 0.

The independent variables include:

X_1= Household size: It was assumed that family size has effect on power relations. Large number of family members may grant household head with strategic power on access and use of forest resources. This variable has positive sign of estimate β (+β).

X_2= Residence duration (years): it was assumed that the number of years that an individual has stayed in the village adjacent to resource base might have an effect to existing power relations. Individuals residing in a village for a long period develop interests to forest conservation and have high social capital. These may give him/her more power that may influence his/her access to resources. This variable has positive sign of estimate β (+β).

X_3= Distance in kilometres from a resource base to where individual stay could significantly affect individual power on access and use of forest resources. It is assumed that individual living closest to resource base can access and use more resources than a distant individual uses, therefore is said to have strategic power. This variable has positive sign of estimate β (+β).

X_4 =Wealth category: based on the local indicators of poverty and richness, it was assumed that the state of being rich significantly increases individual's power on access and use of forest resources. This variable has positive sign of estimate β (+β).

X_5 = Membership in VNRC: It was assumed that individual with institutional power on resource management, also have strategic power on access and use managed resources. This variable has negative sign of estimate β (-β).

X_6 = Participation in politics; Politics refers to the relationships within a group or organization which allow particular people to have power over others. If an individual is involved in politics, He or She may have power to convince other people to reduce forest resource degradation. This variable negative sign of estimate β (-β).

X_7 = Education level, It is assumed that educated people are more exposed to many issues and this may has positive effect on use of forest resources. Individuals with higher education level may have power to educate others on resources conservation and reduce forest resources degradation. Education level has negative sign of estimate β (-β).

X_8 =. Gender equity in distribution of the forest resources, it assumed that being men gave them more power to access the forest resources than women. Gender assumed to have positive Beta weight (+β).

X_9 = Cultivated land size, It was assumed that the mean increase in cultivated land size decrease power to access the forest resources to households' Cultivated land size assumed to have positive regression coefficient β(+β).

X_{10} = Forest access rules, It was assumed that user rights enable the forest resources users to have power to access the resources equally. Forest access rule have positive coefficient β (+β).

The hypotheses tested were:

Null hypothesis (Ho): Dominant power in the study area is not influenced by socio-economic and institutional factors

Alternative hypothesis (Ha): Dominant power in the study area is influenced by socio-economic and institutional factors.

A two – tailed *t*-test at 0.05 level of significance was used to reject or to accept the test hypothesis. The null hypothesis (Ho) was accepted when $p< 0.05$.

The descriptive power of the regression was assessed by its coefficient of determination (R). The coefficient of determination showed the strength of relationship between dependent and independent variables.

In this case linearity was assumed among dependent and independent variables. When postulating relationship among dependent and independent variables, linearity is normally assumed. Though this assumption is not always correct, its adoption at least as a starting point might be valid on several grounds: first, numerous relationships have been found empirically to be linear, second, the linear specification is generally the most sparing; third the theory is often so weak we are not at all sure how the non-linear specification will be (Lewis-Beck, 1983 cited by Kajembe, 1994).

In the same way, when developing regression equation, research objectives dictate whether one emphasizes prediction or explanation. Regression equation developed in this study emphasized explanation rather than prediction. Similarly, multiple regressions was

preferred to simple regression because, first, it almost predictably offer a fuller explanation of dependent variables since very few phenomena are products of single cause. Second, the effect of a particular independent variable was made more certain for the possibilities of distorting influence from other independent variables were minimized (Kajembe, 1994).

CHAPTER FOUR

4.0 RESULTS AND DISCUSSION

4.1 Key Stakeholders in the Management of KVLFR, their Interest and Sphere of Influence

The management of forest resource in the study area involves the participation of different stakeholders ranging from local to national level. A mechanism to ensure comprehensive coordination of management interventions to accommodate the varying roles and interests has been initiated at all levels (URT, 1998). Institutional linkage and clear mandates between the central and local levels of the Government, local communities, and civil society organizations on conservation and management of forest ecosystems is important.

Twelve key stakeholders have been identified in the management of KVLFR. These stakeholders have different interests and sphere of influence as shown in Table 3. Among the identified stakeholders are users and regulators at village and district level. In this study facilitators were not observed.

4.1.1 Users

In this study, farmers as users are interested in fertile land for crop cultivation (Table 3). Sometimes they encroach into the forest reserve by extending farm boundaries in search of more arable land. Other stakeholders are the Pastoralists; these are interested in grazing lands for their livestock. In the study villages, the forest has zones for grazing.

Table 3: Key Stakeholders in the management of KVLFR, their Interests and Sphere of influence

S/No	Type of Stakeholder(s)	Interests	Sphere of influence
1	**USERS** 1.Farmers	Availability of fertile lands	village level
	2.Pastoralists	Livestock grazing lands	Village level
	3.Charcoal makers	Trees as raw materials for charcoal making	Village to district level
	4.Traditional healers	Presence of medicinal	Village to regional level
	5.Traditional house builders	Poles and ropes.	Village level
	6.Fire wood collectors	Presence of trees to be used as firewood for both subsistence and commercial purposes	Village level
	7.Vegetable and fruits collector	Vegetable and fruits from the forest	Village level
2.	**REGULATORS** 1.Village Natural Resource Committees (VNRCs)	Conservation of KVLFR.	Village level
	2. Village governments	To ensure that all activities related to conservation of KVLFR are performed.	Village level
	3.Ward executive officer	Forest resources utilization and conservation.	Ward level
	4. Division Forest Officer	Forest resources utilization and conservation.	Division level
	5.District council	Revenue collection from Forest resources	District level

These are areas with a high percentage of grasses and grazing is allowed although sometimes especially in the dry season, pastoralists encroach protected zones of KVLFR. Charcoal makers are interested in the raw materials for charcoal making. Charcoal making is conducted for commercial purposes in the study villages, and most of the charcoal is sold at higher prices in the nearby township of Makambako, Njombe District where the demand for charcoal is high. Fire wood collection is for both subsistence and commercial purposes. Collection of fire wood for domestic use is allowed at no cost as long as only dry wood is collected. Fire wood collected for bricks burning is usually done by men, a cost of TAS 3000/- has to be charged per ton of wood to the VNRCs. Collection of fire wood for commercial purposes entails more than three visits per week to the forest which is more than collection of fire wood for domestic use, which is done twice per week. Other stakeholders include traditional house builders and traditional healers who are interested in trees for building including poles, ropes and medicines from roots, leaves and barks. The study revealed that most of the traditional healers in the study area operate for commercial purposes. The findings from this study conforms with the study of Lachapelle, *et al*. (2004), who identified the majority of users in Kabhre Palanchok District of the middle hills of Nepal being subsistence agriculturists who depend on forest resources including fodder, fuel wood, and timber. In another study on Community Based Forest Management in Lepaterique in Hondurus, Nygren (2005) identified the forest resource users being resin tapers, loggers, commercial firewood /charcoal producers and farmers who are interested in land clearing for agriculture and cattle raising, on the other hand women were interested in non-commercial gathering of firewood and medicinal plants.

In this study it was revealed that farmers, pastoralists, firewood collectors, traditional house makers sphere of influence does not go beyond the village level because they usually collect the forest resources for subsistence and commercial needs in the villages.

The charcoal makers whose activities are demand driven their sphere of influence goes up to the district level where they sell charcoal. Traditional healers usually perform their activities in the village but their customers come from different areas in the region. Therefore their spheres of influence range from the villages to region level.

4.1.2 Regulators

This study showed that regulators are interested in forest resources utilization and conservation (Table 3). Their role is policy guidance and monitoring of forestry related environmental issues. At the village level, regulators include; Village Natural Resources Committees (VNRCs) and Village Governments, while at ward level the regulator is Ward Executive Officer (WEO) and Division Forest Officer is the regulator at divisional level. The study further revealed that VNRCs are interested in sustainable use of the forest resources and conservation of KVLFR, having the role of patrolling the forest reserve and monitoring of environmental activities in the study villages. VNRCs are accountable to Village government. This observation conforms with what was observed in the Uluguru Mountains whereby the Village Natural Resources Committees ensure that all activities related to conservation were performed (Paulo *et al*., 2007).

Village governments in the study area were observed to be interested in forest resource utilization and conservation of KVLFR. In this study, village governments play the role of organizing people during fire fighting and coordinating meetings with respect to environmental issues. Further more it was noted that, the village governments in collaboration with VNRCs are responsible in taking care of illegally collected forest products from the forest. In addition, Village governments are liable in taking legal actions to villagers who do not abide to village forest bylaws.

Other regulators observed in the study area are the Ward Executive Officer and Divisional Forest Officer who are interested in forest use and management. The study noted them as overseers of forest utilization and management whereby they act as environmental watchdogs keeping an eye on progress and problems in the management of KVLFR. From the study, the Divisional Forest Officer intervenes when the community does not meet the specified forest management standards and knows when to support or when to step back.

In this study, the regulator at district level is the District council that has interest in revenue collection from the forest and forest management activities. It was observed that the basic role of Mufindi district council is to provide technical back stopping to the communities adjacent to KVLFR, and to encourage and support communities to participate in the management of the forest sustainably. Apart from that, the study observed the roles of the District council as monitoring of the state of the KVLFR and a provider of extension services to the villages around the forest reserve. Emtage (2004) in his study in Philippines reported that the roles of local government units in Community Based Forest Management were administration of land management regulations, provision of information and capital, community development and infrastructure development.

Panta (2009) in his study in Terai region, Nepal in community based forest management reported the stakeholders in resource management being primary stakeholders who are interested in collecting firewood, grasses, fibres, herbs and livestock grazing. Secondary stakeholders who are interested on regulating supply of forest products, sustainable forest management, empowering local people and forest protection, and tertiary stakeholders which include; national and local NGOs with the interests of sustainable forest management, empowering local people through community forest management, biodiversity conservation and tourism promotion.

In this study, it was revealed that regulators spheres of influence vary depending on their roles. Village governments and VNRCs sphere of influence does not exceed village level because they are trained to perform their roles inside the village boundaries where KVLFR is located. Ward Executive Officer sphere of influence do not exceed the ward level since he serve as the administrative officer in the villages in the Ward. While the Divisional Forest Officer's sphere of influence is the villages under the division in question. In addition, the District council's sphere of influence is the district level where supports the village councils in the district.

4.2 Power Relations Existing Among Stakeholders Adjacent to KVLFR

In this study three types of relationships were observed with regard to distribution of forest products. It was revealed that, utilization of forest products including fuel wood, charcoal and poles from KVLFR is governed by users' strategic power. Users have complementary relationship (Fig. 3) in accessing forest resources. Community members differed in strategic power and hence access to forest resources whereby wealthier members have more access to the resources. The study shows that 69.3% of local people reported that rich people are the ones who have more access to the forest reserve followed by medium group while poor people have limited access (Table 4). This situation makes poor people to be demoralized in carrying out their roles (Appendix 7) in conservation of KVLFR. In this case, rich people exploit more forest resources due to their strategic power than the poor do. This is in line with Kopelman *et al*. (2002) and Bardhan and Dayton-Johnson, (2002) cited by Mbeyale (2009) who argued that, there is a general agreement among scholars of common property regimes that socio-economic heterogeneity increases power imbalance and decreases cooperation in Common Pool Resources Management at a local level. In such a situation, strategic power is normally manifested where power is derived from ones' endowments and entitlements. In common pool resource management, the community has

right over forest land, forest tree, Non-Timber Forest Products (NTFPs), wild life and other forest products i.e. fodder and grass, fuel wood etc and ownership on the means to exploit forest resources, the ownership of (tools, seeds) both relevant with forest and their private endowments, technology and skills.

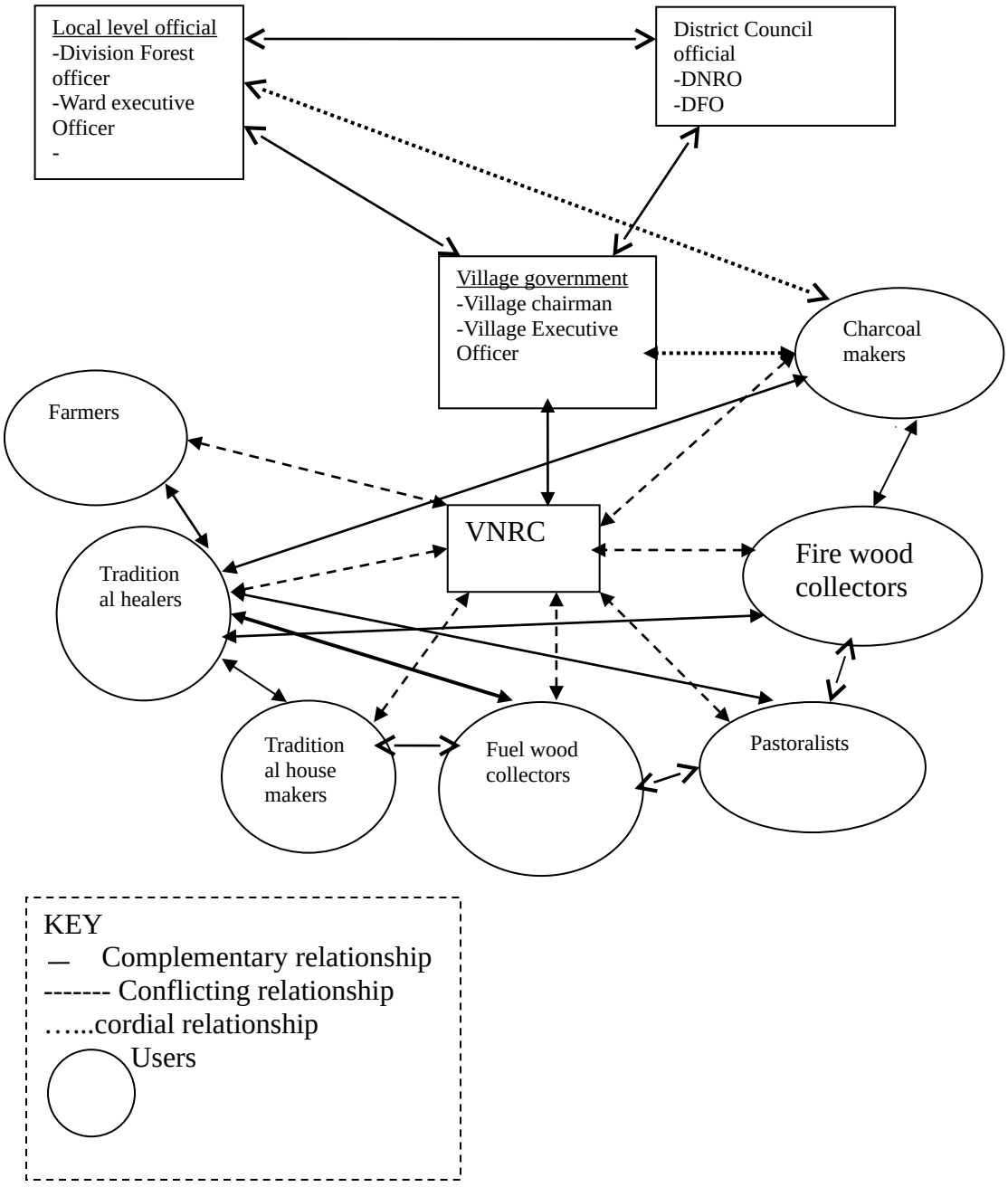


Figure 3: Power Relations among stakeholders in the study area

Although, there is some sort of similar entitlement in fodder and fuel wood, the differentiation of entitlement on timber products is highly varied where the rich people enjoy more volume of timber products than the poor users (Nirmal, 2009).

Table 4: Wealth status and opinions on accessibility to forest resource

Wealth Status	People's opinion on access to forest (%)
Rich	69.3
Medium	27.6
Poor	3.1
Total	**100.0**

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In the study area, charcoal making is motivated by demand from Makambako Township. Charcoal makers need to get licenses from the Divisional Forest Officer and permits from VNRCs. Charcoal makers have cordial relationship with Divisional Forest Officer and Village leaders (Fig. 3) because they have strategic power. Charcoal makers use the strategic power to bribe the Divisional Forest Officer and Village leaders to obtain more resources from the forest reserve. Besides, charcoal makers have weak complementary relationship with other users, since they use their strategic power to get more resources from KVLFR than other users. VNRCs teams usually patrol the forest reserve and take legal actions to those who are found in the KVLFR without permits. Generally speaking, VNRC and users have strong conflicting relationship because they prohibit illegal activities in the forest reserve while users tend to access the forest resources illegally.

In the study area, VNRCs are ones of the village government committees. Village government and VNRC suppose to work together in performing their roles (Appendix 7) in the management and conservation of the forest reserve, since they are supposed to have

complementary relationship. Through discussions, it was observed that when VNRC bring the culprits for punishment to Village government no legal actions are normally taken. This reveals that Village leaders work with illegal forest users especially charcoal makers by taking bribes from them. The situation makes the VNRCs to loose morale in working with the Village Governments. In this case, VNRCs and Village leaders tend to have weak complementary relationship with respect to the management of KVLFR. This is due to the fact that, VNRCs have no working allowances, thus they tend to keep the fines collected from illegal forest users and use it as incentives for their work instead of taking them to the Village leaders. These findings concur with the study by Mbeyale (2009) conducted in Eastern Same, who argued that village chairmen tended to act as power brokers as they normally take bribes from timber traders and pit sawyers instead of siding with the forest officers. Brockington (2007) in his study in Mtowisa village in Rukwa rift valley reported that, the cattle owners were rich and have power to bribe village leaders to allow them move where ever they wanted in the forest reserve and turn court decisions to their own advantage. The poor farmers do not have any right to complain on the destruction caused in the forest reserve and in their farms.

Uncontrolled harvesting of forest products lead to forest degradation. The study revealed that traditional healers are collecting roots, leaves and barks of trees for traditional medicines without permit from VNRCs. Since they are having structural power due to their position, the village leaders and VNRCs do not take any legal action towards them. In this situation, VNRCs and traditional healers have strong conflicting relationship. Traditional healers also have weak complementary relationship with other users, since harvesting of different parts of the trees can cause death of some trees and reduce trees that are used as poles, charcoal making and ropes. Varshney (2003) in his study in northeastern India, reported that the Khasi School of Medicine and others are working to re-establish

traditional laws and practices of forest management to safeguard sacred groves of medicinal plants, which had been depleted under centralized management of the resource since the 1950s.

District council officials and local level officials have complementary relationship because of their institutional power and their roles (Appendix 7). The district council Officials do not trust local level official because of the illegal activities that continue to take place in KVLFR. They consider the local level officials to cooperate with illegal forest users and lead to forest degradation. This situation revealed a weak complementary relationship among regulators at village and District levels. Newman and Dale, (2004) argued that actors sharing weak ties may lack the trust and understanding needed for in depth dialogue over environmental issues.

4.3 Socio-economic and Institutional Factors Influencing Dominant Power in the Study Area

4.3.1 Dominant power

The study revealed that strategic power was dominant among the stakeholders in the study area (Appendix 4**).** The study shows that 68.8% of respondents in the study area reported that households having strategic power due to their wealth are able to get more resources from the forest reserve because they are able to pay the required fees to access the resources from KVLFR (Table 5). In addition, charcoal makers were said to bribe the VNRC members and village leaders so that they can continue with illegal harvesting. Households with institutional power (25.0%), due to their positions in Village government, VNRC and other committee members can sidestep the bylaws and collect the resources from the forest reserve. Few villagers were getting forest resources due to their structural power (6.3%), for example traditional healers who are often elders in the community.

Findings from this study are in line with those of the study conducted by Mbeyale (2009) in mountain and lowland villages in Same District, where it was observed that strategic and structural power dominated the communities based on the access to water, grazing land and forest resources. The observation were based on the socio-economic factors including household heads holding social positions, large numbers of herds of cattle and financial capability have more access to the resources.

Table 5: Dominating Power among stakeholders in the study area

Power	Percent%
Institutional	25.0
Strategic	68.8
Structural	6.2
Total	100.0

4.3.2 Socio-economic and institutional factors influencing dominant power in the study area

In this study, socio-economic factors considered were household size, residence duration, distance from resource base, wealth category, cultivated land size and education level. Institutional factors included; membership in VNRC, participation in politics, gender equity and forest access rules. Table 6 shows the socio-economic and institutional factors that influence dominant power in the study area. The coefficient of determination (R) of 0.749 implies that independent variables explained about 75.0% variation in dependent variable (dominant power).

Table 6: Socio-economic and institutional factors influencing dominant power in the study area

	Coefficient(a) R^2 =75.0			Significance
	Beta weight			
Socio-economics factors x_i	**(β)**	**SE**	t	(p value)
(Constant)		0.243	5.984	0.000
Household size	0.214	0.027	2.625	0.012**
Wealthy category	0.361	0.122	3.642	0.001***
Cultivated Land size	0.039	0.027	0.512	0.611
Education level	-0.207	0.115	-2.395	0.021**
Distance to resource base	0.341	0.071	3.781	0.000***
Residence duration	0.185	0.005	1.830	0.073
Institutional Factors x_i				
Gender equity	0.189	0.105	2.213	0.032**
Membership in VNRC	-0.030	0.140	-0.358	0.722
Participation in politics	-0.097	0.103	-1.177	0.245
Forest access rules	0.020	0.110	0.225	0.823

*** Highly statistically significant at p<0.01 level of significance, **statistically significant at 0.05 and 0.01 level of significance, ns = not statistically significant at 0.05 level of significance.

4.3.2.1 Socio economic factors enabling the strategic power

(a) Distance from the resource base

Table6 shows distance from the resource base was highly significant (p = 0.000) and has positive beta weight (β = 0.341) with respect to strategic power. This implies that individuals closest to KVLFR increased their access to forest resources, and this gave them strategic power to take the resource from KVLFR. These results concur with those of Nirmal (2009) in his study in Dhankuta district Nepal, he reported that the location of a user and settlement pattern influence the use of forest resources. Residents near to the forest have greater entitlement than those far away. Fig.4 shows that, in the study area only 15% of respondents reside at less than one kilometre from KVLFR and access the forest resources easily .While 63.4% of the respondents reside more than two kilometres from the

forest reserve. This shows that most households are far from KVLFR and have limited access to the forest resources and hence have low strategic power.

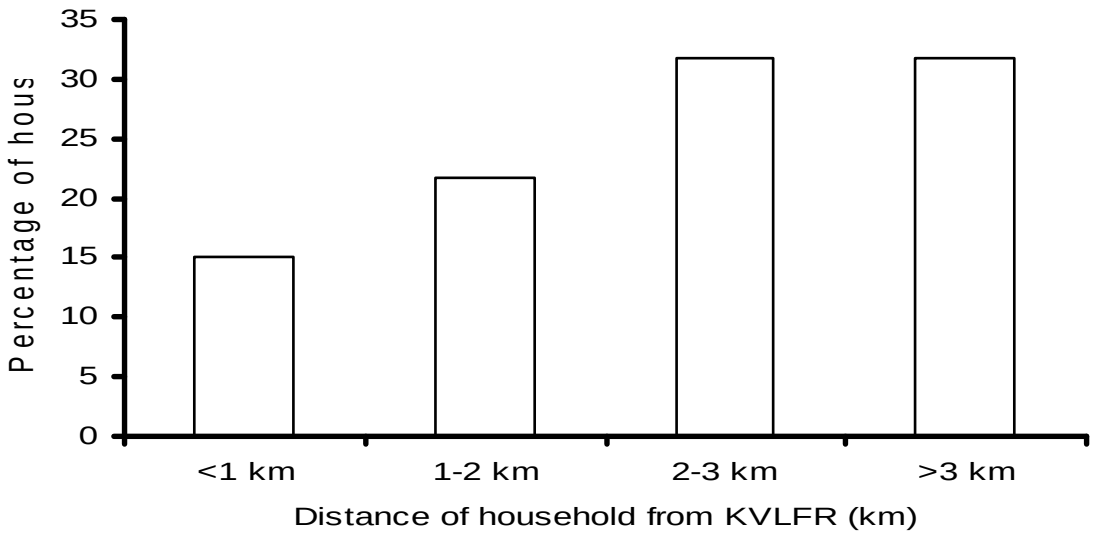

Figure 4: Distance of households in the study area from KVLFR.

(b) Wealth category

Table 6 shows that wealth category was statically significant ($p = 0.001$) and has positive beta weight ($\beta = 0.361$) with respect to strategic power. This implies that the increase in wealth increased strategic power and access to the forest resources from KVLFR. The rich people are more accessible to the forest resources than the poor (Table 7). The findings are in line with those of Mohamed (2009) in her study conducted in Nyanganje forest reserve, where she found that most of the well off people were using money as the source of their power to have more access to the forest reserve illegally compared to the poor .In addition, Nirmal (2009) in his study in Dhankuta district of Nepal, reported that there are variations of resource endowments among different wealth categories. The rich people have greater amount of forest resources. As a result, they have greater amount of entitlements. Agrawal (2001) in his study in India also found out that rich households benefit more than the poor from the community forest reserve.

Further more, these results are in line with that of Mbeyale (2009) who found that the relative wealth and formal education are the main sources of strategic power in the mountains and lowlands of Pangani River Basin. Moreover, in the study conducted in Serengeti Corridor, Kidegesho (2006) reported that, the investor Grumeti Reserve Fund by using financial power made several attempts to frustrate community hunting, a move that was interpreted as a strategy of ensuring that more wildlife population was available for non-consumptive tourism close to his five star hotels. This is attributed by the fact that wealthy people in the community may use their money strategically to paralyze institutional power and thus leading into skewed power relations.

Table 7: Wealth category and access to forest resource

Wealth	Criteria	Respondent	People's

categories		composition in %	opinion on access to forest (%)
Rich	- Burnt brick house with corrugated iron sheets, more than 10 cattle, farm more than 4acres, they get surplus in farm products and have car or motor cycle. Children go to school.	41.1	69.3
Medium	- Thatch burnt brick house, 4-7 cattle, farm of 2-3 acres, enough food for family and have a bicycle, children go to school.	10.6	27.6
Poor	- Thatch mud house, farm less than 2 acres, less food, keeping small animals like chicken. children do not go to school	48.3	3.1
Total		**(100)**	**(100)**

(c) Household size

The study shows that household size has positive beta weight ($\beta = 0.214$) and was statistically significant ($p = 0.012$) with respect to strategic power (Table 6). This implies that those household with large size have strategic power. A plausible explanation is that larger household sizes in rural communities are likely to be associated with availability of large labour power for collection of the resources from KVLFR. The strategic power also

enables the household head high chances of getting leadership position in Village Natural Resource Committee or village government and hence acquiring institutional power. Institutional power tends to increase accessibility of the household members to the resources from KVLFR. Njana (2008) in his study in Urumwa Forest Reserve in Tabora reported that the larger household size increases local community's chances of accessing resources from the forest reserve.

Fig. 5 shows the average household size of respondents in the study area ranging from one to twelve members. The average household size was six members in the study villages around KVLFR. This means that the majority of the households have few members which reduce the chances to access forest resources from KVLFR and hence less strategic power.

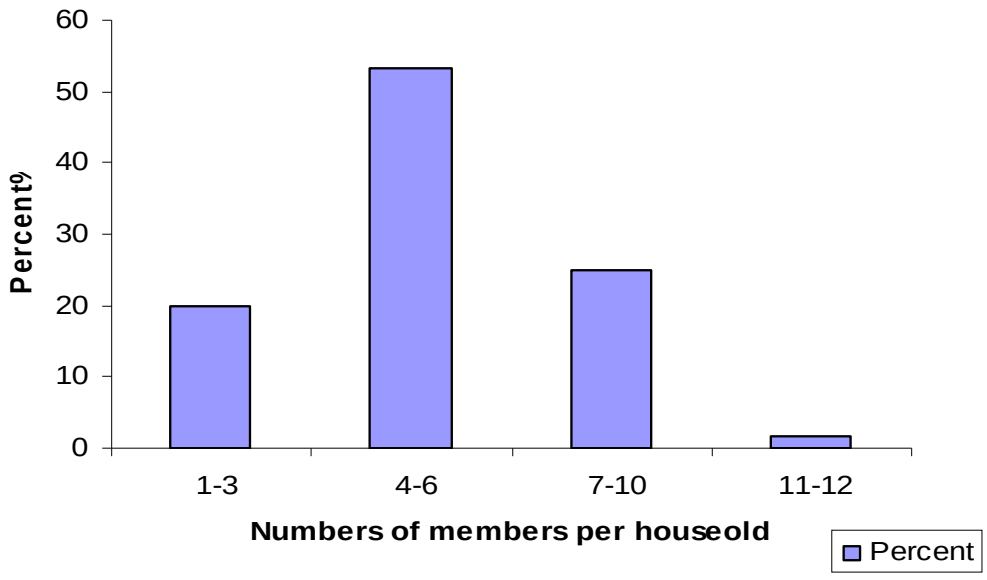

Figure 5: Household sizes of the respondent in the study villages

(d) Residence Duration

Table 6 shows residence duration has positive beta weight (β = 0.185) and is not statistically significant (p = 0.073) with respect to strategic power. This indicates that people who have stayed longer in the area gain strategic power. This is because an individual who has stayed in a particular place for long time often gains social capital and tends to give him/her power that may influence his/her access to resources. The plausible explanation is that, as an individual stays in an area for along time he/she will be aware of the forest resources availability and his rights to those resources and ways and means to exploit the resources. These findings concur with those of Mayetta (2004) who reported that the longer a person stays in a particular place the more he/she becomes involved in natural resources conservation and utilization.

(e) Cultivated Land size

The study shows that cultivated land size has positive beta weight (β = 0.039) and is not statistically significant (p = 0.611) with respect to strategic power (Table 6). This means an increase in one unit of cultivated land size increase the accessibility to forest resources. A plausible explanation is that farmers with large farm sizes are able to allocate their land for different uses including tree planting for different purposes like firewood, medicines, charcoal making, fruits and timber which reduce the dependence on KVLFR.

All interviewed households possess land for agriculture. Further more, majority of the households used 0.5-3 hectares for agricultural activities 76.6% (Fig. 6). This study found mean cultivated land size of 3 hectares per household, which is small to allocate for various uses. Rurai (2007) in his study in Ngorongoro district, reported that farmers with larger farm sizes tend to retain and plant trees in their farms and around their homesteads .This enable them to obtain essential products including; firewood and

construction materials as a result they don't go to the catchment forest to collect those products and therefore contributes to resilience of the forest.

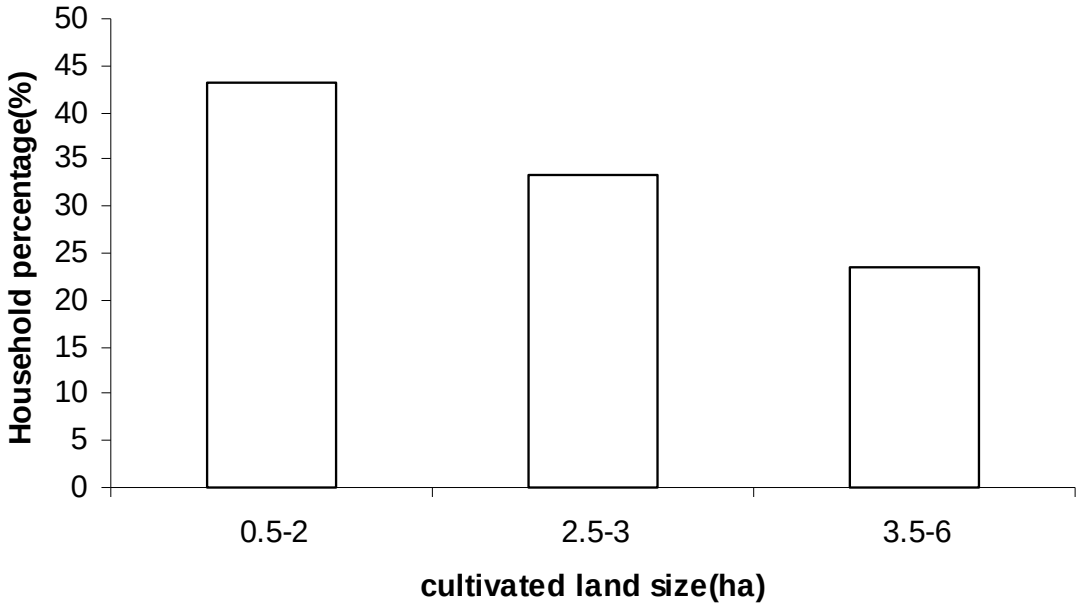

Figure 6: Cultivated Land Sizes in the study area

4.3.2.2 Socio-economics factors constraining the strategic power

(a) Education level

Table 6 shows that education level has negative beta weight (β = -0.207) and is statically significant (p = 0.021) with respect to dominant power. This implies that increase in education level tend to constrain people access to the forest reserve. The plausible explanation is that increase in education level increase people's awareness on the importance of forest resources conservation for sustainable development and increases the willingness to participate in conservation and management of forest resource activities. This reduces the chances of involvement in activities that degrade the forest. Onu (1991) cited by Sumbi (2004) argued that education level is vital in terms of natural resources conservation and utilization. Education level of an individual has influence on attitude and

adoption of different forest management approaches. Increase in education level also increases the willingness of the local communities to participate in conservation activities (Katani, 1999; Mbwambo, 2000). Furthermore, increase in the level of education also increases options for respondents to meet their needs. According to Kajembe and Luoga (1996) there is no development without education.

Fig. 7 shows the education level of respondents in the study villages, 68.4% of respondents attended school up to the primary education level. While 28.3% of respondents had no formal education and 3.3% of the respondents attended secondary school. This show that most people are not involved in forest degradation activities because they have attended primary school hence they know the importance of conserving KVLFR.

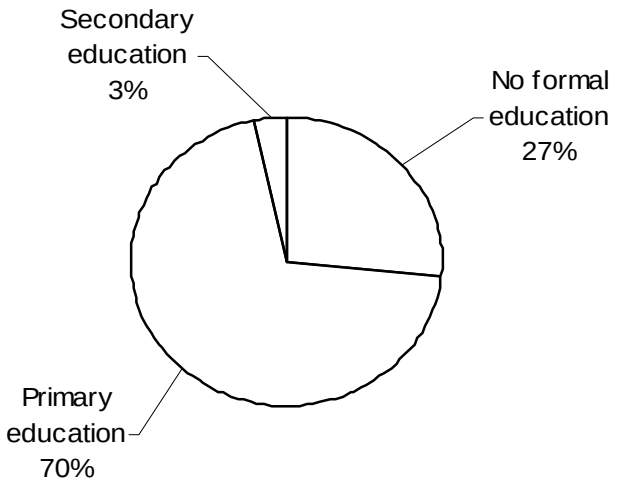

Figure 7: Education levels of respondents in the study area

4.3.2.3 Institutional factors enabling the strategic power

(a) Gender equity

Gender means relationship between male or female. Gender equity in forest management means getting a fair share of forest resources between male and female (Mahanty *et al.*, 2006)**.** Table 6 shows that gender equity has positive beta weight (β = 0.189) and is statistically significant (p = 0.032) with respect to strategic power. This implies that equity in distribution of the forest resources among males and females in the study area influence access to KVLFR. Due to the fact that, most women in community adjacent to KVLFR are poor, depending on their husbands. Therefore, they are not benefiting from the forest resources as men do... Regarding access to forest resources, women have less bargaining power than men do, thus men increase the destruction of the forest resources because in most cases it is the men who are involved in illegal exploitation of forest resources. According to Meinzen-Dick and others (1999) women's access to natural resource has not increased, even under the pressure of decentralization policies, because the institutions have been so dominated by men, especially in patrilineal societies.

In the study area, gender equity was assessed through household interviews. The results show that 56.7% of the respondents reported, there is no gender equity in distribution of forest resources between men and women. While 43.3% reported that, there is gender equity in the distribution of the forest resources (Table 8). This reveals that generally speaking there is no equity in the distribution of forest resources due to poor forest governance. Furthermore, USAID (2009) argued that, wealthier men with economic interests in timber tend to control who had access to forest resources. As a result, women relies on a diverse range of forest products, including non-timber products (honey, berries, mushrooms, and herbs) that are vital for their subsistence and they have total control of the income earned from these products.

Table 8: Gender equity in distribution of forest products

Gender equity	Frequency (Percent)
Yes	26(43.3)
NO	34(56.7)
Total	60(100.0)

(b) Forest access rule

Table 6 shows that forest access rules have positive beta weight (β = 0.020) but not statistically significant (p = 0.823) with respect to strategic power. This implies that presence of forest access rules determine the accessibility to forest resources. This is attributed by the fact that forest reserve was degraded before introduction of CBFM, after introduction of CBFM, KVLFR was left to regenerate and only sustainable uses of some products are allowed. Discussions with VNRC members revealed that local community' user rights to KVLFR include; collection of dry firewood, mushroom, ropes, medicinal plants and edible fruits. Majority of respondents (63.3%) reported that in the study area are constrained by the KVLFR access rules to obtain the forest resources including poles. Only 36.7% of the respondents are accessible to the forest reserve legally (Table 9). This reveals that access rules are not implemented accordingly because the forest was supposed to be left for regeneration. This is different from the observation by Njana (2008) in his study in Urumwa Forest Reserve who reported that about 74% of the local community across his study villages are not constrained by the miombo woodland access rules.

Table 9: Villagers accessibility to forest products

Accessible	**Frequency(Percent)**
Yes	22 (36.7)
No	38 (63.3)
Total	60 (100)

4.3.2.4 Institutional factors constraining the strategic power

(a) Participation in politics

Table 6 shows that peoples involvement in politics has negative beta weight (β = -0.097) and was not statically significant (p = 0.245) with respect to strategic power. This implies that people's involvement in politics constrain strategic power in accessing the resources from KVLFR. The plausible explanation is that, politicians tend to refrain from accessing the forest resources through illegal means. This is because any involvement in illegal activities is likely to destroy their political reputation.

(b) Membership in village natural resources committee (VNRC)

Table 6 shows that VNRC membership has negative beta weight (β = -0.030). However, membership in VNRC was not statistically significant (p = 0.722) with respect to strategic power. This implies that membership to VNRCs constrain strategic power. The plausible argument is that the memberships to VNRC give committee members institutional power to access forest resources from KVLFR. Therefore VNRC can enter the reserve anytime and they know the resources available in the forest reserve. Sometimes they use their institutional power to sell forest product from the reserve and get some money. On the other hand they are using the institutional power to provide illegal permits to charcoal makers. In that case VNRC members are using institutional power to access the resources from KVLFR.

CHAPTER FIVE

5.0 CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

Based on the study findings, the following are the conclusions**:**

The study identified key stakeholders in the management of KVLFR being resource users and regulators at village, Ward, Division and District level. Users' interest is on utilization of forest products to fulfil their needs. Regulators interest is basically on conservation while the District council is interested in revenue collection from the forest reserve.

The power relations existing among stakeholders include complementary, conflicting and cordial relationships. Complementary relationship is seen among users in utilization of forest resources while regulators provide complementary relationship with the district level officials in conservation of forest reserve. Conflicting relationship between users and regulators was found in the utilization and conservation of KVLFR. In addition, cordial relationship was revealed between, Division forest officer, Village government and charcoal makers.

Furthermore, three types of power were identified in KVLFR including strategic, institutional and structural power. Strategic power was found to be dominant. The socioeconomic factors enabling the strategic power include distance to the resource base, and wealth category, household sizes and residence duration, while education level was constraining strategic power. Institutional factors enabling the strategic power include gender equity and forest access rules while membership in VNRC and participation in politics are constraining strategic power.

Generally in the study it was revealed that complementary, cordial and conflicting relationships led to poor governance of KVLFR.

5.2 Recommendation

From the research findings and conclusions, further researches on the following are recommended:

- The comparison of the power relations underlying Village Land Forest Reserves under Community Based Forest Management (CBFM) and those under Joint Forest Management (JFM) in Tanzania.

- The studies on power relations underlying Village land forest reserves in other village forests in Tanzania to determine their influence on livelihoods.

The emphasis should be on power regulation mechanisms to ensure the community surrounding the forest benefit from resource utilization regardless of power relations.

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APPENDICES

Appendix 1: Questionnaire for Households

Division……..
Ward……
Village…….
Village registration number…….
Date of interview……..
Name of enumerator…….

1. General Information Questions
Household characteristics:
1.1. Household number……
1.2. Name of respondent …….
1.3. Tribe…….
1.4. Age……
1.5. Sex……Male 1 Female ☐ 2

1.6. Marital status (Tick appropriate answer)

S/n	Marital status	Code
I	Single	1
ii	Married	2
iii	Divorced	3
iv	Widowed	4

1.7. Duration of residence in the village in years……..

1.8. Education level (Tick appropriate answer).

S/n	Education level	Years of schooling	Code
i	No formal education		1
ii	Primary education		2
iii	Secondary education		3
iv	Others (specify)		4

1.9. What is your religion?
1. Christianity
2. Islam
3. Traditional
4. Other, (specify)

1.10. What is your ethnic group? 1.indiginous 2.Immigrant

1.11. Household composition (Tick appropriate answer).

Age(years)	Female	Male	Total	Code
<18				
18-60				
>60				

1.12. What are the major sources of household income?

S/n	Sources of household income	Code
i	Crop production	1
ii	Livestock production	2
iii	Logging timber	3
iv	Both crop and livestock production	4
v	Petty business	5
vi	Others (specify)	6

1.13. Does your household have land in this area? Yes/No…….
1.14. If yes how many acres.....
1.15. How did you acquire the land you own?

1. Bought 2.Rented 3.Allocated by village government 4.Leased 5.Inherited

1.16: What is the total agricultural land you own (Ha)……..
1.17: Is your Land holdings adequate? 1) Yes….2) No…..……
1.18: If no in 17 give reasons……
1.19. What is the location of your plot in the village from KVLFR
1. Less than 1 km 2.1-2 km 3. 2-3 km 4. More than 3km
1.20. What is your average income per annum in Tsh?
1……..2……..3……..
1.21. The wealth category of the family……
1. Rich 2.Poor

2. Stakeholders in forest resources utilization

2.1. Who are the stakeholders involved in the forest products utilization in the community adjacent to the forest reserve? i……..ii…… iii……..

2.2. What are their interests and aims (Tick appropriate answer).

s/no	interests	Code	
i	Conservation of forest	1	
ii	Utilization of forest resources	2	

2.3. What are the Stakeholders sphere of influence (Tick appropriate answer).

s/no	Sphere of influence	Code	
i	Local	1	
ii	District	2	
iii	Regional	3	
iv	International	4	

2.4. What are the stakeholder's strategies? i. Poverty reduction
ii. Millennium goal iii .Conservation of the forest

3. Power Relations

3.1. Do you think access and use of forest resources is of equal proportions to all villagers? Yes/No

3.2. If no in 26 above which group of people have more access than others?

i. Political leaders' ii. Member's of VNRC iii. Wealthy people vi. Educated people v. Men headed households vi. Women headed households

3.3. Who have stronger voice in terms of implementing decision making?

i. Political leaders ii. Member's of VNRC iii. Wealthy people vi. Educated people v. Men headed households vi. Women headed households

3.4 What is the source of their decision power……..

i. Money ii. Ethnicity iii. Network with politician iv Education level

3.5. Are you involved in forest resource management? Yes/No

3.6 If yes, how are you involved 1.in planning as village member 2. in decision making as village member 3.harvesting as village member

3.7. Are you a member of VNRC? Yes/No

3.8. Do you participate in conservation activities? Yes/No

3.9. If yes how are you participate 1. in tree planting 2.In training 3.in forest patrol 4.In the use of efficiency stoves5. Forest fire prevention

3.10. Do other members of your family participate in conservation activities? Yes/No

3.11. If yes how are they participating 1In tree planting 2.In training 3.in forest patrol 4.In the use of efficiency stoves 5. Forest fire prevention

3.12. Are you involved in political activities? Yes/No

3.13. If yes, are you involved in 1.Campaigning 2.Ruling party 3.Non ruling party

4.0: Livelihood

4.1. Do you have accessibility to the forest products? Yes/ No

4.2. If yes, are you 1. Using permit 2.Without permit

4.3. How is the permit given 1 With conditions 2. Without conditions

4.4. What are the conditions for the person to get a permit 1.payment 2. Without payment

4.5. What are the payments for each forest products?

S/n	Benefits (Uses)	Code	Distance	Price	Quantity
i	Timber	1			
ii	Firewood	2			
iii	Charcoal	3			
iv	Poles	4			
v	Vegetables	5			
vi	Wild animals	6			
vii	Waves	7			
viii	Ropes	8			
ix	Water	9			
x	Medicinal plants	10			
xi	Others (Specify)	11			

4.6. Do you sell some of collected forest products? Yes/No

4.7. If yes, What are the products in 43

S/n	Products (Uses)	Code	Distance	Price	Quantity
i	Timber	1			
ii	Firewood	2			
iii	Charcoal	3			
iv	Poles	4			
v	Vegetables	5			
vi	Wild animals	6			
vii	Waves	7			
viii	Ropes	8			
ix	Water	9			
x	Medicinal plants	10			
xi	Others (Specify)	11			

4.8. Give the average quantity sold per household and their respective price.

s/n	Product	Quantity	price

4.9. Accessibility to forest products among poor and rich people? 1. Fair 2. Unfair

4.10. Are both men and women having equal chance in accessing forest products? Yes/No

4.11. What is the present condition of the forest compared to the period before CBFM?

1. Improved 2. Moderate 3.Deteriorate

4.12.If improved what are the indicators 1. Forest species increased 2. Increase in water sources 3.Reduction in forest fire events 4.

4.13. If deteriorated indicators 1. Reduced forest species. 2. Drying of water sources 3.Frequent forest fire events 4. Increased gaps in the forest.

4.14. In the past 5 years how many times fire events have occurred in the forest reserve…….

4.15. What are the tree species available/disappear in KVFR for the following uses

S/n	Benefits (Uses)	Available species	Species disappeared
i	Timber		
ii	Firewood		
iii	Charcoal		
iv	Poles		
v	Vegetables		
vi	Wild animals		
vii	Ropes		
viii	Medicinal plants		

4.16. Is there any boundary encroachment to the forest reserve? Yes /no.

5. Information on local governance structures?

5.1. Are there any local governance structures that exist in the village? Yes/No

5.2. If yes, what are local governance structures which exist in the study area?

i. VNRC ii Village government iii. VEC

5.3. What are the roles and embedded power of formal local governance structure which exists in the study area? .....

5.4. Are both men and women involved on management of forest resource? Yes/No
5.5. If no why? .....
5.6. What is your opinion on the performance of local governance structure in terms of the following characteristics?

Characteristics					
	Very Good (5)	**Good (4)**	**Satisfactory (3)**	**Poor (2)**	**Very poor (1)**
Accountability					
Transparency					
Equity					
Rule of law					
Responsiveness					
Participation					
Effectiveness and efficiency					

5.7. What do you think should be done in order that the conservation of forest resources in Kingege village forest reserve becomes successful?
.....

Appendix 2: Checklist for key Informants

1. Major factors influenced the tenure change from general land to Village forest reserve.
2. Main stakeholders involved in the utilization of Kingege Village forest reserve.
3. The interests of the stakeholders and their sphere of influence.
4. Who have more voice in terms of decision making and implementation?
5. The stake holders source of power.
6. The strategies of the stakeholders.
7. The factors influencing the power relations in the study area
8. Existing local governance structures in the village.
9. The roles and embedded power of local governance structures which exist in the village.
10. Involvement of men and women in forest resource management.
11. Equity in accessing forest products.
12. Equality in accessing forest product.
13. Number of times in a week which local community allowed into the forest reserve.
14. Socio- economic factors which enable or constrain the performance of local governance structures in the provision of forest benefits.
15. The present condition of the forest compare to the previous periods.
16. indicators if the condition of the forest improved or not improved
17. Suggestion on community participation in

- Planning
- Decision making
- Implementation
- Evaluation
- Cost- benefits sharing.

18. What do you think should be done in order that conservation of natural resources in Kingege village Forest Reserve to be more efficiency.

Appendix 3: Summary of Method /techniques used for each objective

No	Specific Objective	Data to be collected	Method of Data collection	Technique method of data analysis
1	To identify key stakeholders utilizing forest resources and their interests and spheres of influence.	Different Stakeholders in forest and water resources and their interests.	PRA, Participant observation, stakeholders' power analysis, Questionnaires.	Descriptive statistical analysis Content analysis and structural functional analysis.
2	To assess power relations existing in the community adjacent to Kingege forest reserve	Existing power relations	PRA, Participant observation, stakeholders power analysis and Questionnaires	Descriptive statistical analysis Content analysis and structural functional analysis.
3	To determine the socio-economic and institutional factors which influence dominant power.	Different power relation categories, sources of power and factors influencing them. -Factors influencing the dominant power	PRA, Participant observation, and Questionnaires	Content analysis structural functional analysis and multiple regressions.

Appendix 4: Dominant power among stakeholders in KVLFR.

Stakeholders	Strategic Power	Institutional power	Structural power
Users	V	-	V
Regulators	V	V	-
score	2	1	1
Rank	1	2	3

Note:V= presence of that power

Appendix 5: Composite index table

Characteristics					
	Very Good (5)	**Good (4)**	**Satisfactory (3)**	**Poor (2)**	**Very poor (1)**
Accountability					
Transparency					
Equity					
Rule of law					
Responsiveness					
Participation					
Effectiveness and efficiency					

Appendix 6: Results of multiple indices table on Characteristics of Good Governance

No	Accountability	Transparency	Equity	Rule of law	Responsiveness	Participation	Effectiveness and efficiency	Total	Governance Yi
1	3	3	3	3	3	3	3	21	**3.0**
2	4	3	3	3	3	3	3	22	**3.1**
3	3	3	2	2	2	2	2	16	**2.3**
4	4	2.5	2	3	3	3	3	18.5	**2.6**
5	4	4	3	3	2	3	3	22	**3.1**
6	4	4	3	4	3	4	4	26	**3.7**
7	4	2	2	4	4	4	4	24	**3.4**
8	4	4	3	3	3	3	3	23	**3.3**
9	4	3	3	4	3	2	3	22	**3.1**
10	3	2	3	3	2	2	2	17	**2.4**
11	3	4	2	2	3	3	3	20	**2.9**
12	3	2	2	3	2	3	3	18	**2.6**
13	4	4	3	3	3	3	2	22	**3.1**
14	4	3	2	2	2	3	3	19	**2.7**
15	4	4	4	2	2	2	2	20	**2.9**
16	4	3	4	3	3	2	3	22	**3.1**
17	3	2	3	3	3	2	3	19	**2.7**
18	2	2	1	2	1	1	2	11	**1.6**
19	2	2	1	2	1	2	2	12	**1.7**
20	2	2	1	2	2	1	2	12	**1.7**
21	4	3	3	2	3	2	3	20	**2.9**
22	3	2	4	3	3	4	4	23	**3.3**
23	3	2	3	4	3	2	3	20	**2.9**
24	4	4	3	4	4	4	4	27	**3.9**
25	4	2	2	2	2	2	2	16	**2.3**
26	4	3	2	3	3	2	3	20	**2.9**
27	4	4	5	5	5	3	4	30	**4.3**
28	4	3	3	3	4	3	4	24	**3.4**
29	3	2	1	2	2	2	2	14	**2.0**
30	4	3	2	3	3	2	3	20	**2.9**
31	5	4	5	4	4	4	4	30	**4.3**

No	Accountability	Transparency	Equity	Rule of law	Respons	Participation	Effectiveness	Total	Governance
32	5	5	3	5	4	4	4	30	**4.3**
33	5	4	4	4	4	3	4	28	**4.0**
34	4	5	5	5	4	2	4	29	**4.1**
35	4	3	3	4	4	3	4	25	**3.6**
36	3	4	4	2	3	3	4	23	**3.3**
37	4	4	4	3	3	3	3	24	**3.4**
38	4	4	3	4	4	4	4	27	**3.9**
39	4	4	4	3	3	3	4	25	**3.6**
40	4	4	4	3	3	3	4	25	**3.6**
41	4	4	3	3	3	4	4	25	**3.6**
42	4	4	4	3	3	3	4	25	**3.6**
43	3	3	3	3	3	3	3	21	**3.0**
44	3	2	3	3	3	2	3	20	**2.9**
45	4	4	3	4	3	3	4	25	**3.6**
46	4	4	3	3	4	4	4	26	**3.7**
47	4	4	4	3	3	3	4	25	**3.6**
48	4	3	3	4	3	3	4	24	**3.4**
49	4	4	4	3	3	4	3	25	**3.6**
50	4	3	3	4	3	4	4	25	**3.6**
51	4	4	4	3	3	3	3	24	**3.4**
52	4	3	4	3	3	3	4	24	**3.4**
53	4	4	3	4	3	4	4	26	**3.7**
54	4	4	3	3	4	3	4	25	**3.6**
55	4	3	3	4	3	3	3	23	**3.3**
56	4	3	4	3	3	3	4	24	**3.4**
57	4	3	4	3	3	2	3	22	**3.1**
58	4	4	3	3	3	3	4	24	**3.4**
59	4	3	3	3	3	3	4	23	**3.3**
60	4	4	3	3	3	4	4	25	**3.6**
	225	197.5	184	189	180	173	200		192.5
Index	**3.75**	**3.291666667**	**3.066667**	**3.15**	**3**	**3.00333333**	**3.333333333**		**3.2**

Appendix 7: Stakeholders and their roles in the study area

S/No	**STAKEHOLDERS**	**roles**
1	**USERS** 1.Farmers 2.Pastoralists 3.Charcoal makers 4.Traditional healers 5.Traditional house builders 6.Fire wood collectors 7.Vegetable and fruits collector	-Forest protection, -Regulation of access and use of the forest, -To rehabilitate or develop the productive capacity of the forest.
2.	**REGULATORS** 1.Village Natural Resource Committee (VNRC)	-Establishment of by-laws, and enforcing them -sensitized in making fire lines around the forest reserve, - carrying out patrols in order to prevent illegal activities in KVLFR. -Awareness rising on forest conservation, educating the villagers about the benefits of conserving forests and tree planting.
	2. Village government	-Organizing people during fire fighting -Coordinating meetings with respect to environmental issues. -Taking care of the forest products which are collected illegally from the forest in collaboration with VNRCs.
	3.Ward executive officer	-Overseeing forest utilization and management issues
	4. Division Forest Officer	-To support and assist the communities to manage their own forests sustainably.