

THE INFLUENCE OF ECONOMIC REFORMS ON UTILISATION OF FOREST RESOURCES BY THE LOCAL COMMUNITIES IN TANZANIA: THE CASE OF KITULANGHALO FOREST RESERVE AND ITS SURROUNDING VILLAGES, MOROGORO DISTRICT, TANZANIA

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ABSTRACT

The economic reforms undertaken in Tanzania between 1981 and 1994 in order to redress the deteriorating economy has caused retrenchment, closure or privatization of some of the parastatals and many people who were formerly employed by these enterprises were forced to find alternative means of survival. A study was therefore conducted with the main objective of analyzing how economic reforms have influenced utilization and management of forest resources of Kitulanghalo forest reserve.

The study was conducted between January and March 2000 in Gwata-Ujembe, Maseyu and Lubungu villages surrounding Kitulanghalo Forest Reserve which is located at about 50 km east of Morogoro Municipality along Morogoro - Dar es Salaam highway. The tools employed in primary data collection were Participatory Rural Appraisal (PRA) techniques and household surveys. About 60 households were sampled in the study villages. Data were analysed by using both PRA techniques and the Statistical Packages for Social Sciences (SPSS).

The results indicated that agricultural activities and charcoal business are the main economic activities of the people surrounding the forest reserve. More than 75% of the households in the study villages ranked charcoal making and selling as a first or second source of income after agriculture. The distance from homestead to areas where charcoal burning activities are carried was about 1.8 to 18 km. Furthermore, the results indicated that about 69%, 35% and 65% of the villagers interviewed for Gwata-Ujembe, Lubungu and Maseyu respectively were immigrants and have lived in the villages for 11-23 years. The population by year 2000 in Gwata-Ujembe village had increased by 57% compared to that of year 1980.

The growing population has exerted pressure on resources due to increased demand for agricultural land, use and trade in forest products. About, 54%, 53% and 86% of the respondents in Gwata-Ujembe, Lubungu and Maseyu villages indicated respectively that there are possibilities of increasing the area owned by individual households by opening up virgin forests. Also, traditional rules have been eroded as people of different traditions and beliefs moved into the area.

INTRODUCTION

In the early 1980s there was a general feeling that the economy of Tanzania needed some re-adjustment. The economy had been weakened by a series of economic shocks since 1970s such as the second round of oil price increases, increases in the price of manufactured goods, fall in prices of Tanzanian exports, two successive bad crop years, costs of the war against Uganda and the break-up of the East Africa Community (Maliyamkono and Bagachwa, 1990; Bagachwa, 1992). There were also long term weaknesses of the economy such as poor performance of the agricultural sector and poor parastatal

performance which required rectification and restructuring of the industrial sector such that it is export oriented rather than import dependent.

In order to redress the deteriorating economy, Tanzania initiated Structural Adjustment Programmes (SAPs), between 1981 to 1985. These were: the National Economic Survival Programme (NESP) 1981 - 82 and the Structural Adjustment Programme (SAP) 1982/83 - 1984/85. Structural adjustment programmes (SAPs) typically involve a variety of economic reforms in monetary, fiscal, trade, regulatory policies and public sector management. These reform programmes have been based on the

assumption that, if sufficient economic incentives are provided to producers, they will expand existing production and invest in new productive activities, thus providing the engine for sustained economic growth (Lancaster, 1993).

After a few years of implementation, the home grown SAPs were perceived to have failed (Maliyamkono and Bagachwa, 1990; Bagachwa, 1992). The failure of home grown SAPs led to the adoption of the Economic Recovery Programmes (ERP) in 1986/87 - 1989/90, which had the backing of the International Monetary Fund (IMF), World Bank (WB), and Tanzania's major aid donors. Later on the Economic and Social Action Programme (ESAP) was formed in 1989/90 - 1991/92. The last year of ESAP overlapped with the Enhanced Structural Adjustment Facility (ESAF), which was supposed to last from 1991/92 - 1993/94. Following these reforms, the public sector was restructured and bureaucracy streamlined, and parastatals were closed down and/or privatized, and as a consequence of that, many of the people who were formerly employed by these enterprises became jobless and had to find alternative means of survival. Exploitation of forest resources is one of the means of survival adopted by some of the formerly employed people. Various reports and statistics indicate that exploitation of forest products have increased over the SAPs years (Tibaijuka, 1991). Products produced and sold included charcoal, timber and firewood (Monela, *et al.*, 2000).

Kitulanghalo Forest Reserve is located at about 50 km from Morogoro town and 140 km from Dar es Salaam which is the administrative and commercial capital of Tanzania. Dar es Salaam has a population of nearly 2.5 million people. Most of them depend on primary source of fuel for the daily energy needs, from charcoal and firewood (FBD, 2001). Morogoro, has about 230,000 people (<http://www.tanzania.go.tz>) and their energy sources are like that of Dar es Salaam (Monela *et al.*, 1993). Morogoro municipality used to have many industries owned by the government, which are now closed down.

As the administrative capital of Tanzania, Dar es Salaam used to have many people employed by the government in various sectors. Some of the unemployed people from Morogoro Municipality and Dar es Salaam City found their way to

Kitulanghalo forest reserve and the surrounding woodlands to earn a living.

Kitulanghalo forest reserve comprises of largely miombo woodland tree species. Due to high potential to supply a variety of forest products and services for rural communities, the miombo woodlands form an integral part of local communities who live within cities and roads, whereby forest products are the key sources of income (MLNRT, 1989). The increased human settlement along the highway has increased commercialisation of firewood and charcoal due to increased populations in Dar es Salaam and Morogoro.

Objectives of the study

Main objective

The main objective of the study was to analyze how economic reforms have influenced utilization and management of forest resources of Kitulanghalo forest reserve.

Specific objectives:

- To assess the land use in response to population pressure, demand of forest products and commercialization of markets for agricultural and forest products;
- To assess whether the growing population pressure in Morogoro urban area and retrenchment has exerted pressure on resource use;
- To assess the influence of socio-economic characteristics of the local communities in the area on resource use.

MATERIALS AND METHODS

The Study area

The study was conducted between January and March 2000 in Gwata-Ujembe, Maseyu and Lubungu villages surrounding Kitulanghalo Forest Reserve (Figure 1). Kitulanghalo Forest Reserve and surrounding general lands are located at about 50 km east of Morogoro Municipality along Morogoro - Dar es Salaam highway. The area is bisected by the Zambia - Tanzania highway which marks most of the southern boundary of the reserve. The Forest Reserve is surrounded by general lands under cultivation or open woodlands. The altitude of

Kitulanghalo area varies between 275 m and 350 m above sea level (Magashi, 1997). Mean annual rainfall is about 900 mm, which is seasonally distributed providing a wet season from October to May and a dry season from June to September.

The annual mean temperature is about 24.3°C. Geologically, there are highly weathered rocks of mixed alluvial and colluvial deposits in low-lying areas while the highlands consist of limestone and dolomite (Msanya *et al.*, 1995; Magashi 1997).

Topographically, Kitulanghalo area is located on a piedmont plain of the Kitulanghalo hill. The general topography of the area is rolling to steep convex slopes (10-22%) and undulating to rolling (slightly to highly dissected) linear slopes with shallow and deep gullies (Recha, 2000). The soil texture is sandy clay loam and silty clay loam (Recha, 2000). The clay content increases with depth as a result of the eluviation process (Nduwamungu, 1997). However there is low clay content in the cultivated land which could be attributed to its removal through soil erosion.

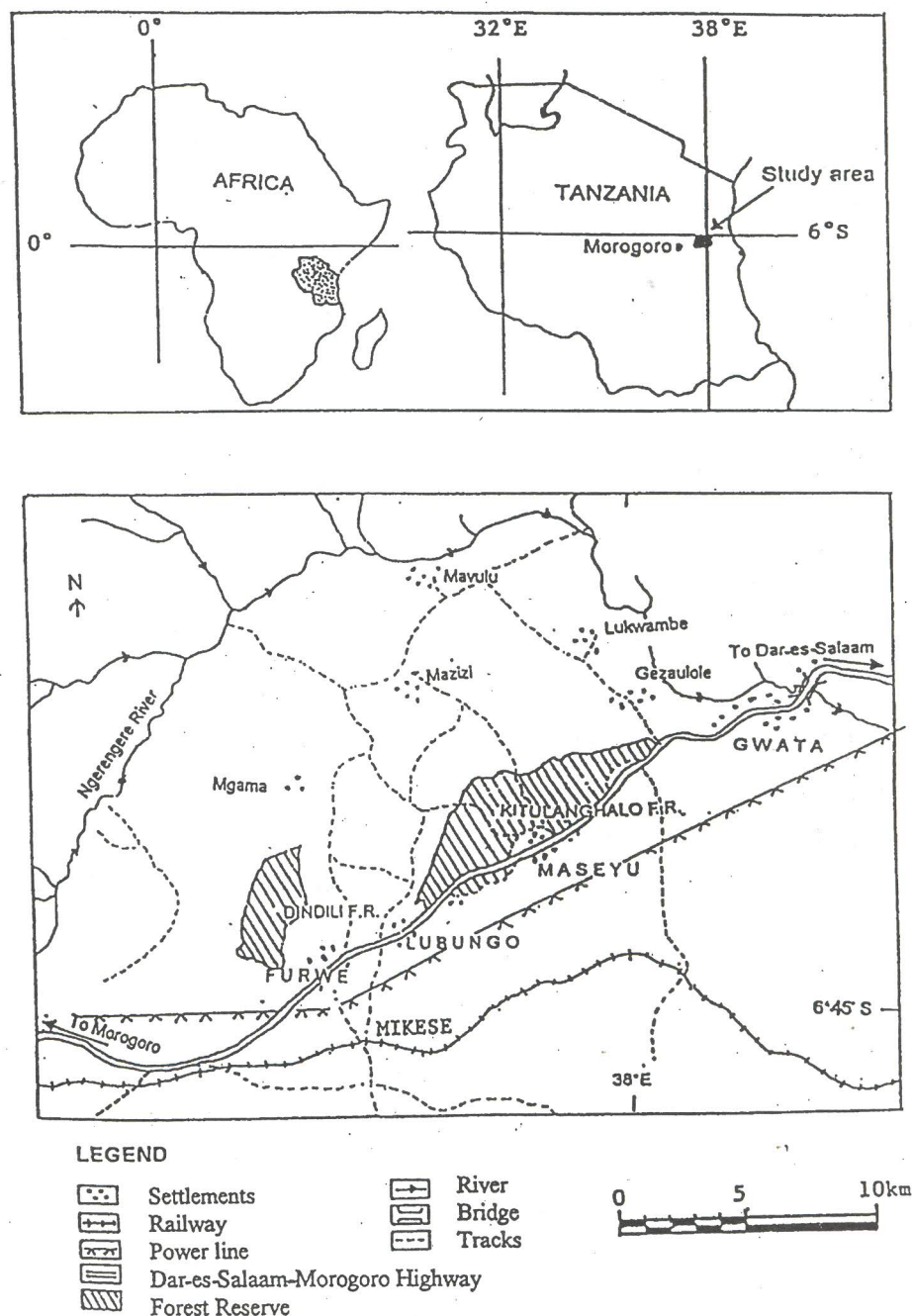


Figure 1: The location of Kitulanghalo Forest Reserve and surrounding public lands, Morogoro, Tanzania.

Nduwamungu (1997) found that the species composition is about 59% canopy trees, 33% small trees, and 8% shrubs, with an undergrowth of grass. Generally the miombo trees are the dominant species with different age classes. The forest reserve is mainly dominated by *Brachystegia spiciformis*, *Pterocarpus angolensis*, *Dalbergia melanoxylon*, *Tamarindus indica*, *Julbernardia globiflora*, *Isobertinia spp.* and *Combretum spp.* (Temu, 1976; Holmes, 1995; Mugasha, 1996; Nduwamungu 1997).

Data collection

The study integrated several methodologies to obtain both quantitative and qualitative data. The tools employed in primary data collection include Participatory Rural Appraisal (PRA), participant observation, informal discussions and household surveys. PRA exercises were conducted in Gwata-Ujembe village. During PRA exercises, a joint meeting was conducted between the researchers and a sample of twenty (20) people, which comprised of five women, five youths, five village leaders and five elders. Activities done included drawing of a village resource map which was done by the villagers themselves and facilitated by the researchers; discussions on benefits derived from the forest, general problems faced by the villagers and on how policy changes have affected the forest resource uses. Participant's observation mainly involved observation of the community and household activities. More information was obtained simply by observing what was going on in the villages studied. Informal discussion were conducted in order to obtain general information on the forest area and other issues related to economic activities of the people surrounding the forest areas. Some informal surveys were carried out involving sub-village leaders, a field forest officer and elders. Lastly, the primary data were also obtained from household surveys which were conducted in the villages bordering the Kitulanhalo forest reserve. Before the actual survey took place, a questionnaire was pre-tested and modified. This was done in order to improve the accuracy and relevance of the information being sought. Two households were selected in Gezaulole, CCM and Kagera sub-villages and visited during the pre-testing of questionnaire. Secondary data were obtained from records available at SUA, regional, district and village offices.

The study was conducted in the villages bordering Kitulanhalo Forest Reserve. A multistage random sampling from village to households was employed. One administrative division and ward of Mikese were identified. Followed by selection of three villages namely Gwata-Ujembe, Maseyu and Lubungo. The sub-villages of the selected villages formed the sampling area. A total of 60 households were sampled in the selected sub-villages.

Data analysis

The data collected by PRA techniques were analysed with the help of the communities. Whereas data collected from household survey were analysed by using both quantitative and qualitative methods. The Statistical Packages for Social Sciences (SPSS) was the main tool used in analysing the quantitative data while qualitative data were subjected to a content analysis.

RESULTS AND DISCUSSION

Socio-demographic information

In the survey conducted in the villages bordering Kitulanhalo Forest Reserve many of the interviewees were the heads of households. About 85%, 82% and 77% of the interviewees for Gwata-Ujembe, Lubungo and Maseyu were heads of households respectively. The female interviewees were 15%, 17.6% and 41.2% for Gwata-Ujembe, Lubungo and Maseyu respectively (Table 1). However, the percentage of male interviewees exceeded those of female since there were more males than females as indicated by 76.9% for Gwata-Ujembe, 88.2% for Lubungo and 64.7% for Maseyu villages (Table 1).

About 88%, 94% and 94% of all sampled households were married in Gwata-Ujembe, Lubungo and Maseyu villages respectively. The rest were either divorced or separated (Table 1). The average family size comprised of 6 people for Gwata-Ujembe and 5 for Lubungo and Maseyu villages respectively. About 16% and 27% of all sampled households were headed by polygamist in Gwata-Ujembe and Lubungo villages respectively. However, it was found that 50% of family members share the same resources including land while the rest did not. Sharing of

resources include living in the same compound, cooking together and cultivating the same land.

Agricultural products

The main economic activities of the people found in the study areas which was also taken as the main sources of livelihood in the household included agricultural activities and charcoal business. Nevertheless, in all the three villages surveyed it was found that agricultural activities ranked number one as responded by 80.8%, 94.1% and 56.3% of the respondents for Gwata-Ujembe, Lubungo and Maseyu villages respectively.

The main agricultural production system is monocropping for all the villages as reported by 96% of the respondents for Gwata-Ujembe, 87.5% for Lubungo and 100% for Maseyu villages (Table 2). Inter-cropping is mainly practiced in Gwata-Ujembe village while multiple cropping is practiced only in Maseyu village as responded by 12.5% (Table 2). Also, it was found that all the villagers cultivated maize, sorghum and cassava. These are the main crops cultivated by all villagers which constitute staple food for the local people who are living in the area.

Other crops cultivated for food include beans and castor seeds. There is no permanent cash crops grown in the villages rather farmers sell the surplus food for earning cash. In the past, cotton, simsim and castor seeds were grown as cash crops but are no longer grown due to poor

marketing as a result of the introduction of free market economy.

According to the villagers, market liberalisation for agricultural products has brought many buyers with unpredictable prices. Farmers argued that they are forced to sell their agricultural products at lower prices as compared to those used to be offered by crop authorities and co-operatives which are virtually closed down now. The production of simsim and cotton has been abandoned due to lack of market and high costs of tending compared to the prices offered. Most farmers have increased trade in surplus food produce at the expense of cash crop production. Some of the farmers had the opinion that selling food surplus was dangerous to farmers because they may sell even what could be used during food shortages. Also, dependence on sales of food surplus led to low income earning by households which in turn forced them to look for alternative strategies for the survival. Since these villages are bordering Kitulanghalo forest reserve the villagers found the alternative strategy for their survival is to engage themselves on trade of forest products.

Forest products

People in the study area still rely on the surrounding woodlands to meet both their subsistence needs and income. According to Hives and Eckman (1993) in many areas people would have difficult surviving if they had to depend only on cultivated land for food, fuel and cash income. It was found in the study area that

Table 1: Demographic data of households of sampled villages surrounding Kitulangalo Forest Reserve

Item		Percentages responses of the sampled households		
		Gwata-Ujembe N=26	Lubungo N=17	Maseyu N=17
Relation to household head	Head	84.6	82.4	58.8
	Wife	15.4	17.6	41.2
Sex	Male	76.9	88.2	64.7
	Female	23.1	11.8	35.3
Marital Status	Married	88.5	94.1	94.1
	Divorced	7.7	5.9	5.9
	Separated	3.8	-	-
Average family size		5.7	5.47	5.20
Polygamist head	Yes	16.0	26.7	-
	No	84.0	73.3	100.0
All share the same resources	Yes	50.0	50.0	
	No	50.0	50.0	

Table 2: Percentage responses on the main sources of income in the households

Source	Rank	Percentage responses		
		Gwata-Ujembe	Lubungo	Maseyu
Agricultural crop	1	80.8	94.1	56.3
	2	19.2	5.9	37.5
	3	-	-	6.3
Charcoal making	1	-	12.5	75.0
	2	-	87.5	25.0
	3	-	-	-
Charcoal Selling	1	100.0	-	75.0
	2	-	100.0	25.0
	3	-	-	-
Petty business	1	-	-	-
	2	100.0	100.0	100.0
	3	-	-	-
Traditional healers	1	-	-	-
	2	100.0	-	-
	3	-	-	-
Pitsawing	1	33.3	-	-
	2	66.7	-	-
	3	-	-	-
Employment	1	100.0	-	-
	2	-	-	-
	3	-	-	-
Agricultural production system	Monocropping	96.0	87.5	100.0
	Intercropping	4.0	-	-
	Multiple cropping	-	12.5	-

most people still depend on woodlands for their livelihoods. Most of the households in the villages ranked forest products as a first or second source of income after agricultural activities (Table 2).

The forest and woodland products are collected for direct consumption or for selling to generate income for food purchasing and other expenditures. In this way woodlands play direct and indirect role in food security (Makonda, 1997). In all villages studied people depend on forest and woodlands for collecting firewood, charcoal making, building poles and timber. However, collection of forest products from the reserve is strictly prohibited.

Nearly 40%, 36% and 79% of the respondents in Gwata-Ujembe, Lubungo and Maseyu villages respectively reported to collect firewood mainly from the public woodlands and farms. Firewood in the study area is mainly collected for own consumption. However in Gwata-Ujembe some few households (8.7%) collected firewood for home consumption and sale. Women mainly are responsible for firewood collection as responded by 50% for Gwata-Ujembe, 41.2% for Lubungo and 21.4% for Maseyu villages. The distance

from homestead to where the villagers can get firewood ranged from 1.5 - 2.8 km.

Charcoal making is also carried out in the same area where firewood is collected, that is in the woodlands in general land and farms. The months preferred to engage in charcoal making activities differ among the three surveyed villages. The reason being that; some villagers are engaged in charcoal making as a part time activity after harvesting of agricultural products i.e. July to September. Other villagers prefer to engage in charcoal making during the rain season February - March because at this time, production of charcoal is normally low and the price is high. Others engage themselves in charcoal making throughout the year because they consider charcoal making as their main source of livelihood (Table 2). The distance from homestead to areas where charcoal making is carried out ranged from 1.8 km in Lubungo village to 18 km in Maseyu village. The long distances have been contributed by increased population growth which has led to clearing of woodlands in general lands for expansion of agricultural lands and charcoal making.

The availability of forest products in the surveyed villages has decreased especially from 1970s to 2000. In all the three villages surveyed shortage of firewood was noted since 1980s due to high demand by the villagers (Table 3).

Availability of charcoal in Gwata-Ujembe was reported to be the same since 1970s to 2000 compared with other villages because in this village few villagers are engaged in charcoal activities. This has been contributed by the location of the village which is bordered by the Coastal region and Ubena centre where there are many economic activities. In the other villages of Lubungo and Maseyu, 80% and 100% of the respondents respectively indicated that firewood and charcoal availability has decreased (Table 3).

The main reason given for the decrease in availability of firewood and charcoal is the increased population which led to high demand for agricultural land. The expansion of agricultural areas and charcoal making meant clearing of woodlands. Another reason is lack of an alternative economic activities for the villagers as a result many villagers found that the only way of living is to engage in trade of forest products such as exporting charcoal to Morogoro town and Dar es Salaam city. As the exports and

consumption of forest products increased scarcity of forest resources in the area increased.

The economic reforms and the utilization and management of forest resources

In the three villages surveyed it was found that 69%, 35% and 65% of the villagers interviewed for Gwata-Ujembe, Lubungo and Maseyu respectively were not born in the villages (Table 4). Most of the villagers interviewed have lived in the villages for a period between 11 and 23 years. This is within the period when the national economy started to deteriorate and various economic reforms being undertaken (Maliyamkono and Bagachwa, 1990; Bagachwa, 1992). Most of the people who settled in these villages came from outside Morogoro region as indicated by 28%, 100% and 27% of the respondents for Gwata-ujembe, Lubungo and Maseyu villages respectively (Table 4).

The remaining either came from within the ward, division, district and the region. The migration of people into these villages resulted to increased population which also resulted into increased demand for agricultural land and use of forest products. The forested land was reduced due to

Table 3: Percentage responses on availability of forest products

Product	Availability	Gwata-Ujembe				Lubungo				Maseyu			
		70s	80s	91-95	96-2000	70s	80s	91-95	96-2000	70s	80s	91-95	96-2000
Firewood	Increased	-	9.1	20.0	20.0	-	-	-	6.7	-	-	-	-
	Decreased	57.1	63.6	66.7	70.0	-	100	66.7	66.7	-	66.7	93.8	93.8
	Same	42.9	27.3	13.3	10.	-	-	33.3	26.7	-	33.3	6.3	6.3
Charcoal	Increased	-	-	-	-	-	-	-	-	-	-	-	-
	Decreased	-	-	-	-	-	-	80.0	80.0	-	-	100.0	100.0
	Same	100.	100.0	-	100.	-	-	20.0	20.0	-	-	-	-
Poles	Increased	-	-	-	-	-	-	16.7	16.3	-	-	-	-
	Decreased	50.0	60.0	66.7	71.4	-	-	83.3	83.3	-	100.0	100.0	100.0
	Same	50.0	40.0	33.3	26.6	-	-	-	-	-	-	-	-
Thatching grass	Increased	-	-	-	16.7	-	-	16.7	100.0	-	-	-	-
	Decreased	100.	11.1	25.0	16.6	-	50.0	-	-	-	-	14.3	26.6
	Same	-	88.9	75.0	66.7	-	50.0	83.3	-	-	100.0	85.7	71.4
Saw logs	Increased	-	-	-	-	-	-	-	-	-	-	-	-
	Decreased	100.	100.0	100.0	100.	-	-	-	-	-	-	-	-
	Same	-	-	-	-	-	-	-	-	-	-	-	-

expansion of agricultural land. Furthermore, traditional rules like cutting certain trees used for rituals and water catchment, and forbidden

cultivation along river banks were eroded as people of different traditions and beliefs moved in the areas.

All respondents revealed that they were not willing to go back to their areas of origin and the reasons given were that they have already invested in these villages, good agricultural environment, lack of basic public services in their areas of origin, it is relatively easy to earn money in these villages through charcoal making and selling and availability of land (Table 4).

The immigration of people from one area to another has influenced the traditional norms and indigenous activities of the people. According to the respondents, in the villages bordering the Kitulanhalo forest reserve, villagers started to engage in charcoal making as an economic activity after the arrival of the Sukuma and Wamalila ethnic groups. Before that time charcoal making activities were not commercialized. Another study conducted in Iringa rural district showed that the settlement of Wakinga ethnic group in that area which is famous for miombo woodlands was due to pitsawing activities which resulted in increased deforestation of miombo woodlands (Monela, *et al.*, 2000).

Immigration of people and land acquisition characteristics

The rural population in the surveyed villages are peasant farmers. All the interviewees in Gwata-Ujembe and Maseyu villages own land, while nearly 6% in Lubungo have no permanent land. In general, villagers own more than one plot and the number of plots owned depends on the age, number of sons in the family and the working capability. Generally speaking, old men have more plots because they had acquired many and large plots when the population was low. However, old men with many sons have fewer and smaller plots due to apportioning to their sons. The immigrants especially those engaged in charcoal making have many and big plots because the areas cleared for charcoal making are normally considered as areas for agriculture if the soil is good. Typically, villagers owned one up to four plots of different sizes but majority owned two plots. The total area owned by individual farmers ranged from 1.3 – 2.7 ha. The distance from homesteads to the farm fields ranged from 0 - 5 km.

Land in the surveyed villages is obtained through different means, however, inheritance, allocation by village government and cleared woodlands/forest are the major means of acquiring land. Nearly 39%, 35% and 56% of the respondents in Gwata-Ujembe, Lubungo and Maseyu villages respectively indicated that

Table 4: Percentage responses on people's settlement in the villages

Response by Villager		Village Names		
		Gwata-Ujembe	Lubungo	Maseyu
Born in the village	Yes	30.8	64.7	35.3
	No	69.2	35.3	64.7
Years lived in the village		22.0	11.0	23.0
	Within the ward	50.0	-	63.6
Where living before	Within the division	-	-	9.1
	Within the district	5.6	-	-
	Within the region	16.7	-	-
	Outside the region	27.8	100.0	27.3
	Good agric. environment	18.8	16.7	-
Reasons for not going back	Availability of land	6.3	-	-
	Married in the village	12.5	33.3	25.0
	My investment is here	25.0	33.3	58.3
	Basic human services available	12.3	-	-
	No people there	18.8	-	-
	Easy to earn money here	-	16.7	16.7
	Witch crafts	6.3	-	-

Table 5: Percentage responses on trend of people moving in the three villages

Period	Gwata-Ujembe			Lubungo			Maseyu		
	Increased	Decreased	None	Increased	Decreased	None	Increased	Decreased	None
1980s	57.1	28.8	14.1	-	64.3	35.7	-	-	-
1990 - 95	75.0	16.7	8.3	100.0	-	-	100.0	-	-
1996 - 2000	87.0	8.7	4.3	100.0	-	-	100.0	-	-

farmland is acquired by inheritance. Land acquisition through village government allocation was responded by 30.8%, 23.5% and 6.3% for Gwata-Ujembe, Lubungo and Maseyu villages respectively.

Also, 23%, 35% and 31% of the respondents indicated land acquisition through clearing of woodlands/forests for Gwata-Ujembe, Lubungo and Maseyu villages respectively. Other means of acquiring land in the study villages included buying, renting, and given by friends. The farmers indicated that there are possibilities of increasing the area owned by individual household by opening up virgin forests. This was indicated by 54%, 53% and 86% of the respondents in Gwata-Ujembe, Lubungo and Maseyu villages respectively.

In the entire surveyed villages it was noted that there was a trend of people moving into the villages from different areas of Tanzania, and some of these immigrants have bought land in the villages. These are the people who buy many hectares of land ranging from 5 up to over 50 hectares. Many of these people are the Government officers mainly from Morogoro Municipality and Dar es Salaam city, and they include district/regional commissioners, permanent secretaries in the ministries and other officers. According to the respondents, 61% in Gwata-Ujembe, 33% in Lubungo and 12.5% in Maseyu villages, people from outside prefer to buy land in the villages due to the fact that the area is good for agriculture. Other reasons cited included charcoal making activities, marriage from the villages, shop business and retirement. It was also revealed that retired soldiers and prisoners mainly settle in Gwata-Ujembe village because many of them are familiar with the village environment, and some of them have married from the villages. The Gwata-Ujembe village is boarded by the Ubena prison and is separated by Ngerengere River. It was found out that the presence of Ubena prison, Kinonko army force and Wamimbiki conservation project have greatly influenced the immigration of people,

land acquisition and land ownership by Gwata-Ujembe villagers. These institutions have contributed nearly 43% of the immigrants to the village.

The rate of immigration of people into these villages increased from 1980s to 2000s (Table 5). The immigrants are categorized into three groups namely, those coming into the area with the aim of buying land mainly for agricultural activities, those who move into the area so as to engage in charcoal business, and those who moved into the areas so as to find a suitable settlement and in turn either engaged themselves in agriculture or charcoal business. The population by year 2000 in Gwata-Ujembe village had increased by 57% compared to that of year 1980. Another study conducted in this village showed that the immigration of people into peri-urban site (Gwata-Ujembe) increased by 1.2% in the 1980s a period characterised by the Structural Adjustment Programme (SAP) policies. About 99% of these immigrants are from towns where they have failed to make a living due to unemployment and have been forced to emigrate to nearby villages to find some activities to do. Most of them are engaged in farming and in extraction and trade of forest products such as firewood, charcoal and pitsawing.

In general this situation has caused a shortage of land particularly in Gwata-Ujembe village. To address land shortage problem, villagers are forced to clear the woodlands so as to expand agricultural land and to find new settlement. As the problem of land scarcity escalates, there is a danger of enchronching the reserved forest land.

CONCLUSION

The study revealed that the people in these villages still rely on surrounding woodlands for both meeting their subsistence needs and source of income. Many households interviewed ranked forest products as a first or second source of income after agricultural activities. For instance charcoal making ranked first by 12.5% and 25%

of the respondents in Lubungo and Maseyu villages while charcoal selling ranked first by 100% and 75% of the respondents in Gwata-Ujembe and Maseyu villages respectively.

Expansion of agricultural land has resulted into the reduction of woodlands in the general lands. Other factors which contributed in the reduction of woodlands included the new settlements acquired by immigrants and charcoal making activities. The rate of immigrants into these villages from 1980s to year 2000 has increased by 57% in Gwata-Ujembe village which is a period characterised by various economic reforms.

The study also revealed that the closeness of Gwata-Ujembe village with Ubena prison, Kinonko army force and Wamimbiki conservation project have contributed to the relatively high rate of immigration into the village. The immigration of people has led to the reduction of land especially the woodlands. As a result of increased population the resources found in the woodlands have started to be scarce particularly trees for making charcoal. At the moment charcoal making is carried out at the distance of 18.33 km from Maseyu village.

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