POWER STRUGGLES IN THE MANAGEMENT AND UTILIZATION OF SULEDO VILLAGE LAND FOREST RESERVE, KITETO DISTRICT, TANZANIA

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ABSTRACT

Contestation among stakeholders with varying interests is common in most rural areas involving over utilization of natural resources important for livelihood which often results into power struggles. This paper presents a power struggle situation in SULEDO Village Land Forest Reserve, Kiteto district, Tanzania where contestation among stakeholders has emerged with the increase of the value of the forest resources and lack of equity in the utilization of the resources. A total of 25 stakeholders involved in the management and utilization of SULEDO VLFR were identified along with their roles and interactions in the management of SULEDO VLFR. Stakeholders identified were categorized into three groups namely regulators, facilitators and users. Likewise, three categories of power were identified namely strategic, institutional and structural. Strategic power was found to be dominant. Results showed different power struggles among stakeholders whereby power struggle between Zonal Environmental Committee and SULEDO villages was found to be dominant and resulted into resource use conflicts. It was concluded that Community Based Forest Management remains a complex and contested arena, comprising many stakeholders with different powers, varied and conflicting interests. But what is important is to have a proper guidance of the processes and improving communication among key players.

***Key words**: Power Struggles, SULEDO Village Land Forest Reserve, Management and Utilization*

INTRODUCTION

Background

Of the estimated 33 million hectares of forest land in Tanzania, 57% (around 19 million hectares) is mostly unprotected and occurs outside the government forest reserves (URT 2002a). In the 1990s, there were reforms in forest management whereby a number of pilot Participatory Forest Management (PFM) initiatives were started in Babati, Manyara Region and Mgori, Singida region. These initiatives and others across the country acted as a background in the review of the forest policy in 1998 and legislation in 2002, which contributed to a favourable legal environment for PFM (Blomley and Ramadhani 2006).

Community involvement in forest management in Tanzania entails Joint Forest Management (JFM) and Community Based Forest Management (CBFM). In JFM, the government is the owner but shares duties and benefits with local communities, while in CBFM local communities are both owners and duty bearers (that is, owners, users and managers) (Wily 1997). The National Forest Policy of 1998 (URT 1998) clearly recognizes this and provides incentives for forest management under CBFM at the lowest level of local government through villages which number over 11 000 in the

country. Notable examples of CBFM include the East Usambara forests in Tanga region, montane forests in Iringa region as well as Miombo woodlands, and coastal forests in Tanga, Mtwara and Lindi regions (Wily 1997). Todate, Tanzania mainland has one of the most advanced community forest jurisdiction in Africa as reflected by the policy, law and practice (Wily 2000).

Currently, CBFM has been initiated in a number of unreserved village lands and are at different stages of development. These CBFM initiatives include among others, Duru-Haitemba in Babati district and SULEDO in Kiteto district. SULEDO is the acronym for 3 wards namely Sonya, Lengatei and Dongo and Mgori in Singida region (Wily and Mbaya 2001, Blomley and Ramadhani 2006).

Management and Utilization of SULEDO Village Land Forest Reserve

SULEDO Village Land Forest Reserve (VLFR) was initiated in 1993 as a project which was under the Arusha Regional Forestry Programme (ARFP) supported by Swedish International Development Agency (Sida). The project looked at different ways of managing forests jointly with local government authorities in a number of districts of Arusha Region. In 1994, SULEDO was formally established as a CBFM site through official transfer of administrative authority to the community (Blomley and Ramadhani 2006). The change in tenure of SULEDO VLFR also resulted in changes in power relations at the local level, making a major impact on the institutions that determines people's access and control of the forest resources (Shackleton *et al.* 2002).

There are a number of stakeholders in SULEDO VLFR with different powers and have now started to utilize the forest (natural capital) after many years of managing it. The situation has created room for power struggles in the reserve which tend to lead into conflicts. The conflicts are both real and potential. Power struggles are defined as an open clash between two opposing groups or individuals (Lukes 2005). Power struggles can be manifested between different traditional authorities, political leaders and elected representatives who can disrupt community-based processes (Barrow *et al.* 2002). Kajembe and Monela (2000), in a study carried out in Duru-Haitemba reported power struggles between the "elites" and the "traditionalists" at the local level. The most probable common cause for power struggles between stakeholders is unequal distribution of resources (Markovsky 1993; Platteau and Gaspart 2005).

Power struggles linked to intra- and inter-community issues relate to the manner in which rural people interact within a village or community, and how such communities interact with each other in the management of forest resources. During the interaction of stakeholders, various types of power affect each other, and the outcome is not simply the most powerful acting upon the least powerful but rather an outcome where each type of power has contributed to ultimate outcome such as conflicts. These interactions influence the way communities are involved in the management and utilization of forest resources (Mbeyale 2009). However, if these interactions are characterized by competing interests and power imbalance among resource users, they consequently lead to power struggles among stakeholders which may lead to unsustainable utilization of the forest resources (Beeler 2005).

Power struggles in most cases are perpetuated by prevailing institutions and ideologies and can raise groups with more bargaining power than others. Bargaining power is defined by Ensminger (1992) as one's ability to get what one wants from others. It can come from greater wealthy, social or political status, and the ability to manipulate the ideology of others. Nuijten (2005) stated three categories of power which are embedded in people's livelihood as strategic, institutional and structural. In

some cases, the three categories of power are closely linked and cannot be easily separated from each other. Participatory approaches, which aim at devolving power to lower levels, always include an alteration of power relations and benefit sharing mechanisms. Therefore, participation and power are closely linked in the management of forest resources (Barrow 2002).

SULEDO VLFR has been hailed as an ideal development project. In 2002 SULEDO won the Equator Prize for best development practice, implying that this is a successful case of CBFM, which links and achieves the dual objectives of livelihood improvement and arresting forest degradation (Sjöholm and Luono 2002).
SULEDO VLFR is rich in valuable species including African blackwood (*Dalbergia melanoxylon*). The value of *Dalbergia melanoxylon* includes provision of fuel with high calorific value of about 49 000 kcal/kg. Timber of *Dalbergia melanoxylon* has sapwood which is white or yellowish-white, often 12 cm wide and sharply differentiated. The timber is slightly oily and exceptionally hard. The heartwood of *Dalbergia melanoxylon* is purplish black, sometimes darker towards the outside, with light streaks and not always uniform in colour. The heartwood is extremely durable and resistant to all forms of biological deterioration and is the most expensive hardwood in the world, currently fetching up to 25 000 US dollars per cubic metre in the export market (Gathanju 2009).

The high resource potential in SULEDO VLFR has created groups of stakeholders with varied and conflicting interests which further create management challenges including power struggles which lead to forest resource use conflicts. Each stakeholder with different power is competing to have a stake on the utilization and management of the forest resources. Finding a way to balance the power struggles so as to ensure equity in terms of sharing benefits, requires among other things, in- depth analysis of key stakeholders and factors underlying power struggles Chapin (2004) and Benjaminsen *et al*. (2008) documented the discrepancy which exists between the rhetoric of CBFM and problems that persist on the ground, as there is a substantial debate around the benefits of community based conservation.
Despite the fact that SULEDO VLFR is important in supporting livelihoods of the adjacent local communities as well as economic development of the country at large, still there is inadequate information on power struggles underlying the management of the forest. This study is important because it was carried out at the time when SULEDO communities have started to utilize the natural capital after conserving it for quite some time; hence a lot of power struggles have emerged among different stakeholders. The major question is how existing power pockets can be mitigated to minimize the influence of the existing power relations on the management and utilization of the forest resources.

Understanding how these power issues can be addressed at a community level is key for the achievement of more equitable distribution of forest resource benefits and costs among the key players. The findings from the study will contribute to the process of mitigating the problem of power struggles which tend to emerge among stakeholders in different parts of the country. Therefore, the findings of this study will contribute to ensuring sustainable forest resources management in the study area and in other CBFM in Tanzania at large.

METHODOLOGY

Description of the Study Area

SULEDO VLFR in Kiteto district, lies between 4^{o} and 6^{o}6' S and between 36 ^{o}15' E and 39 ^{o} E. The district covers approximately 268 000 ha out of which 167 416 ha are under SULEDO VLFR shared by ten villages namely Sunya, Asamatwa,

Olgira, Lengatei, Lesoit, Olkitikiti, Engong'ongale, Mturu, Mesera and Laiseri

Kiteto District has a population of 155 727 (URT 2002b). The ethnic composition include Wamaasai (32%), Wagogo (27%), Warangi (18%) and the remaining 23%) is a mixture of smaller groups including Wakamba, Wanguu, Wabena, Wakaguru, Wahehe, Wasandawi, Waburunge, and Wa-Arusha. Although the villages are composed of different ethnic groups, but each group tends to live in its own ethnic based sub-village (Lissu and Mitzlaff 2007).

The most dominant species in SULEDO VLFR are *Combretum molle* and *Dalbergia melanoxylon, Julbernadia globiflora* and *Brachystegia microphylla. Combretum species*, *Dichrostachys cinerea and Acacia polyacantha* dominate in some in some clusters (Malimbwi 2000). The disturbances in these woodlands for the past ten years were caused by, among others, cutting of poles and trees. Malimbwi (2000) and Isango (2007) found that the woodlands have a mortality rate of 1.5% per year which is slightly higher than recruitment rate of 1.3% per year.

Data collection

Qualitative data were collected by using PRA approach, participant observation, semi structured and unstructured interviews while quantitative data were collected by using structured questionnaires. This triangulation of techniques helped to readdress limitations inherent in different techniques and allowed cross checking and verification (Mikkelsen 1995). A total of 90 households were selected for structured interview, 30 households for each study village as recommended by Bailey (1994) that a sample of at least 30 units is sufficient irrespective of the population size. A range of 15- 20 participants was selected for PRA. The tools used in the PRA were Focus Group Discussions and pair wise ranking.

The PRA group included village government leaders, Village Environmental Committee (VEC) members, members of the Zonal Environmental Committee (ZEC), prominent people in the study villages and youth. Structured questionnaires were administered to Sunya, Lengatei and Dongo villages. Semi-structured and unstructured interviews were used to collect information from key informants. Key informants in this study included facilitators (ORGUT), regulators (District Forest Officer, VEC, and, ZEC, Village Government Leaders) and users (traders, farmers and pastoralists). Secondary data were collected in published and unpublished documents from various sources including Sokoine National Agriculture Library, District Forest offices in Kibaya Township, village offices in the study area and from websites.

Data Analysis

Qualitative and quantitative methods of data analysis were used in this study. Content analysis technique was employed to analyze qualitative data and information from the discussion with key informants and PRA groups. Social Network Analysis was also done in analyzing power relations. All the quantitative analyses were performed using Statistical Package for Social Sciences (SPSS) Computer Programme Version 16. Descriptive statistical analysis was used to explore data among others for distribution of responses, and multiple response analyses were also performed to ascertain responses and percentages.

RESULTS AND DISCUSSIONS

Main Stakeholders, their Roles and Interactions in the Management of SULEDO VLFR

Main stakeholders

Table 1 show stakeholders identified in the study area with respect to management and utilization of SULEDO VLFR. Stakeholders identified include Communities, Non-Governmental

Organizations (NGOs) and Governmental Organizations.

Roles of main stakeholders

Table 1 presents categories of stakeholders and their roles in SULEDO VLFR. The grouping of the stakeholders into these categories was based on their roles in management and utilization of SULEDO VLFR. Three categories of stakeholders namely regulators, facilitators and users were identified in SULEDO VLFR whereby 7 stakeholders were regulators while 15 were facilitators and 3 were users.

Table 1: Main stakeholders and their roles

SN	Name of stakeholder	Category	Role of stakeholders
1	Forest and Beekeeping Division (FBD)	Regulator	Provision of Technical advice and approving model by laws
2	Manyara Regional Natural Resources Office (MRNRO)	Regulator	Provision of technical advice
3	District Forest Officer (DFO)	Regulator	Provision of technical advice on the management of SULEDO VLFR
4	Village Environmental Committee (VEC) SUNYA	Regulator	To prepare and submit monthly reports to ZEC, to ensure that SULEDO VLFR is utilized and managed in accordance with the laid down procedure
5	Village Environmental Committee (VEC) LENGATEI	Regulator	To prepare and submit monthly reports to ZEC, to ensure that SULEDO VLFR is utilized and managed in accordance with the laid down procedure
6	Village Environmental Committee (VEC) LAISERI	Regulator	To prepare and submit monthly reports to ZEC ,to ensure that SULEDO VLFR is utilized and managed in accordance with the laid down procedure
7	Zonal Environmental Committee (ZEC)	Regulator	Payment of profit shares to the 10 villages, receiving and discussing all conservation and utilization reports for SULEDO VLFR
8	University of Dar es Salaam (UDSM)	Facilitator	Provision of education on financial management and provision of expertise for preparation of harvesting contract
9	Community Research and Development Services (CORDS)	Facilitator	Helping in the establishment of land use plans
10	FARM-AFRICA	Facilitator	Support in finding market for carbon credits
11	Kimana Njolo Ndaleta Nameloku Pastimbo (KINNAPA)	Facilitator	Support in land issues and conflict resolution
12	Sunya Ward Education and Training (SWEAT)	Facilitator	Support in land issues and conflict resolution
13	Legal and Human Rights (L&HR)	Facilitator	Provision of education on land rights and human rights
14	*Mama Misitu (*MM)	Facilitator	Educating SULEDO communities on forest conservation
15	Tanzania Traditional Energy Development Organization (TATeDO)	Facilitator	Provision of education to SULEDO communities on how to make high quality charcoal
16	Tanzania Forest Conservation Group (TFCG)	Facilitator	Provision of training on forest conservation
17	Forest Training Institute (FTI)	Facilitator	Provision of inventory equipments and provision of training on basic forest conservation methods
18	*Umoja wa Mazingira* SULEDO (UWAMASU)	Facilitator	Provision of technical advice on community rights on the resources surrounding them
19	ORGUT	Facilitator	Provision of technical advice, provision of fund, helping in monitoring and evaluation and to linking SULEDO communities with other stakeholders
20	Sokoine University of Agriculture (SUA)	Facilitator	Research and provision of technical advice
21	Tanzanian Forestry Research Institute (TAFORI)	Facilitator	Research and provision of technical advice
22	African Wildlife Foundation (AWF)	Facilitator	Provision of funds for the establishment of village wildlife management area and provision of education on right of villagers to wildlife
23	COMMUNITY SUNYA	User	Owners and users of forest resources from SULEDO VLFR
24	COMMUNITY LAISERI	User	Owners and users of forest resources from SULEDO VLFR
25	COMMUNITY LENGATEI	User	Owners and users of forest resources from SULEDO VLFR

Source: Field survey (2010)

Regulators

The regulators identified include the Forestry and Beekeeping Division (FBD), Manyara Regional Natural Resource Office (MRNRO), Kiteto District Forest Office (DFO), SULEDO Zonal Environmental Committees (ZEC) and Village Environmental Committees (VEC). The main roles of the regulators include enforcing Forest Act Cap 323 [R.E. 2002] and regulations relating to forest resources management in order to ensure that the overall objective of managing and conserving SULEDO VLFR is achieved. The specific roles of FBD were to provide technical advice for the management and utilization of SULEDO VLFR and approving model bylaws. Model bylaws are approved by the central government. The roles of MRNRO were to provide technical advice in the management and utilization of SULEDO VLFR and coordinating the local and central government in the management of SULEDO VLFR. The specific role of DFO was to provide technical advice on the management of SULEDO VLFR.

On the other hand, ZEC is responsible for the payment of all forest management costs, payment of shares to the ten villages surrounding the reserve after deducting management costs as stipulated in the agreements for managing and harvesting of forest products signed between ZEC and the ten village governments, entering into contracts with buyers and /or users of all kinds of products within SULEDO VLFR. ZEC is also responsible for employing experts of different fields for the purpose of making sustainable management of SULEDO VLFR. In short, ZEC has the overall responsibility of sustainable management and utilization of SULEDO VLFR. The specific roles of VEC include collecting money emanating from fines for different offences which do not exceed USD 31.00, taking legal measures against persons committing offences against SULEDO forest regulations. Other roles of VEC were to ensure that SULEDO VLFR is utilized in accordance with SULEDO Management plan ensuring that forest scouts patrols are properly conducted.

Facilitators

Facilitators are those facilitating the communities in different ways mainly through encouraging, supporting and guiding. In SULEDO VLFR, the main facilitators were ORGUT, Sokoine University of Agriculture (SUA), Tanzania Forestry Research Institute (TAFORI), African Wildlife Foundation (AWF), University of Dar es Salaam (UDSM), Community Research and Development Services (CORDS), Farm Africa, Kibaya Kimana Njolo Ndaleta Nameloku Pastimbo (KINNAPA), Sunya Ward Education and Training (SWEAT), Legal and Human Rights (L&HR), *Mama Misitu* (MM), Tanzania Traditional Energy Development Organization (TATeDO), Tanzania Forest Conservation Group (TFCG), Forest Training Institute, Olmotonyi (FTI) and *Umoja wa Wanaharakati wa Mazingira* SULEDO (UWAMASU). These organizations do facilitate management activities of SULEDO VLFR through the provision of technical and financial support.

ORGUT is the most prominent facilitator due to the fact that it works very closely with SULEDO communities in the management of the reserve. Its main roles include provision of technical and financial support. ORGUT also provided training on financial management to the ten villages surrounding SULEDO VLFR with the objective of assisting communities in the management of revenue generated from harvesting of forest resources. Moreover, ORGUT provided training on procurement procedures to ten villages surrounding SULEDO VLFR. In addition, from 1994 to 2010 ORGUT provided 4 motorcycles and 2 Land cruiser hardtops for management activities of SULEDO VLFR. ORGUT also linked SULEDO community with other stakeholders within and outside Tanzania. For example, in 2009, ORGUT linked SULEDO with UDSM for the purpose of

preparation of harvesting contract.

Furthermore, UDSM facilitated communities surrounding SULEDO VLFR through training on financial management while *Mama Misitu* provided forest conservation education to communities surrounding SULEDO VLFR through video shows. SUA facilitated SULEDO VLFR through research which aimed at improving the management of the reserve. In 2009-2010, SUA conducted research aimed at contributing to evidence-based development of PFM. TAFORI on the other hand facilitated SULEDO VLFR through research aimed at assessing increment of the forest before harvesting and the impact of harvesting on the remaining trees. AWF facilitated SULEDO VLFR through provision of funds for the establishment of village Wildlife Management Area (WMA) and provision of training on the rights of villagers to wildlife.

The study showed that TATeDO facilitated education to the communities on how to make high quality charcoal from the branches left after timber harvesting. TFCG provided training on forest conservation. CORDS facilitated establishment of land use plans in Sunya, Asamatwa, Olgira, Lengatei, Lesoit, Olkitikiti, Engong'ongale Mturu, Mesera and Laiseri villages surrounding SULEDO VLFR. Also, CORDS assisted in developing land use plans aimed at reducing land use conflicts between farmers and livestock keepers. Furthermore, CORDS offered training to communities surrounding SULEDO VLFR with the purpose of empowering them and enabling them to govern their forest resources, which would lead to optimal forest resource use and sustainable development.

Farm Africa supported SULEDO communities in finding market for carbon credits while KINNAPA supported SULEDO communities in making land use plans and setting village boundaries for all villages. Kibaya Kimana Njolo Ndaleta Nameloku Pastimbo also supported resolution of land use conflicts by forming land use committees in each village and train the committees on their responsibilities. Sunya Ward Education and Training facilitated SULEDO VLFR by supporting the communities in land use planning aimed at resolution of conflicts. FTI, Olmotonyi supported SULEDO communities through provision of equipments for inventory. Moreover, FTI supported SULEDO through provision of training on basic forest conservation methods. Lastly, UWAMASU, the only Community Based Organizations in SULEDO VLFR facilitated SULEDO community by providing technical advice on community rights with regards to management of the forest resources from SULEDO VLFR.

Users

Table 1 shows different forest users in SULEDO VLFR. Users identified include pastoralists, farmers, and traders. These are the ones who are benefiting from the reproductive functions of the trees, shrubs, herbs and other types of plants from SULEDO VLFR. It was revealed that users were collecting firewood, withies and poles from SULEDO VLFR. Other products collected from the forest include Non Timber Forest Products (NTFPs) such as fruits, mushrooms, honey, small game, fodder and herbs. In principle, there are no permits for collection of forest resources for domestic consumption but permits and fees are required when commercial activities are involved.

Farmers are cultivating around the forests where moisture conditions and soil fertility are favourable than in farm lands located far away from the forest. During discussions with key informants, it was revealed that farmers get environmental services from the forest including water whereby some farmers in Sunya village use it for irrigation farming during dry season. Traders on the other hand do trading on

forest products. It was revealed during the study that traders pay fees to get permits for collecting forest products from SULEDO VLFR for commercial purposes. Pastoralists are directly connected to forest resources through utilizing SULEDO VLFR as a grazing area. Pastoralists utilize the forest specifically during dry seasons when pasture and water become scarce. Similarly, URT (2003) reported that pastoralists and farmers surrounding Uluguru Mountains forest reserves use water from the forest reserves especially during dry seasons for their livestock and production of both food and cash crops.

Generally speaking, farmers, pastoralists and traders in SULEDO participate in the management of the forest resources through CBFM which started in 1994 with support from ORGUT.

Stakeholders interactions in the management of SULEDO VLFR

Fig. 1 shows a social network comprising 25 stakeholders (also referred to as 'nodes') and links showing interactions or flows between the nodes (Prell *et al*. 2007). Stakeholders are connected if there is relationship among them in the management of SULEDO VLFR. Fig. 1 indicates that DFO, ORGUT and ZEC have many ties (highly centralized), therefore they are located at the centre of the network. The common characteristic of central actors is that they are responsible for regulating forest resources and the fact that they can make connections with other stakeholders.

Figure 1 also shows that stakeholders including TFCG, UDSM, L&HR, TATeDO, CORDS, SWEAT, Farm Africa, FTI, FBD, AWF, SUA, MRNRO and TAFORI have few ties (low centrality), therefore they are located at the periphery of the network. This implies that those are marginal stakeholders in the network but they are important sources of information in the network. Similarly Bodin and Crona (2006) pointed out that peripheral actors connected to networks that are not currently mapped are very important resources for fresh information that is not available inside the network. For example, MRNRO does not appear at the centre in the network but has a lot of influence over the way forest resources are managed due its institutional power in Manyara Region. On the other hand, FBD does not appear also to be very central in the network but has high influence on the way forest resource policies are developed and enacted, and thus sets institutional framework for the management and utilization of forest resources. This is due to the fact that FBD has institutional power in overseeing the management and utilization of all the forest resources in the country.

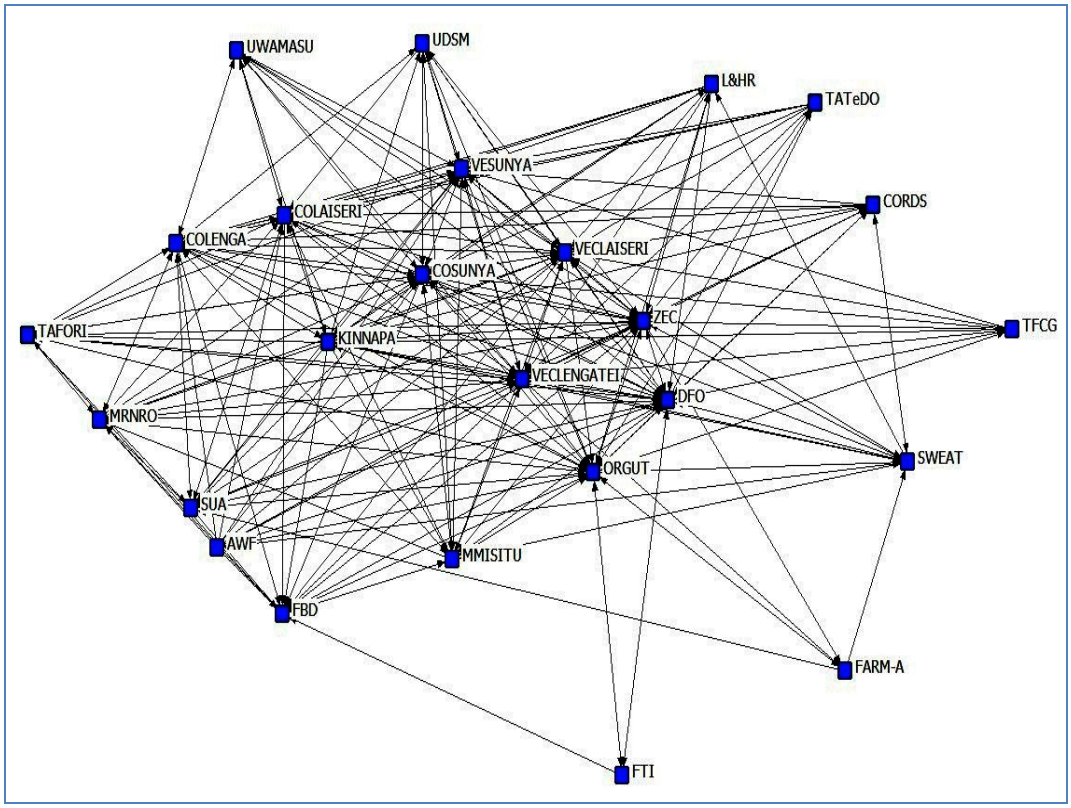

Figure 1: Social network of stakeholders in SULEDO VLFR

Stakeholders Degree of Centrality in the management of SULEDO VLFR

Fig. 2 shows Freemans degree of centrality of the stakeholders. Degree of centrality refers to the number of tied incidents (Freeman1979). DFO is highly connected to other stakeholders with 68 scores. This implies that the DFO has highest influence in the management of SULEDO VLFR. DFO is playing an important role in mobilizing stakeholders in the network. Fig. 2 shows that DFO is highest in the hierarchy with regard to the management of SULEDO VLFR, meaning that they have both institutional and structural powers. The study also revealed that FTI has 9 scores of degree of centrality which is the lowest in the network. This indicates that FTI has less influence in the network. Wasserman and Faust (1994) argue that stakeholders with low centralities in the networks can be encouraged to mobilize other stakeholders through inclusive dialogue.

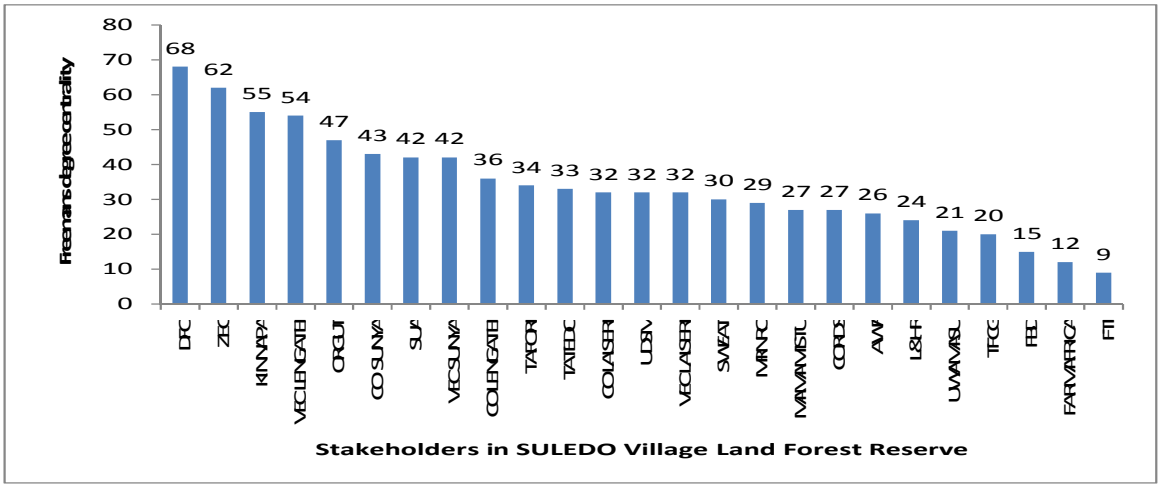

Figure 2: Degree of centrality among stakeholders in SULEDO VLFR

Stakeholders position in the management of SULEDO VLFR

Fig. 3 shows various sizes of nodes which indicate a measure of the centrality of a node of stakeholders in management and utilization of SULEDO VLFR. Wasserman and Faust ,1994 argue that betweenness centrality looked at where stakeholder sat on the paths to other stakeholders (for example if many stakeholders must go through stakeholder X to get to stakeholder Y, then stakeholder X has a high degree of betweenness centrality). The betweenness of centrality of stakeholders was calculated based on the stakeholders' network. ORGUT was found to hold high betweeness of centrality in the network compared to other stakeholders. This is due to the fact that ORGUT has a number of sources of information outside the network. It is worth noting that ORGUT was working with SULEDO VLFR since its establishment. Furthermore, the DFO has potential source of information outside the network due to the fact that they have institutional powers on all forest resources in Kiteto District and before other stakeholders enter in relation with SULEDO VLFR they had to consult the DFO.

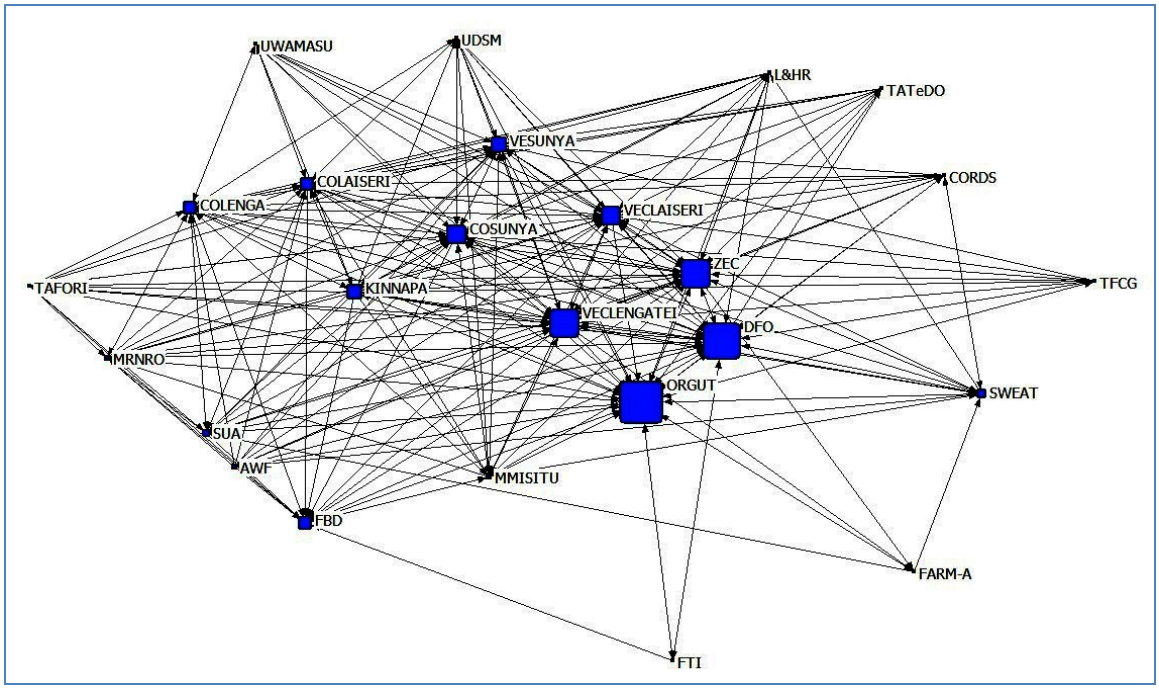

Figure 3: Betweenes of centrality of stakeholders in SULEDO VLFR

Types of power underlying SULEDO VLFR

Table 2 shows three categories of power identified in Sunya, Lengatei and Laiseri villages namely strategic, institutional and structural underlying the utilization and management of forest resources. Moreover, Table 2 shows that key users in all the study villages were pastoralists. Pastoralists were found to have institutional power. During Focus Group Discussion in each study village it was revealed that some pastoralists were holding positions in the village governments hence this granted them institutional power for the use and management of forest resources. The pastoralists were also found to have strategic power. It was revealed that pastoralists usually bribe village government leaders to get accessibility to the forest resources. Mbeyale (2009) argued that users including pastoralists and timber traders in Chome Forest Reserve had strategic power due to the fact that they were bribing the Forest Assistants to get accessibility to the forest.

Table 2: Pair Wise Ranking of Power types

Stakeholders	Strategic power (1)	Institutional power (2)	Structural power (3)
Sunya village			
Key users (pastoralists)	X	√	√
Key regulator (ZEC)	√	√	√
Key facilitator (ORGUT)	√	X	X
Sub- score	2	2	2
Lengatei village			
Key user (pastoralists)	√	√	X
Key regulator (ZEC)	√	√	√
Key facilitator (ORGUT)	√	X	X
Sub- score	3	2	1
Laiseri village			
Key user (pastoralists)	√	X	√
Key regulator (Village council)	√	√	√
Key facilitator (ORGUT)	√	X	X
Sub- score	3	1	2
Total scores	8	5	5

Key
√= presence of respective power
X= absence of respective power
Source: Field survey, 2010; Focus Group Discussion with village government leaders, Village Environmental Committees (VECs) members, members of the Zonal Environmental Committee (ZEC), prominent people in the study villages (old people) and youth.

Furthermore, the Wamaasai pastoralists age set system in the study area gives them structural power in utilization of the forest resources from SULEDO VLFR. It was revealed that this structural power enables them to easily link or break message flow with village government leaders. Similarly Mbeyale (2009), in the study carried out in Pangani river basin argued that Wamaasai pastoralists age set system give them structural power, as the resource use control is highly regulated by the Laibon and Laigwanan who can either bridge or break the communication flow with the village government leaders depending on their perception of issues at hand.

Moreover, the study shows that ZEC was a key regulator in Sunya and Lengatei villages while in Laiseri village, the Village Council was a key regulator having strategic power. During Focus Group Discussions, it was revealed that all village revenues are managed by village councils hence this granted the village councils strategic power. It was revealed further that village councils had higher position at the village level hence this granted them structural power. ZEC and village councils were also found to have institutional power, due to the fact that the 1998 Forest Policy and the 2002 Forest Act Cap 323 [R.E. 2002] have given institutional power to the village councils and ZEC to work with forest officers in the management of the forest resources around them (Section 4.1.1 and 4.1.2 of the policy and part 5 section 23 of the Act). In this case, Zonal Environmental Committee and village councils have the responsibility to take care of the forests within their jurisdiction.

Table 2 also shows that ORGUT was a key facilitator in all the study villages having strategic power. The financial capacity of ORGUT had granted ORGUT strategic power over forest resources management in SULEDO VLFR. ORGUT had been facilitating SULEDO VLFR since 1994 when the forest was established. To date, ORGUT is facilitating the management of SULEDO VLFR by providing financial and

technical support on forest management and utilization.

Dominant power underlying the management and utilization of SULEDO VLFR

Table 2 shows that strategic power was dominant in the study area with 8 scores due to the fact that the key user (pastoralists), key regulator in Lengatei (ZEC), key regulator in Laiseri (Village council) and key facilitator (ORGUT) were all found to have strategic power. During discussion with VECs of each the study village it was revealed that pastoralists were bribing village governments leaders for accessing grazing areas in SULEDO VLFR. Mbeyale (2009) argued that strategic power of the pastoralists lies in their animal wealth which can easily be used to corrupt village government leaders for accessing grazing areas in the forest reserve. Moreover, ZEC has the overall responsibility of collecting all revenues from SULEDO VLFR hence virtually ZEC has strategic power on management and utilization of the forest resources but since other key players such as business people are more aligned to working with Village councils leaders or body, they render the ZEC less powers as compared to the village government. The village council has the responsibility of collecting all villages' revenues hence grants the village councils more strategic power with regard to the management and utilization of forest resources as many more players enjoy and trust the village level as compared to the more bureaucratic level of the ZEC.

Table 2 also shows that institutional power was having 5 scores. During the discussions with key informants it was revealed Key regulator (ZEC) found to have institutional power. ZEC has the overall responsibility of regulating the management and utilization of the forest resources found in SULEDO VLFR, hence this granted ZEC institutional power with regard to forest resource management and utilization. The findings concur with that of Mohamed (2009) who indicated that members of Village Environmental committees, Village Natural Resource Committees and Village government exercise some institutional powers over the forest resources that are in the villages around Nyanganje VLFR and as they do so they tend to overshadow the powers from the higher levels such as the districts and regional level, this has resulted to mistrust between the village and district levels including some other relevant levels.

Table 2 also shows that structural power was having 5 scores. During focus discussions it was revealed that key users (pastoralists) were using structural power in forest resource utilization. This can be attributed to the fact that most of the Maasai pastoralists have stayed to an area for more than 50 years. Hence they do not accept to pay fees for grazing their livestock in the reserve during dry seasons, they think that they have traditional rights. Mbeyale (2009) pointed out that, Maasai pastoralists in Pangani river basin were using structural power in utilizing the natural resources, because they had been in the area for long time. ZEC has the overall responsibility in managing and utilizing the forest resources found in SULEDO VLFR, hence this granted ZEC structural power. Moreover at the village level village councils are highly positioned with regards to village issues hence this granted village councils structural power over forest resources utilization and management.

Power struggles in SULEDO VLFR

Table 3 shows occurrence of power struggles in the study area. The results revealed that 60% of respondents in Sunya village reported that there are power struggles in SULEDO VLFR while 40% reported there are no power struggles. In Laiseri village 73.3% of respondents pointed out that there are power struggles in SULEDO VLFR while 26.7% reported that there are no power struggles. In Lengatei village 70% reported existence of power struggles while 30% refused that

there are no power struggles in SULEDO VLFR.

Table 3: Existence of power struggles in SULEDO VLFR

	Name of Village			
	Sunya	Laiseri	Lengatei	Total
Power struggles	F (%)	F (%)	F (%)	F (%)
No	12 (40)	8 (26.7)	9 (30.0)	29 (32.2)
Yes	18 (60)	22(73.3)	21 (70)	61 (67.8)
Total	30 (100)	30(100.0)	30(100)	90 (100)

Key: F=frequency
Source: Field survey, 2010

Dominant power struggle in SULEDO VLFR

Figure 4 show stakeholders involved in power struggles over utilization and management of forest resources. The thickness of the lines indicates intensity of power struggles among stakeholders. Thicker lines representing higher intensity of power struggles while thin lines representing weak power struggles among the stakeholders.

The dominant power struggle identified was between Zonal Environmental Committee (ZEC) and ten villages forming SULEDO VLFR namely Sunya, Asamatwa, Olgira, Lengatei, Lesoit, Olkitikiti, Engong'ongale Mturu, Mesera and Laiseri, over distribution of income accrued from timber harvest in an area demarcated for trial harvesting referred to as pilot area. During interview with Village Government Leaders of each of the study villages it was revealed that the dominant power Struggle was mainly attributed to unfulfilled expectations of villagers with regard to timber harvesting. The villages expected to receive USD 27 950 each from timber harvesting in 500 ha but only 92 ha were harvested and only USD 14 907 were collected due to misunderstandings and mistrust among the key players.

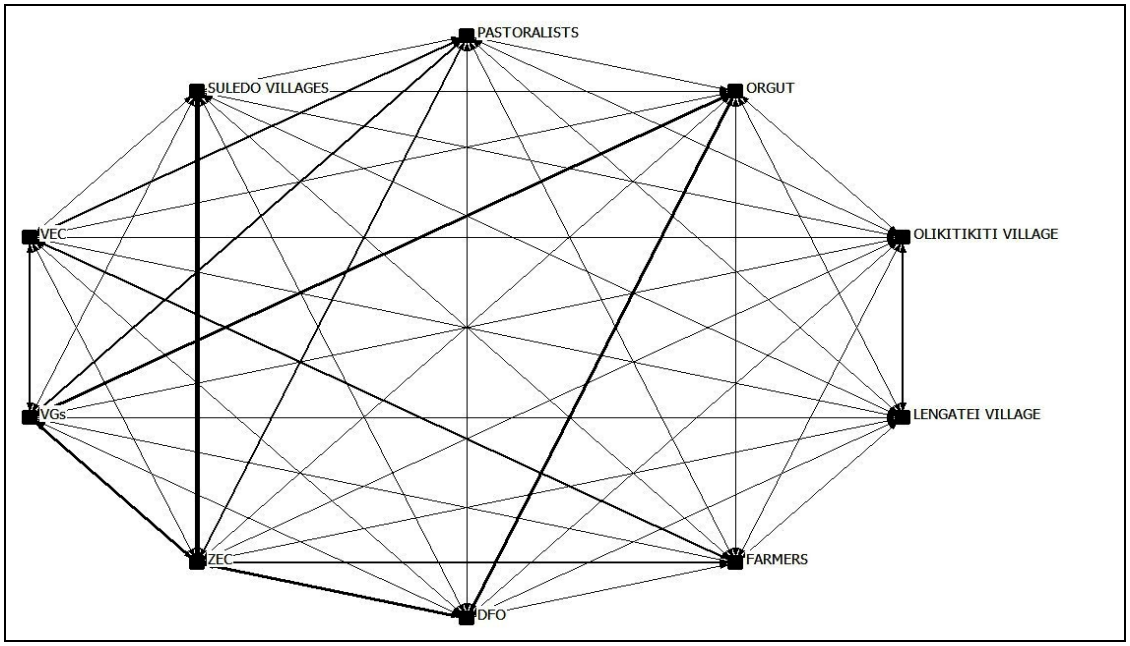

Figure 4: Dominant power struggle in SULEDO VLFR

Out of USD 14 907, USD 8 696 were used by ZEC for administrative purposes and USD 6 211 were divided among the villages whereby each village got USD 621. The earning was contrary to the expectations which intensified the mistrust and perceived unequal power relations and unreliable distribution of dividends. Similarly 18.8% of the respondents in the study villages reported that the cause of the power struggle between ZEC and Ten Villages was due to unequal distribution of income from forest harvesting (Table 4).

ZEC is responsible for revenue collection and reporting to the village general assemblies. According to respondents, 2.5% reported lack of accountability by ZEC which resulted into a power struggle. During interview with Village government Leaders of each of the study villages it was revealed that ZEC was not reporting appropriately the harvesting progress, income and expenditure, as a results communities blamed ZEC for misuse of the funds. The findings concur with those reported by Nuijiten (2005) who pointed out that, organizations or officials who do not operate according to ethics of accountable management are usually labelled as corrupt hence causing a power struggle leading eventually to forest resource use conflicts.

Table 4: Reasons for power struggles in SULEDO VLFR

Reasons for power struggles	Frequency (n=90)	Percentage (%)
Restriction of pastoralists to utilize grazing land in SULEDO VLFR	26	54.2
unequal distribution of income from forest harvesting	9	18.8
Lack of accountability from village leaders	4	8.3
No clear boundaries between Kiteto district and neighbour districts	3	6.2
Misuse of revenue from the forest	3	6.2
No clear boundaries in the forest between villages	3	6.2
Total	**48***	**100**

*The number do not add up to 90 due to (accounting for those who did not respond to the question) missing values
Source: Field survey, 2010

During discussions with key informants, it was revealed that power struggle between ZEC and the ten villages forming SULEDO is also due to high overhead costs. This was due to the fact that VECs and Executive Committee "KAMATI TENDAJI" composed of 10 members including forest manager, chairperson and secretary of ZEC receive allowances during their meetings. Members for these committees receive USD 3.00 per day during working days. It was found that USD 8 696 was spent on payments of allowances instead of covering expenses of community projects including construction of classrooms, school furniture and water Projects. As a result, some villages are against harvesting of their forest areas because they don't see benefits from the activity. Therefore, they have proposed in the contrary to clear fell a portion of the forest reserve for crop production in which all villagers will benefit rather than conserve the forest for such long time and only few people seem to benefit. Institutionally the villages have got the institutional powers to refrain from harvesting if they find themselves losing than benefiting, and they are capable of holding responsible the ZEC which is institutionally coordinating the ten villages. Therefore in essence it is true that if handled properly the power struggle may improve governance and more specifically equitable distribution of the earnings and sustainable management of the resource base. Otherwise if poorly handle it may

further conflicts, poor governance leading to unsustainable utilization of the resources base. On the same line of thinking, Kisoza *et al*. (2004) argue that the greater unequal distribution of scarce forest resources in a system, the greater will be the power struggle which create conflicts of interests between dominant and subordinate segments of the society. Peet and Watts (1996) pointed out that forest resources are embedded in a shared social space where complex and unequal relations are established among a wide range of social actors. Those actors with the greatest access to power are also able to control and influence natural resource decisions in their favour.

Levels of power struggle between ZEC and the ten villages surrounding SULEDO VLFR

Table 5 shows the levels of power struggle between ZEC and the ten villages surrounding SULEDO VLFR. In Sunya village 50% of the respondents reported power struggle was very high while 30% reported high, and 15% reported low while 5% reported very low. In Laiseri village 11.8% of the respondents reported very high power struggle while 41.2% reported high and 47.1% of the respondents reported low. Furthermore, in Lengatei village the results showed that 36.8% of the respondents reported very high power struggle while 31.6% reported high and 26.3% reported low while 5.3% reported very low power struggle. The majority of the respondents in the study villages reported high level of power struggle between ZEC and the ten villages surrounding SULEDO VLFR namely Sunya, Asamatwa, Olgira, Lengatei, Lesoit, Olkitikiti, Engong'ongale Mturu, Mesera and Laiseri.

Table 5: Levels of power struggle between ZEC and the ten villages surrounding SULEDO VLFR

	Name of Village			Total
	Sunya	Laiseri	Lengatei	
Levels	F (%)	F (%)	F (%)	F (%)
Very high	10 (50)	2 (11.8)	7 (36.8)	19 (33.9)
High	6(30)	7 (41.2)	6 (31.6)	19(33.9)
Low	3 (15)	8 (47.1)	5 (26.3)	16 (3.6)
Very low	1 (5)	0 (0)	1 (5.3)	2 (28.6)
Total	20 (100)	17 (100)	19 (100)	56 (100)

Key: F=frequency

Source: Field survey, 2010

CONCLUSION

Forest resources in the study area were highly contested with power struggles. Dominant power struggle was between ZEC and the ten villages surrounding SULEDO VLFR, centred on the utilization of forest resources. Power imbalances between stakeholders with regard to access and use of forest resources and unequal benefits distribution among stakeholders were the core cause of the existing power struggles in SULEDO VLFR. Since these struggles are due to power imbalances and mistrust that comes about because of the possibilities for other stakeholders to hold responsible those in office it remains to be a challenge for SULEDO to improved governance, equitable distribution of the resources and sustainable management of the forest resources. At these early stages of realizing the benefit of conservation, it may lead to a more positive and a healthy scenario but it is important to have a proper guidance of the processes, and balancing the powers should take a form of improving communication among stakeholders and

respecting the powers that different groups have over the management and utilization of the resources.

REFERENCES

Bailey, B.K. 1994. *Methods of Social Research*. The Free Press Cllier-MacMillan Publishers, New York. 813pp.

Barrow, E., Clarke J., Grundy I. Kamugisha Jones R., and Tessema Y. 2002. Whose Power? Whose Responsibilities? An Analysis of Stakeholders in Community Involvement in Forest Management in Eastern and Southern Africa. Nairobi, IUCN- EARO. [http://www.app.iucn.org/dbtw-wpd] site visited on 12/02/2011.

Beeler, S. 2005. Common Pool Resource Management and Conflicts in the Niger Inland Delta (Mali): Strategies and potentials of action for conflict mitigation. [http://www.eco.unibs.it/~iascpeu] site visited on 10/2/2010.

Benjaminsen, T. A., Kepe, T. and Bråthen, S. 2008. Between Global Interests and Local Needs: Conservation and Land Reform in Namaqualand, South Africa. *Africa*, 78 (2): 223-244.

Blomley, T. and Ramadhani, H. 2006. Going to scale with Participatory Forest Management: Early Lessons from Tanzania. *International Forest Review* 8; 93-100pp.

Bodin, Ö and Crona, B. 2006. Social networks in natural resource management: What is there to learn from a structural perspective? http://www.ecologyandsociety.org/vol11/iss2/resp2] site visited on 10/12/2010.

Chapin, M. 2004. A Challenge to Conservationists. *World Watch Magazine*. 4(2):1-16.

Ensminger, J. 1992. *Making a Market. The Institutional Transformation of an Africa Society*. Cambridge. Cambridge press. 112pp.

Freeman, L. C. 1979. Centrality in Social Networks. *Social Networks* 1:215–239.

Gathanju, D. 2009. Protecting African black wood (mpingo), the world's most expensive tree. *The Arc Journal* 11 (2): 23pp.

Isango, J. A. 2007. Monitoring of Permanent Sample Plots (PSPs) established in SULEDO miombo forests in Kiteto District. Morogoro: Tanzania Forest Research Institute (TAFORI),Morogoro Tanzania, 15 pp.

Kajembe G.C. and Monela, G.C. 2000. Empowering communities to manage natural resources: where does the new power lie? a case study of Duru – Haitemba, Babati, Tanzania. In; *Empowering communities to Manage Natural Resources: Case studies from Southern Africa,* (Eds). Shackleton, S and B. Camphell CIFOR/USAID/IUCN/WWF/Africa Resources Trust/SADC/CSIR/IES..151- 163 pp.

Kisoza, J.A., Kajembe, G.C. and G.C. Monela. 2004. Natural Resource Use Conflicts in Kilosa District, Morogoro Region, Tanzania. In*: Institutions, Incentives and Conflicts in Forest Management: A Perspective. Proceedings of the IFRI East African Regional Conference (Edited by Shemweta, D.T.K., Luoga, E.J., G.C.Kajembe and S.S.* Madoffe). 12th –13th January 2004. Moshi, Tanzania. 108-123 pp.

Lissu, U.A and von Mitzlaff, I. 2007. Moving towards sustainable harvesting of village Forests experience from Kiteto SULEDO forest. *The Arc Journal Biannual Newsletter Issue No*. 21**.**

Lukes, S. 2005. *Power: a radical view*. Basingstoke: Palgrave Macmillan. 125pp.

Malimbwi, R.E. 2000. *Forest inventory report for SULEDO forests*. ORGUT office, Stockholm. 70pp.

Markovsky, B. J., Skvoretz, D., Willer, M. J.; Lovaglia, J. and Erger, 1993. The needs of weak power: An extension of

network exchange theory. *American Sociological Review* 58 (2):51-103.

Mbeyale, G.E 2009. The impact of Institutional changes on the Management of Common Pool Resources in Pangani River Basin: A case of eastern Same, Kilimanjaro, Tanzania. Thesis submitted in fulfilment of the requirements for the Degree of Doctor of Philosophy of the University of Dar es Salaam. 307pp.

Mikkelsen, B. 1995. *Methods for Development Work and Research*; *A Guide for Practitioners*. New Delhi, Sage publications India Pvt Ltd. 296pp.

Mohamed, C. 2009.The role of Local Governance structures in regulation of forest benefits. A case study of Nyangaje Forest Reserve. Dissertation for Award of MSc. Degree at Sokoine University of Agriculture, Morogoro, Tanzania.153pp.

Nuijten, M. 2005. Power in Practice. A Force Field Approach to Natural Resources Management. *Trans-disciplinary Environmental Studies*. 4(2):1-13.

Peet, R. and Watts, M. 1996. *Liberation ecologies: environment, development and social movements*. Routledge, London, UK. 444pp.

Platteau, J. P. and Gaspart, F. 2005. *Disciplining local leaders in community-based development*. Namur, Belgium: Centre for Research of the Economics of development (CRED). 68pp.

Prell, C., Hubacek, K. and Reed, M. 2007. Stakeholder Analysis and Social Network Analysis in Natural Resource Management. *Society and Natural Resources* 22(6):501-518.

Robinson, E. J. Z. & Maganga, F. 2009. The implications of improved communications for participatory forest management in Tanzania. *African Journal of Ecology*, 47 (1): 171-178.

Shacleton S., Campbell, B., Wollenberg and Edmund, D. 2002. *Devolution and Community Based Natural Resources Management:* Creating Space for local people to Participate and benefit? Natural resources perspectives number 76. The Overseas Development Institute, 111 Westminster Bridge Road, London SE1 7JD, UK.6pp.

URT (United Republic of Tanzania). 2002a. *The New Forest Act: No. 7 of 7th June 2002*. Dar es Salaam. Government Printer. 174pp.

URT (United Republic of Tanzania). 2002b. *Population Census and Housing Census. In National Bureau of Statistics, President's Office Planning Commission's* Dar es salaam, Tanzania. 281pp.

URT (United Republic of Tanzania). 2003. Assessment of water quality and quantity for rivers originating from Uluguru catchment forest reserve-Morogoro region Draft report. Management of catchment forests in Morogoro region. 59pp.

Wasserman, S. and Faust, K. 1994. *Social Network Analysis: Methods and Applications*, Cambridge University Press. 123pp.

Wily L. A. 1997. *Villagers as forest managers and government 'learning to let go'. The case of Duru-Haitemba and Mgori Forests in Tanzania*. London: Institute of International Development. (Forest participation series; no. 9).

Wily, L. A. 2000. *Reconstructing the African commons*. *IASCP*, Proceedings of the Eighth Biennial conference, entitled constructing the commons; crafting sustainable commons in the new millennium, Indiana, USA, May 31st-June 4, 2000. 78pp.

Wily, L. A. and Mbaya, S. 2001. *Land, people and forests in eastern Africa at the beginning of the21st century: The impacts of land relationship on the role of communities in forest future.* Nairobi: World Conservation Union (IUCN) Eastern Africa Programme.115pp.