

# SAFEGUARDING THE COMMONS: CONFLICTS OVER NATURAL RESOURCE USE AND POVERTY ALLEVIATION STRATEGIES IN RURAL TANZANIA

By

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**Abstract:** This paper discusses the impacts of conflicts emanating from competing natural resource use and poverty eradication strategies around protected and mining areas in Tanzania. Case studies of various protected areas are used to demonstrate the nature and extent of conflicts emerging from changing demographic conditions, land use competition and globalisation pressures. Such conflicts often occur at the expense of the commons. In many protected and mining areas, local communities' efforts to minimize poverty levels are frustrated by globalisation influences and state's interests which favour large-scale operators, mostly foreigners. There is an increasing fear of losing their land without equitable compensation. As a result, small-scale farmers among the commons are forced into unsustainable decisions of either selling mining plots to small-scale miners or do the mining themselves. Such pressures magnify the extent of conflicts over resource use. Expansion of mining in farmlands, for example, increases environmental destruction risks, especially in areas that are already vulnerable. The long-term implications include accelerated food insecurity, generation of a landless class, increased poverty, and rapid environmental degradation. Land use conflicts around protected areas are demonstrated through encroachment of farming communities, bush fires, excessive tree felling, and poaching. Most of these negative practices are a function of ignoring the commons' interests and needs to most of the save the interest of state and globalisation. Experiences from the game controlled areas around Serengeti National Park demonstrate that local communities can effectively participate in protecting wildlife and forestry only when they are given proper recognition and ensured of benefit sharing. Examples are given in this paper to support the concept of "*community conservation*" and "*partnership forest management*" in natural resource management. The main issue here is whether the conflicting interests between the state and the commons on the one hand, and the state and globalisation pressures on the other, can be harmonized. This necessitates serious involvement of the commons in decision-making processes especially on issues that directly affects their welfare. The paper concludes by calling for a dialogue that could trigger the process of strategy development to safeguard the interests of all stakeholders including the commons. In all respects, the commons' interests need to be put in the forefront in instituting conservation measures and large-scale natural resource exploitation programmes. Local communities need to be considered as equal partners who have a stake in the planning, management and benefit sharing.

## Introduction

In 1987, the World Commission on Environment and Development challenged the international community and national governments to work towards a sustainable future that will broaden, not contract, the choices future generations will have to make. This call was amplified by the United Nations General Assembly which called for a balance between population and environment capacities in order to make sustainable development possible, keeping in mind the links among population levels, consumption patterns, poverty and the natural resource base (UNFPA, 1991). The emphasis was directed towards addressing the relationship between demographic pressures and unsustainable consumption patterns on the one hand, and environmental degradation on the other.

These arguments show the various efforts made by the international community in addressing the population, environment and natural resources linkages. The task put forward is to:

- Re-examine the population/resource imbalances;

- Correct inefficient and wasteful use of resources; and
- Seek optimal strategies that can ensure access of the commons to natural resources.

Population is among the basic resources on which nations depends on. Due the various human actions, large areas of land, forests, mineral deposits, wildlife and water resources have been depleted. Similarly, various resource use conflicts have emerged and are largely triggered by population pressure, globalisation, and the neglect of the commons' interests and needs. This complementary relationship between human and other natural resources necessitates consideration of the end user of the resources in any discussion of resource management issues. We need to ask ourselves "*for whose interest/benefit are the resources conserved/protected?*" This question leads us to the topic of this paper, "*Safeguarding the Commons: Conflicts Over Natural Resource Use and Poverty Alleviation Strategies in Rural Tanzania*". The paper discusses how agriculture and mining are accommodated in the rural setting village and how people's lifestyles are being molded by population pressure, changing occupational preferences, globalization, and the emergence of new economic opportunities like mining.

Using the case of Mabuki village in Mwanza Region (Tanzania), this paper demonstrates various changes that have occurred in the farming practices and social organisation, changes in land use and tenure, agrarian reforms, access to mining rights, and conditions of employment. The emergence of mining activities in Mabuki village influenced changes in the migration trends, which are no longer determined by agrarian and pastoral reasons. Agriculture and mining are contrasting production systems producing radically different outputs: low valued agricultural goods on the one hand, and high valued diamonds on the other. These economic activities involve different dynamism with regards to property ownership including land use rights, and shared rights over the diamonds. Nonetheless, these different types of work relations currently involve similar cooperative interactions amongst workers in Mabuki village.

### **Globalisation and the Mining Sector:**

One of the failures of most governments in developing countries is their inability to meet the present needs of the commons without compromising the resource needs of future generations. Most developing countries depend on natural resources for employment, revenues and foreign exchange earning. In order to enhance sustainable utilization and exploitation of these resources, there is need to include population parameters and the environment into the economic equations. This means countries should evolve new ways of measuring economic growth that takes improvement in the welfare of the commons on board. A number of sectoral reforms have been initiated in Tanzania in recent years. These include policy changes in the mining and health sectors, and the local government reforms. The purpose of these reforms is to encourage local community involvement and foreign investment, and to facilitate small-scale economic activities including mining.

The Sukuma<sup>1</sup> people practice extensive crop cultivation and livestock keeping. The practice of extensive agriculture necessitates a large labour force. A large family has long been associated with a proliferation of hoeing capacity, food and material prosperity. Traditionally, the fundamental measures of wealth were food production. This attitude still prevails.

Historical demographic data demonstrate a linkage between rapid population increase on the one hand, and deforestation and agricultural intensification on the other (Lupande 1997, Meertens *et al.* 1995). Changes in the farming systems were reflected in the use of ox-ploughs and tractors that started around 1934, and increased significantly in 1945 when cotton production became an important cash crop (Fuggles-Couchman 1964). After independence in the 1960s, the Arusha Declaration introduced the *ujamaa and self-reliance policy*, which led to the resettlement of the rural population and change in the

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<sup>1</sup> Sukuma is the tribe which inhabit the area of northwest Tanzania, south of Lake Victoria.

land use patterns and tenure system. Though the Villagisation Act of 1975 accorded village governments the responsibility for land distribution (URT, 1975), the principles of traditional tenure systems remained strong. Traditionally, land was distributed and utilised according to customary inheritance rules and procedures based on family and community solidarity (Cory 1953, Wilemski 1994). In some cases, land was acquired through purchase and/or migration of family members to other areas.

Due to rapid population growth, the traditional land tenure and management systems have been gradually eroded. This situation is further exacerbated by the expanding market economy and emergence of non-farm activities like mining, which compete with agriculture for land. The emergence of non-farm activities, notably diamond mining, have intensified the problem of landlessness and land use conflicts especially between livestock-keepers, cultivators and miners. Recent observations from some villages in Kwimba District show the escalation of the conflicts to the extent that livestock keepers are required to spare grazing areas within their own land or farms (Madulu 1998; 2000). Variations in the severity of the land problem depend on the extent of population pressure and land use competition within the community and between economic activities.

### **Mabuki: A Diamond Village**

Mabuki is an old traditional village occupying a strategic position along a major trunk road, some 50 kilometres from Mwanza town. The village lies in an area that is environmentally devastated by successive resource mismanagement practices including large-scale forest clearing during the 1920s, overgrazing, improper agricultural practices, and more recently, unplanned and uncoordinated small-scale mining activities.

Over 90 per cent of households in Mabuki village identify land scarcity as a major obstacle to agriculture. Increasing utilisation of land for diamond mining on the part of small, medium and large-scale miners facilitate this problem. While the male population increased by 34 percent between 1978 and 1988, the female population increased slightly by 6 percent, causing the sex ratio to tip towards a relative abundance of men. Table 1 shows the population development in Mabuki village between 1978 and 1988.

*Table 1: The Population of Mabuki Village, 1978-1998*

Years	Males	Females	Total	Sex Ratio
1978	2068	2247	4315	92
1988	2761	2387	5148	116

Source: Tanzania (1981, 1992).

Diamond mining at Mabuki started as far as 1922 before the opening of the famous Williamson Diamond Mines at Mwadui in 1940. The presence of heaps of old sand, gravel, a big well, and machine scraps used for mining purposes between 1940s and 1960s illustrate the existence of mining activities in the past (Jones 1981, Kimambo 1984). Although a significant number of Mabuki villagers engage in diamond mining, most of the small-scale miners are migrants. A list of 526 miners registered in Mabuki village in 1992 indicated that about 60 percent of the miners were migrants from within Kwimba District or other districts within the region.

These data suggest a dominance of short-distance movements. About 33 percent of the migrants were born in other villages within Kwimba District. Similarly, 16 percent and 21 percent of the males and female migrants, respectively, were from other villages within the district. Those born in other regions comprised only 16 percent for males and 12 percent for females. Generally, male migrants dominate the long-distance migration and females dominate short-distance movement. The rapid expansion of the male

population in the village has been caused by selective migration flows in favour of male migrant miners. While men migrate for economic reasons, most women move for the purpose of marriage. However, there is an increasing stream of women migrants who seek residence in the village as service providers and/or miners.

Despite their diverse origins, migrants have a strong solidarity amongst them. Although there is no official association for miners, they are all registered at the village office and are informally organised with their own recognised leaders. The solidarity between miners is expressed in the form of shared use of digging and washing equipment, and assistance in terms of food and pocket money. Sometimes, the landlords who own the land provide necessary equipment, food and shelter to migrant miners under special agreement to deduct the costs from their proceeds.

During the first 20 years of independence, the Tanzania Government encouraged rural population to participate in production of commercial export agriculture. The Sukuma farmers were renowned in the past for cotton production for export and small-scale mining activities were not officially allowed. Declining cotton prices and the economic crisis of the 1980s gradually led to a revival of small-scale mining. This move was facilitated by the change in the mining policy in the 1990s to allow small-scale mining activities to operate. To encourage this move and to ensure that most of the minerals produced fall into the government hand, the Bank of Tanzania (BoT) opened mineral purchasing posts within its branches, especially for gold and diamonds. These posts operated as open markets where individuals including small and large-scale miners sold their minerals freely. Unfortunately, this system was abandoned, but private buyers still operate legally.

There are three main types of mining operations in Mabuki village, namely: small, medium and large-scale mining operations. Long-standing residents of the village engage primarily in small-scale mining activities with an even large number of poor, livelihood-seeking migrants. Medium-scale miners tend to be outsiders; often, regional government officials who have gained access to land through their position and hire small-scale miners to pan for them. Finally there are large-scale foreign mining firms using mechanised production techniques. The coming of large-scale mining firms in Mabuki has put both small-scale miners and farmers at risk of losing their mining sites, and agricultural and grazing lands, respectively (Madulu 1998).

### ***Agriculture and Mining Crushing for Labour***

Diamond mining entails heavy manual labour especially for digging holes followed by laborious panning, in search for the elusive diamonds. Small-scale diamond miners pan for diamonds by digging large holes roughly three by three metres wide and one to two metres deep. The soil contents of the hole are piled on one side of the holes, which can be as close as 1-3 metres from each other. Thus, the landscape has a peculiar barren moon-like surface appearance that requires careful circumnavigation to traverse. Similar and even more dangerous features are found in small-scale gold mining areas in Geita and Kahama Districts (Yanda *et.al.* 2000).

The digging of the holes is often done during the dry season and panning or '*washing of sand*' is normally determined by availability of water. Due to this limitation, most washing activities are done during the rainy season when water is in abundance. However, there are a few miners who manage to dig wells within their abandoned holes or near water sources. Large panning sieves are used to separate sand from the minerals. Unlike the small-scale gold mining where mercury is used to separate gold minerals from the mud, diamonds are just washed by water and sorted by hand from the big gravels.

The uncertainty of finding any diamonds means that most small-scale migrant miners are frequently without cash to buy food and other basic necessities. Most try to engage in subsistence farming either on

their own farms or as labourers, to earn food and cash. In many cases, migrant miners engage themselves in farming as labourers in order to obtain money or food. Some migrant miners enter into loose contracts with the local villagers or landlords to provide them food and accommodation with the anticipation of paying back when they get and sell diamonds. In this way, mining compete for the same labour source, especially during the rainy season when both farming (preparing of agricultural plot for planting) and mining (digging and washing) require the maximum amount of labour. To avoid labour competition between agriculture and mining, most people engage themselves with farming during the wet season and put emphasis on mining activities during the dry season. In some cases, however, the family labour engaged in mining is replaced by hired labour for agricultural works.

### ***Access to Land and Mining Rights in Mabuki***

The dominance of migrants within the mining community raises a question of access and ownership of land. In view of the stratification of mining activities in Mabuki, miners' access to land is highly variable. The various approaches used to access land for mining purposes include official permission from the national ministry responsible for mining activities or regional government office, and unofficial purchases from local farmers. Other options include local villagers mining on their own land, migrant miners purchasing mining plots from villagers, villagers assigning plots to migrant miners with the understanding of sharing the proceeds.

The official channels of getting large scale mining plots is often used by medium and large-scale miners seeking mining rights and land lease titles. These groups of miners rarely involve the local communities in their search for mining rights. All negotiations are done at the ministry or regional levels and local people are caught by surprise when they hear that their land has already been sold to a large-scale miner, in most cases, a foreigner. In some cases, the prospective miners pay nominal compensation to the villagers' properties, which exclude land anyway. In this case, the commons have no say in determining the level of compensation to be made to their own properties. Similar to the large-scale miners, medium scale miners, mostly government officials, holding mining permits from the regional office. This category of miners also bypasses the local community in their efforts to obtain mining permits. Most of them are absentee miners who employ small-scale migrant miners to work for them. They rarely pay compensation to the local communities for the land taken for mining activities or to the village administration for the destruction of the villahe environment. A number of complaints have been reported in Mabuki with regard to compensation of land and property (farms, houses, crops and fruit trees) belonging to the commons. The presence of large-scale miners in the village has sparked a number of conflicts over land use, water and grazing areas. Regional and district government and even the village administration are not taking these complaints seriously.

Moreover, the large and medium-scale miners in Mabuki have catalyzed the local land market. Being alert of the possibility of loosing their land with little or no compensation at all, the commons and local farmers sold small mining plots to incoming small or medium-scale miners. The local farmers are philosophical about this, seeing land alienation and farmland degradation as inevitable, and therefore, their land sales afford them some immediate gain as opposed to near certain future losses. In so doing, speculative mining activities have spread allover the village leaving large parts of the former grazing and farmlands deeply pitted, decimating the topsoil and undermining the future agricultural potential of the land. In the process of these sales, however, a local landless class of villagers is formed.

### ***Globalization and the Commons' Welfare***

Small-scale miners' diamond sales are usually very arbitrary. There is no centralised marketing system in the village. Diamond buyers do come to the village on an *ad hoc* basis and even without the knowledge of the village administration. One of the regular buyers, a South African, is reported to come to Mabuki on a

weekly basis. Other buyers are based in Mwanza and Shinyanga. In addition to these, there are local agents who purchase diamonds when they have the capital to do so. Some buyers have managed to establish networks to ensure quick access to any valuable diamond finds. The pricing system of diamonds is also arbitrary and is dominated by the buyers. The local institutions and small-scale miners have very little say in price negotiations probably because of lack of reliable markets, and due to their ignorance of the actual value of diamonds in the world market.

In many respects, small-scale miners' are similar to small-scale farmers. Both belong to the class of the commons who are driven by survival imperatives in the first instance. Similarly, both face exceptionally low prices for their products. While farmers receive minimal prices for their crops, especially in the now liberalised cotton marketing, miners have little say, if any, in the pricing of their diamonds probably due to their low negotiating power, ignorance, and lack of strong producer organisations. There is no transparency with regards to the real market price for diamonds. In policy terms, small-scale miners can be likened to subsistence farmers – allowed to get on with what they are doing in the hopes that they will soon be obsolete.

Above and beyond the unequal exchange experienced by individual miners, the entire community is short-changed from much needed tax revenues from the sale of diamond products. Village officials put inordinate effort into taxing villagers' agricultural and livestock produce in the village weekly markets, whereas diamond sales go untaxed. Diamonds originating in the village are sold without any form of taxation or loyalty to the village, and often the selling is done without the knowledge of the village administration. Whether it be ignorance, poor management or a deliberate blind eye, the village and district administration have neglected to tax an extremely valuable source of revenue and have failed to facilitate the formulation of strong associations among the small scale miners to enhance their market awareness and bargaining power. The lack of diamond tax revenues means that almost nothing from the diamond business is re-invested in the village social service and productive infrastructure. At present, rather than contributing to Mabuki's future wellbeing, diamond mining is seriously undermining the village through the widespread degradation of the village's soils, grazing areas, and water sources. Small-scale mining activities are largely environmentally destructive (Madulu 1998, Jambiya *et al.* 1996). In Mabuki village, mining activities have turned large areas of farmland and grazing areas into badlands that may not be put under any agricultural use for many years to come.

Indirectly, the Tanzanian government is now trying to discourage artisanal miners in favour of large-scale industrial mining. In a way, the government is endeavouring to increasingly constrict small-scale miners' resource access and give mining rights to large firms. The practice is in line with the pressure exerted by international financial institutions like the World Bank and IMF to attract foreign investment. This observation has already been demonstrated in Mabuki village (Diamonds) where two large-scale companies are already in operation and conflicts over mining rights have started to occur between local small-scale miners and large-scale foreign companies. Conflicts over mining rights between local small-scale miners and large-scale foreign companies have also been noted in the Tanzanite mining areas in Mererani (Arusha Region); diamond mining areas in Maganzo village (Shinyanga District); and gold mining areas in Geita and Kahama Districts.

### **Are Mining and Agriculture Compatible?**

Paradoxically, in the face of adverse demographic, environmental and economic pressures, the majority of Mabuki's population are adamant that their main occupation is agriculture. This probably stems from the survival imperative of food production. As argued above, most small-scale miners live a hand-to-mouth existence and must engage in subsistence food production to make ends meet. Austen (1968) and Malcolm (1953) argue that life among the Sukuma was centred on the growing of cereals, viewed as the source of material wealth from which other necessities of life and cattle can be bought. Generally, food

security continues to be an indicator of respect and family prosperity, and agricultural performance is still considered as an importance measure of success (Madulu 1998). To the majority of the Sukuma people, farming is an occupational identity and a source of pride. Large families are common where there is food to eat. Many poor families do sell their labour in exchange for food. This situation is also common in the Mabuki's mining community, where some miners sell their labour to get food in a hand-to-mouth existence. In this way mining and agriculture are complementary, but the pursuit of both activities within a family can and does lead to conflictual situations.

Farming and diamond mining constitute competing labour activities. Farming and small-scale mining both require a lot of hard manual labour digging. Over a third of the households in Mabuki view labour shortages as a major obstacle to agricultural success (Madulu 1998). Mining has a negative push-pull effect on agricultural performance. First, mining is resulting in poor and old villagers being pushed off the land through the private sale of mining plots and government allocation of mining blocks to large-scale miners. Second, mining also pulls the youth out of agriculture through their involvement in mining as independent or hired labourers.

In this case, farming is at a disadvantage because most of the able-bodied young people who are traditionally supposed to provide labour to the agricultural sector are attracted to mining. The absence of youth in the households deprives the agricultural sector of a vital source of labour. The tendency of youth to leave their natal households leaves older people without recourse to family labour and at the same time they have greater difficulty in earning non-farm income and gaining capital for agricultural investment. Old age care is also surfacing as a problem in Mabuki due to the growing shortages of land and labour connected with mining activities. As youth with money in their pockets gain prominence in investment decisions it is becoming apparent that the traditional focus on cattle as a form of investment savings is declining. Young people are opting to invest in better housing, trade and mining instead, while the older generation investment pattern prioritizes farming and livestock.

The move from pure farming to mining or a combination of the two generates a potential for labour and land use competition with livestock keeping. To avoid this problem, farming activities, as much as possible, occupy mostly in the wet season or mornings, and mining and non-farm activities are carried out in the dry season or evenings (Madulu 1998). The hitch is that diamond panning is primarily a wet season activity that collides with the busiest time of the agricultural calendar. Generally, the increase of mining activities in Mabuki is having adverse effects on medium to long-term agricultural prospects and the agrarian environment.

Evidence from Mabuki village demonstrates a complementary relationship between agriculture and mining. About 40 percent of the small-scale miners relied on capital obtained from selling agricultural produce for starting mining and other non-farm activities. Similarly, agriculture supplies food to the mining community. In turn, mining provides finance for agricultural development in the form of hired labour, purchase of agricultural inputs, and use of tractors or ox-ploughs. As argued above, participation in mining or other non-farm activities does not necessarily detach individuals from agriculture. By contrast, migrant miners rarely invest in the Mabuki village. Most of them travel back to their home villages and districts and invest there. What is often noted, however, is the return of these migrant miners after an absence of only a few months. For most migrant miners, mining is a compulsive occupation, while for the local miners; mining is primarily a means to an end, an avenue for gaining capital to invest in trade or agriculture.

### ***Cross-Cutting Investments in Mining and Farming***

The rising importance of mining in Mabuki has led many households to lose farmland and instigated land use conflicts between farming, mining, settlements, and livestock keeping. On the positive side, the re-

establishment of mining activities in Mabuki has given an impetus to various service-oriented non-farm activities. This development has strengthened the service provision in the village to meet the needs of a rapidly growing population.

Small-scale mining is largely pursued by youths who would otherwise have put their full effort into the agricultural labour force. Most small-scale mining activities use crude mining techniques that are environmentally unfriendly. The loss of farming and grazing land is causing land scarcity and could ultimately threaten local food insecurity. The bulk of profits from mining are not being reinvested in land conservation activities, agriculture, social service provisioning. The case of Mabuki village suggests that the mining wealth are not benefiting the local population. A feeling of insecurity and a '*sell while you can*' attitude is now taking hold. Villagers are involved in agrarian asset stripping and face an uncertain future, as large-scale mining operations engulf their village.

### **Globalisation and Natural Resource Conservation**

In Tanzania, the Wildlife Conservation Act No. 12 of 1974 lists a number of human activities that are prohibited in protected areas (Tanzania, 1974). Evidence from Mkomazi Game Reserve suggests denial of the commons of access to the reserves' resources. In this case, the commons have been deprived the resources they were traditionally using with no alternative being given to them (Homewood et al, 1999). The experience of the Sandawe<sup>2</sup> people in Kondoa District demonstrate that the commons can manage and maintain an ecosystem by ensuring a dynamic ecological equilibrium and the continuous availability of essential natural resources (Madulu, 1999). Other groups like the Sukuma of north-west Tanzania have, for many years, used their local management systems (*Ngitiri*)<sup>3</sup> to protect the environment (Meertens, *et. al.*, 1995). Supporting the establishment of the Ngorongoro Conservation Area (NCA) in Tanzania, Prince Bernard of the Netherlands wrote a Preface to Fosbrooke's book by stating that:

Some problems that face conservationists concern the preservation from extinction of a single species. In other cases national parks are established to preserve an assemblage of animals, a famous national feature or beauty spot, or even a specific bird or plant. But at Ngorongoro an attempt is being made to carry matters a stage further, ... whereby the interests of all those with a stake in Ngorongoro should, as far as possible, be reconciled and developed (Fosbrooke, 1972:7).

These examples suggest that a productive partnership between local communities and the protected areas is possible. A compromise that ensures direct benefits to all stakeholders including the interests of the commons need to be derived in order to alleviate poverty and conflicts between the natural resource conservators and the commons. This is true, especially when the value of the commons' knowledge is recognised.

### **Globalisation and Poverty of the Commons**

Population growth and the resultant human activities have been viewed as generating pressures to the natural resource base and environments. This statement is demonstrated by, among others, the rapid decline in tropical forests, global warming, pollution, and increased pressure on protected areas (UN, 1993). In most cases, human population is viewed as being intruders to the environment in general and protected areas in particular. Although this view dominates, different regions and countries have dealt with protected areas in different ways. Evidence gathered elsewhere suggest that natural resource conservation can prosper if conservation measures are supported by all stakeholders which include the

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<sup>2</sup> Traditionally, the Sandawe people are hunters and beekeepers; hence, they needed the forests for their own survival.

<sup>3</sup> Individuals and local communities established their own protected areas that were managed through local rules and regulations



commons, the private sector, and a full range of government and non-governmental agencies (McNeely and Ness, 1996; Kauzeni and Madulu, 2000). This argument demonstrates that natural resource conservation requires the co-operation of a wide range of institutions and individuals.

Through provision of special permits and hunting blocks, the commons right of access natural resources has in most cases being undermined. Evidence from Mkomazi Game Reserve in Tanzania demonstrates serious conflicts often in relation to resource use between permit holders and the commons (Mollel, 2000). In very uncommon cases, the commons stand firms to defend their rights as demonstrated by the Masai communities to regain their ancestral right:

The residents of Sambu, Oloosoito-Maaloni and Arash villages near Loliondo, are contemplating a number of actions to be taken against both the government and an Arab company in connection with the plunder of the resources. At the centre of the dispute is Ortello Business Company Limited, a game-hunting firm based in the United Arab Emirates. It is being accused of wanton destruction of the environment and wild animals. .... For those communities, the land invaded by the Arab Company and the animals being hunted for commercial interests to serve international markets are their vital means of survival“ (Mollel, 2000).

### **Community Participation in Biodiversity Conservation**

Despite the fact that for a long time many local communities has contributed to the conservation and protection of biological resources, only recently their importance in natural resource protection and the need for sharing benefits are been recognized (McNeely and Ness, 1996; Tanzania, 1998a). Analysis of the people's perceptions of the socio-economic pressure on coastal forest resource use and management in Tanzania show no direct responsibility on the part of the communities for the maintenance and protection of the coastal forests. This is because the commons believe that these resources don't belong to them and they are denied access. This denial perpetuates negative perceptions that many protected areas are actually a liability to them rather than an asset. Though it is generally perceived that the commons destroy the environment, in reality more destruction is made by the businessmen and multinationals, in the name of feeding the global market and demands (Mollel, 2000, Madulu, 1999).

Discussing the importance of the commons in biodiversity and environmental conservation, McNeely and Ness (1996) argued for the need to respect, preserve, and maintain knowledge, innovations, and practices of indigenous and local communities embodying traditional lifestyles. Efforts to put this approach into practice are getting momentum in Tanzania, though still at a very limited level. The Hifadhi Ardhi Dodoma project (HADO), a land conservation project for in Central Tanzania, has introduced the concept of partnership management in order to ensure that natural resources are productively utilized and sustainably managed (Nkwilima, 1999). Moreover, the National Forest Policy emphasize that local community and other stakeholder participation in forest and wildlife conservation should be promoted through joint management agreements between all stakeholders (Tanzania, 1998a). Similarly, the National Wildlife Policy (NWP) has put emphasis on the involvement of local communities in the implementation of laws and regulations of the Wildlife Division (Tanzania, 1998b). This approach can flourish if local communities are considered to be protection partners as well as beneficiaries of the revenue accrued from the protected areas (Cruz, 1996; Kauzeni and Madulu, 2000). In a way, this is largely a community-based approach to conservation.

### **Population and Natural Resource Conservation**

Human population and its ecological impact is a major subject in wildlife and forest conservation. The underlying assumption here is that increases in human population increases the competition between man and wildlife for the limited resources (Kurji, 1977). Expansions of the ecological threshold of the human population often occur at the expense of the range for the wildlife, hence, decreasing the survival chances

of the wildlife (Kurji, 1977, 1981, 1985; Meerteens *et al*, 1995). Rapid population growth around conservation areas of Tanzania has become a common problem of great local and national significance. Examining the demographic settings around major conservation areas of Tanzania, Kurji (1976) proposed that human settlements should be given priority in any wildlife ecological study in order to enable the understanding of the dynamics of the spatial development of settlements. He argued that the impact of man and his activities on the environment has translated itself into a new emphasis on planning with ecological integration. The influence of man on the wildlife populations is in most cases through the use of fire; his keeping of livestock; through pollution, poaching and settlement (Kurji, 1976).

Recent studies in Tabora Region illustrate that almost all Forest Reserves in the region are encroached (Shishira and Yanda, 1998). The encroachment is in the form of new settlements and clearing of forests both for lumbering and agricultural purposes. These features signal the impact of human population and activities on the future conservation activities, especially under the globalisation pressures. Trends around the Serengeti-Maswa area demonstrate an increasing potential for conflict between the expanding human population on the one hand, and wildlife population and environment on the other (Kurji, 1977; Meertens, *et al.*, 1995). These threats to land resources necessitate an integrated land use management strategy, which takes on board the interests of the commons.

## **Conclusion**

This paper has discussed impacts of conflicts emanating from competing natural resource use and poverty eradication strategies around protected and mining areas in Tanzania. It has also illustrated the linkages between globalisation on the one hand, and poverty alleviation strategies, environmental protection and the welfare of the commons on the other. The cases of mining and natural resource conservation in protected areas that have been cited in the paper, have demonstrated the influence of globalisation on the changing welfare of the commons.

It has been argued that various activities that are taking place in the name of globalisation actually deplete the economic base of the commons and stimulate resource use conflicts and competition. Such conflicts often occur at the expense of the commons. They are triggered further by changing demographic conditions, hence, leaving the commons poorer and poorer in most cases. Expansion of mining in farmlands, for example, increases the risks of environmental destruction, especially in areas that are already vulnerable. In many protected and mining areas, local communities' efforts to minimize poverty levels are frustrated by globalisation influences and state's interests which favour large-scale operators, mostly foreigners. There is an increasing fear of losing their land without equitable compensation. As a result, small-scale farmers among the commons are forced into unsustainable decisions of either selling mining plots to small-scale miners or do the mining themselves. These effects are reflected in the forms of increasing environmental destruction, deforestation, and lack of economic re-investment in both the social infrastructure and the environment as illustrated by the mining activities in Mabuki village. The long-term implications include accelerated food insecurity, generation of a landless class, increased poverty, and rapid environmental degradation.

The arguments given call for an integrated approach that reconciles the interests of all stakeholders, including the commons. Experiences from the game controlled areas around Serengeti National Park demonstrate that local communities can effectively participate in protecting wildlife and forestry when they are given recognition and ensured of benefit sharing. In so doing the ecological and socio-economic impacts of globalisation could be reduced. Examples given in this paper support the concept of "*community conservation*" and "*partnership forest management*" in natural resource management. The main issue here is how best to harmonize the conflicting interests of the state and the commons on the one hand, and the state and globalisation pressures on the other.

The paper concludes that there is a serious necessity of involving the commons in decision-making processes especially on issues that directly affects their welfare. Such involvement could trigger the process of strategy development to safeguard the interests of all stakeholders including the commons. In all respects, the commons' interests need to be put in the. Local communities need to be considered as equal partners who have a stake in the planning, management and benefit sharing.

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