

## **Livelihoods and Poverty Reduction Initiatives: Lessons from Semi-arid and Arid Areas of Tanzania**

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### **Abstract**

In Tanzania semi-arid and arid areas include Dodoma, Singida and Shinyanga Regions, much of Mbulu District and the lower areas of Arusha Region, Moshi District, north of Same District and north-east of Iringa Region. The main characteristics of these areas include land degradation, unreliable rainfall, water shortages, famine, overgrazing, dry land cultivation, competition for limited resources biomass between farmers, cattle keepers and wildlife, and vulnerability. These areas contain some of the most important wildlife resources, and therefore tourism activities occur in these areas, as do many important mineral deposits and mines.

This study examines the issues of rural livelihoods, the environment, and poverty reduction through case studies. The main question is how can poverty reduction policies be tailored towards supporting the livelihood aims and objectives of rural communities in Tanzanian dry lands? Local communities in semi-arid areas are able to generate revenue from the use of natural resources. This has been possible due to having access to resources, tenure and ownership of natural resources, participation and good village governance and establishment of legal mechanisms (especially in Ololosokwan). However, although village aggregate incomes have increased, little is known about the distributional effects of these benefits to the household level. Also, the current Poverty Reduction Strategy (PRS) pays little attention to wildlife as a source of improved livelihood and poverty reduction.

### **Introduction**

Information detailing sustainable livelihoods issues in semi arid or arid areas of Tanzania is scarce. However, the few studies that have been conducted in these areas indicate the complex interaction between shortage of rainfall, prolonged drought, and torrential rains, as well as local initiatives to cope with such changes. These conditions put more pressure on the people living in these areas, and have stimulated the emergence of strategies to cope with such changes in the natural environment.

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Semi-arid and arid lands are defined as areas within the rainfall range of 300-600mm and 0-300mm per year respectively (FAO, 1987). Because of the short growing periods (75-119 and 1-74 growing days respectively), these areas are not suitable for agriculture. Rainfall is unpredictable and subject to great fluctuations. Severe draught is common and can cause major problems such as famine, displacement of people to relatively fertile areas, diseases due to inadequate food supply and intake, and economic costs to the government to import food from outside.

In Tanzania, areas receiving less than 800mm of rainfall per annum would fall under semi-arid areas. This would mean the whole of Dodoma, Singida and Shinyanga Regions, much of Mbulu District and the lower areas of Arusha Region, Moshi District, north of Same District to the north and north-east of Iringa Region. It is estimated that these areas take about 45-75% of the whole land area in Tanzania.

These areas present specific features such as land degradation, unreliable rainfall, repeated water shortages, periodic famine and high pressure of overgrazing, dry land cultivation in marginal areas, and heavy competition for the limited biomass between farmers, cattle keepers and wildlife. The areas contain a large proportion of Tanzania's rural population, and some of its most important natural resources. Most of wildlife resources, and therefore tourism activities, occur in drylands, as do many of the important mineral deposits and mines such as diamond in Shinyanga, tanzanite in Arusha, gold in south Mwanza, and gemstones in northeast Tanga region.

The main land uses in these areas that support people's livelihoods are livestock husbandry and wildlife management. Most of these areas are unsuitable for agriculture, although limited drylands cropping is carried out in marginal areas using limited rainfall or irrigation where possible. Most residents in these areas are agro pastoralists, rearing cattle and doing agriculture as a diversifying source of food and income. This balance between livestock and agriculture is variable from place to place and among different ethnic groups. In addition, people in these areas rely on a wide range of other natural resources to support their livelihoods. For example, fuelwood provides nearly all the household energy requirements in these areas, and forests and woodlands provide an array of other food and medicinal products (URT, 1998a; Mariki et al., 2003), also, wildlife provides bush meat (legally or otherwise) (TRAFFIC, 2000) or revenue from tourism activities.

The main characteristics of the natural environment in which these people live is its *unpredictability*. Consequently, *diversification* and *flexibility* are central elements of the livelihood strategies employed by people in these

areas. Semi-arid areas not only receive limited rainfall, but the rainfall that does occur is highly unpredictable, both in spatial and temporal terms. Thus residents in these areas have adapted livelihood strategies that enable them to survive in the face of both unpredictability and limitations imposed by arid conditions.

Diversification is an adaptive strategy when, for example, diversifying livestock holdings among cattle, goats, and sheep; and between livestock and limited agricultural cultivation and other economic activities. Flexibility is equally important, and this includes the issue of *mobility* – i.e., being able to adapt to the annually variable conditions produced by the landscape to move livestock to areas of optimal forage. Mobility should not imply nomadism. The perception that pastoralists of Tanzanian drylands are nomads is largely mythical, and is perpetuated by misunderstandings of pastoralist land use practices. Pastoralists in these areas have regular home ranges and grazing territories that are used according to seasonal movements, properly referred to as *transhumance*. Thus in carrying out an assessment of livelihood strategies and poverty alleviation in Tanzania's semi-arid and arid areas, it is crucial to examine the degree to which *diversification* and *flexibility* are being supported by policy decisions and macroeconomic developments.

Most of the success stories from community based conservation initiatives in semi-arid and arid areas provide lessons for improving the livelihood of the local people in the respective areas. Some of the documented changes include: favourable changes in environmental conditions, increased socio-economic benefits, improved governance, and positive contributions to changes in behaviour and well-being at the community level (Janis et al., 2002). An assessment of Community Based Natural Resources Management (CBNRM) best practices in Tanzania conducted by Janis et al (2002)—also covering semi-arid areas—notes the following conditions for success: the need to start small; the use of participatory methods to identify root causes for environmental degradation and poverty; understanding of linkages between poverty, environment and livelihoods; trust between partners; and the involvement of all stakeholders. Other factors include community willingness to invest in management measures; community ownership of the resources; and equitable benefit sharing. Financial transparency, local empowerment and devolution of authority for resource management and democratic institutions (Janis et al., 2002) also contributed to the successes.

This paper examines the issues of rural livelihoods, the environment, and natural resource management through an analysis of local case studies selected from semi-arid areas in Tanzania. From these case studies the

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following questions about rural livelihoods and poverty reduction in Tanzania's semi-arid and arid lands are raised:

- (i) What are some of the key dynamics in rural economies in these areas?
- (ii) How are macroeconomic developments affecting local livelihoods in these lands?
- (iii) How can poverty reduction policies be tailored towards supporting the livelihood needs of rural communities in Tanzanian drylands?

The answers to these questions are central to poverty reduction initiatives in Tanzania given the extent of unpredictable conditions in the semi-arid areas as a whole, and the national economic importance of activities such as wildlife tourism and livestock husbandry in these drylands.

### **Conceptual Framework**

This paper is guided by a simple conceptual framework that explains the linkage between environment, poverty and livelihoods. The main argument in this framework is that addressing environmental issues that matter to the poor is a precondition to sustained poverty reduction and improved livelihoods. Most of the rural poor depend on the environment for their livelihoods, thus for this to happen, poverty reduction policies and strategies must above all be pro-poor and integrated so that the approaches taken allows the poor to have the power to utilize the resources that they have in addressing poverty, increasing their wealth, and enhancing conservation. The poverty reduction policies and strategies and the ensuing approaches should look at the institutional aspects within which communities organize their life and activities, namely the issue of good governance or power. These policies and strategies must also look at the level of economic growth (i.e., wealth and how it is generated), who benefits, and who loses; and also look at the resource base, namely nature and how this can contribute to poverty reduction.

The nature, wealth and power nexus is a powerful approach in addressing poverty issue, and experience shows that programmes that integrate nature (environmental management), wealth (economic concerns) and power (good governance) have promising results.<sup>1</sup> The case studies examined in this paper illustrate some of the key points and linkages that

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<sup>1</sup>The Nature, Wealth, and Power nexus was first developed by USAID in collaboration with Center for International Forestry Research (CIFOR), Winrock International, World Resource Institute and International (WRI) Resource Group (IRG) in 2002 and is now being used in poverty reduction process in Uganda. For further details see USAID et al (2002) *Nature, Wealth, and Power: Emerging Best Practice for Revitalizing Rural Africa*. USAID, Washington DC.

demonstrate the importance of addressing poverty reduction through the nature-wealth-power linkages. Through community participation and initiatives in environmental management by way of wildlife and forestry resources, communities in the case study areas have evolved elaborate management systems that have enhanced their power over resources and improved governance and accountability. Also, communities are deriving benefits in monetary and access to resources and improved environmental conditions. Although these are initial results, the changes that are happening further demonstrate the challenges that poverty reduction policies and strategies may face. One of the challenges is how to extend benefits to individuals well beyond what the communities are getting through community social investments. The other challenges are how to sustain and nurture the positive changes now taking place amidst increasing pressure on the natural resources.

### **Case Study Experiences**

The case studies in this paper—namely Ololosokwan, MBOMIPA and Duru-Haitemba—have been selected because they provide insights on the linkages between livelihoods and natural resources and poverty reduction efforts from semi-arid areas. These areas are rich in resources such as wildlife, livestock, land, minerals and mines, and forestry that provides for the subsistence of the local people. Although these areas are rich in natural resources, poverty is rampant and growing. While poverty data for specific areas, including arid and semi-arid areas is not available, the Household Budget Survey of 2000/01 indicates that overall poverty has increased in rural areas. Both income and non-income poverty indicators show an increase in rural areas than in most urban areas. Most of the semi-arid areas are rural.

#### ***1. Ololosokwan Village: Land, Tourism, and Wildlife***

Tanzania has the greatest abundance and diversity of large terrestrial mammals than any country in the world, thus making wildlife the most important natural resources. Wildlife is the basis for the tourism industry, which has grown rapidly over the past decade to an annual worth of \$725 million at the national level; and accounting for 12% of GDP (World Bank/MIGA, 2002). This section examines the experiences with tourism and wildlife of Ololosokwan village in Loliondo Division, Ngorongoro District, a semi-arid area in the northern part of the country.

Ololosokwan village is located in the north-western corner of Loliondo Division, Ngorongoro District, bordering the Serengeti National Park to the west and the Kenyan border to the north. The village is the home to

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about 3,500 pastoralists, the majority of whom are Maasai of the Ilpurko section. The village's land comprises 46,000ha of *acacia* savannah and grasslands, with a rolling topography and a number of permanent watercourses draining into the Lake Victoria basin to the west.

The livelihood of the people in Ololosokwan depends primarily on livestock herding, following traditional transhumant pastoralist practices. Traditional pastoralist movements between dry and wet season grazing areas are, however, now curtailed by more changes such as the creation of the Kenyan border and the Serengeti National Park, which does not allow free access for grazing. In addition to livestock, over 90% of the households in Loliondo villages are directly or indirectly engaged in agricultural cultivation (O'Malley, 2000). Such cultivation is not the main form of economic activity but a strategy that pastoralists in this area use to diversify opportunities and take advantage of favourable rainfall conditions to enhance food production (O'Malley, 2000).

On a relative basis, the pastoralist communities of Loliondo are slightly better off than most of the others because the per capita livestock holdings in Loliondo are roughly three times those of pastoralists in the neighbouring Ngorongoro Conservation Area (Galvin & Thornton, 2001). However, Loliondo is also a remote area with limited infrastructure and social services, and limited access to markets (Homewood et al., 2001).

However, the livestock economy in Tanzania has generally declined over the past years due to factors such as land losses and declining state support to livestock keepers. All these factors are related to macroeconomic policy changes adopted in the late 1980s. A proposal was put forward by the government in Loliondo in the late 1980s to convert large tracts of pastoralist lands to agricultural plantations. This plan was averted following local protest and land use planning initiative, although other pastoralist areas such as Simanjiro were not as fortunate and experienced extensive encroachment on pastoralist rangeland from land cultivators (Shivji, 1998).

Alienating land from the local people either through state alienation for investments or through village allocations to outsiders has often undermined the viability of pastoralist production systems. The adoption of structural adjustment policies in the late 1980s rapidly cut government subsidies for livestock and agriculture in rural areas (Bagachwa et al., 1995). Livestock drugs previously provided at reduced prices and through government extension services increased in price and became less available, resulting in the resurgence of diseases such as the East Coast Fever among livestock populations in northern Tanzania (ESRF, 2003).

An important part of the Ololosokwan village is the wildlife populations of the Serengeti-Mara ecosystem. Ololosokwan has abundant resident wildlife species such as giraffe, impala, buffalo, and other large mammals, as well as predators such as lion, hyena, and cheetah (Maddox, 2001). In addition, during the beginning of the wet season hundreds of thousands of wildebeest and zebra pass through the village's lands on their way to the Serengeti plains. Ololosokwan and neighbouring communities thus provide important habitats for this important wildlife resource.

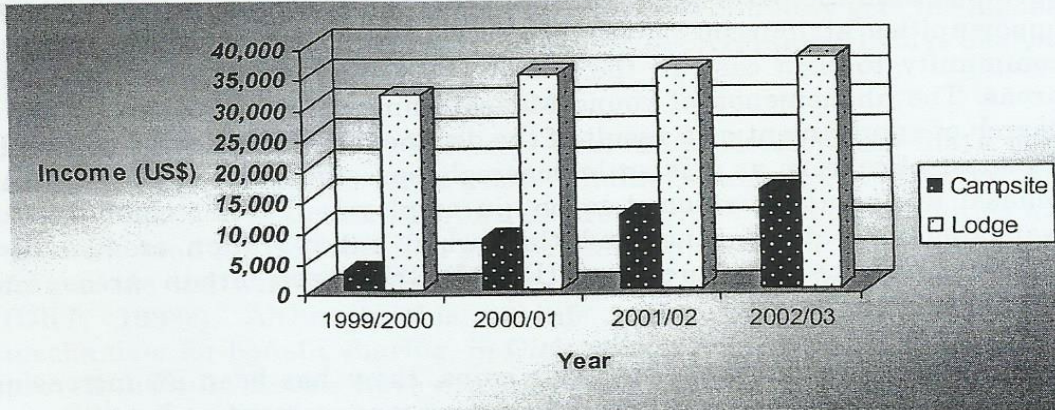
The history of wildlife management and conservation in the Serengeti area plays an important role in the livelihood strategies of the villagers in Ololosokwan. Members of the Ololosokwan community once lived inside what is now Serengeti National Park, and concerns exist locally in terms of past, present, and potentially future exclusion from wildlife conservation areas. These concerns have been informed not only by history but also by more recent boundary conflicts with Serengeti National Park, and the continued use of the Loliondo area as a centrally managed tourist hunting concession. These land tenure concerns relating to wildlife combine with the threat of widespread alienation of pastoralist lands during the 1980s for agricultural development to create considerable land tenure insecurity among the pastoralist communities in Loliondo.

Within the context of these tensions over land use and tenure in Ololosokwan and surrounding communities during the 1980s and 1990s, a number of positive developments relating to wildlife management also occurred at the local level. As tourism took off throughout northern Tanzania during the 1990s, it spread out of National Parks and onto village lands. A number of early ventures between private companies and village governments that had obtained title deeds to community lands were developed in the early 1990s, including in some of the Loliondo villages (Dorobo Tours and Oliver's Camps Ltd., 1996).

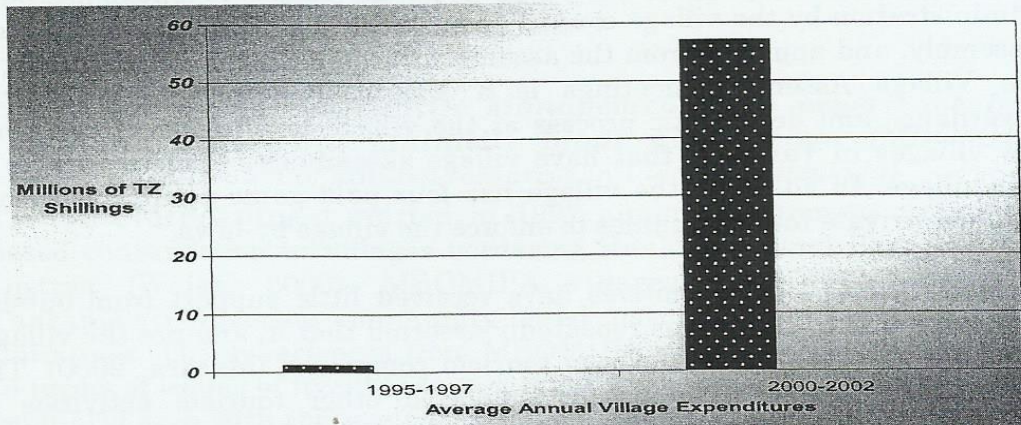
In 1998 and 1999 Ololosokwan developed two major tourism ventures on village lands managed in collaboration with private companies. One of these provided a concession to a luxury company for a small lodge, and the other provided for use of a campsite with no permanent developments. Income from these developments has increased gradually since 1999 and now earns the village about US\$55,000 annually (Figure 1).

Tourism accounts for over 90% of the village's available revenue, and has enabled investment by the community in social services and other developments to increase from around Tsh 2.5m annually in 1995-1997 to approximately Tsh 57m annually in 2000-2002 (Figure 2).

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**Figure 1:** *Income from tourism to Ololosokwan village. Source: Nelson and Ole Makko, 2003*



**Figure 2:** *Increase in Ololosokwan village expenditures from 1995-1997 to 2000-2002 as a result of growth in tourism revenues. Source: Nelson and Ole Makko, 2003.*

The growth in village revenue from wildlife-based tourism resulted to important changes in local livelihoods. It enabled improvement in the village's social infrastructure such as educational, health, and water facilities. Also, individuals have benefited by having school fees for secondary and universities paid for, and for health expenses. Employment earnings among individuals from Ololosokwan's campsite total about \$3,000 annually at present, and this does not include the more significant



earnings from the permanent lodge. Seasonal and permanent employment opportunities at tourism developments have enabled young men in the community to earn cash in the village instead of rushing out to urban areas. The phenomenon of young Maasai immigrating to urban areas in search of employment as a result of the decline of the livestock economy is a matter of concern as it is an increasingly spreading trend. Those young Maasai are poorly positioned to obtain employment other than that of watchmen or hair plaiting, and this urban out-migration creates new dangers such as the spread of HIV-AIDS between urban areas and pastoralist communities.

Partly, as a result of these economic gains, there has been an increasing interest and involvement in natural resource management and governance by the Ololosokwan community. Village land use plan and by-laws were passed by the Ngorongoro District Council in 2000. This integrated wildlife-livestock-tourism as the major land use in the village, which has spin-off benefits for the conservation of the Serengeti ecosystem. The by-laws provide for the democratic management of village revenues through administration by the village council and quarterly reporting to the Village Assembly, and approval from the assembly for expenditures. Conducting of the Village Assembly meetings is a significant improvement in the governance and democratic process at the village level. Indeed, there are few villages in Tanzania that have village assemblies as structures as in this village. In addition, the village has four paid game scouts who work with the private tour companies to enforce the village by-laws.

However, these local initiatives have received little support from outside authorities. The district has repeatedly asserted that it, and not the village, should receive all payments from tourism companies (Masara, 2000). The government has not adequately supported other tourism activities in Ololosokwan as a result of the perceived conflict between these activities and the use of Loliondo as a tourist hunting concession (Masara, 2000; URT, 2000a). Some local communities are obviously not in favour of setting aside land for hunting when they do not see direct benefits, as opposed to the kind of arrangement that Ololosokwan has with the investors. Issues regarding hunting block allocation and options for maximising these resources have been extensively discussed (Nshala, 2002), and concerns such as villager's rights to land and tourist hunting and how the industry could be improved by taking an open and competitive approach such as the auctioning of the hunting blocks have dominated these discussions. The auctioning is working well in Namibia, and has increased revenue to communities because it has allowed competition among interested hunters such that the

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highest bidder gets the hunting quota while the community gets the highest pay. Auctioning has also reduced the element of corruption which is likely to be the case in a closed system.

In addition, six villages in Loliondo—including Ololosokwan—have been designated for inclusion in a 'pilot' Wildlife Management Area (WMA) (URT, 2002b). WMAs are described as areas where local communities will set aside land for conservation and wildlife management, and will be able to manage the wildlife and resources therein in order to derive benefits (URT, 1998c). Although this wildlife policy promotes WMAs as a mechanism for benefit sharing, in Ololosokwan WMA implementation has proven difficult. Locals have expressed concern over the degree to which the WMA Regulations give them secure rights to manage and benefit from wildlife on village lands. The regulations are complex and provide daunting procedural hurdles for local communities. Thus, at present, villages in Loliondo (including Ololosokwan) are not enthusiastic about the WMA idea; and some would prefer to continue with their existing tourism developments as managed under the village land use plan and by-laws (Ngoitiko, 2003).

### ***2. Community-Based Wildlife Management: The experience from Matumizi Bora ya Maliasili Idodi na Pawaga (MBOMIPA)*** *(Better utilization of natural resources in Idodi and Pawaga)*

The MBOMIPA project started in 1997 aiming to promote community-based conservation in villages bordering Ruaha National Park in Iringa District (Walsh, 2000). MBOMIPA villages are considered one of Tanzania's pioneering community-based natural resource management initiatives. The experiences from MBOMIPA provide a useful comparison in terms of issues of livelihoods, community and wildlife management in a semi-arid area with those of Ololosokwan.

MBOMIPA covers 19 villages with an area of approximately 4,000km<sup>2</sup> containing 40,000 people in the Lunda-Mkwambi Game Controlled Area. This area is in a semi-arid zone with about 500mm of annual rainfall (Walsh, 2000). The villagers here are a diverse mix of small-scale farmers and migrant pastoralists. The scale of management for MBOMIPA is much larger, working with a large number of villages to collaborate in the management of natural resources across a relatively large and diverse area.

The aim of MBOMIPA has been to enable these communities to develop wildlife as a profitable livelihood asset, and competitive form of land use in order to create conservation incentives and a buffer zone to the Ruaha

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engagement in natural resource management (Walsh, 2000). Benefits accrued from community wildlife management are at the moment channelled to the improvement of social services. This is deliberate so as to ensure that benefits are extended to as many members of the community as possible, while giving more time to the community-based venture to evolve into a viable economic entity that would extend more benefits to individuals. At least over 40,000 people in 16 villages stand to gain from this development. However, MBOMIPA or the district lacks a proper plan on how this transition can take place. There are fewer cases of individual benefits in the form of employment as village game scouts.

Overall, the village level income from wildlife-based land uses in the MBOMIPA villages is about Tsh 1-1.5m annually, or about 2% of the annual income earned by Ololosokwan village. Relatively, this is a small proportion given the resources that are available. Villages in southern Tanzania attempting to earn income from wildlife have not had equivalent opportunities from tourism as have villages in northern Tanzania due to the much lower volumes of tourism and limited infrastructure. The critical challenge, therefore, has been how to promote tourist hunting, which is the most valuable consumptive form of wildlife use to local communities.

Although MBOMIPA has made great progress in creating benefits from wildlife through resident hunting, the highest value wildlife uses have remained unavailable. Elsewhere, in the Selous Conservation Programme, resident hunting auctions have not been possible and, community benefits have been limited to the meat sales; and the livelihood gains have been minimal (Ashley et al., 2002). It is expected that the implementation of WMAs will address these challenges by enabling the communities to manage and benefit from tourist hunting, but it is too early to say to what degree the legal framework provided by the WMA regulations will empower community-based management and improve livelihoods since the process is now slowly unfolding.

### ***3. Community-based Forestry: The Case of Duru-Haitemba, Babati District***

Forest and woodlands are important livelihood resources for people living in dry land areas, as they provide an array of critical energy supplies, food, and medicinal products, in addition to their values as water catchments.

A number of important pilot initiatives in community-based forest management (CBFM) have been developed in semi-arid areas possessing a variety of forest and woodland types. One of these initiatives is the Duru-Haitemba, in Babati District, Manyara Region.

The Duru-Haitemba forest comprises parts of the lands from seven different villages covering 9,000ha, one of the largest tracts of woodland in the area. In the 1980s this forest was targeted for gazettement as a centrally managed forest reserve, which would have prevented the use of its resources to the local communities living there. This had the perverse but not unusual effect of spurring local destruction of the forest, as surrounding communities moved to replace forest with farmland before it could be gazetted and alienated from their use, and liquidate valuable forest products such as timber before strict central management was imposed on them (IRG, 2000).

By the 1990s, government authorities and local natural resource management advisors<sup>2</sup> changed tactics in what proved to be an important shift for forest management and policy not only in Babati District but throughout Tanzania. Rather than proceeding with the gazettement, the authorities approached the local communities to see if they would be able to play a role in managing and protecting the forest. This approach was taken to avert the impending destruction of the forest due to the planned gazettement of the forest.

The situation began to improve when stakeholders agreed to develop a local framework for management and stewardship of the forest. Villagers prepared village by-laws and a basic management plan for the forest. Village boundaries were surveyed and each village assigned clear jurisdictional responsibility and tenure/ownership of the forest on its village lands. The by-laws empowered the village government to police resource uses in the forest and issue licenses for approved, limited uses. Thus the management of the Duru-Haitemba forest rapidly shifted from a planned National Forest Reserve to seven separate but contiguous Village Forest Reserves.

Two critical outcomes arose from this experience, which at the time, in the mid-1990s, were novel and relatively experimental in Tanzania. First, an improvement in the forest condition and a reduction in the level of uncontrolled exploitation occurred in Duru-Haitemba. Miombo woodlands such as Duru-Haitemba are naturally resilient and can recover from exploitation relatively rapidly. The implications for local livelihoods were that the villages had gained legal control, over the forest and had secured access to its resources. Since the management arrangement gave the village government overriding powers, and since when this evolved village governments were at the centre of development initiatives, promotion of

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<sup>2</sup> Principally the Land Management Programme based in Babati District and funded by SIDA.

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benefits to individuals was minimal. The by-laws initially faced uneven enforcement but in a number of instances courts of law upheld them. Empowered to manage their forest, the communities also experienced a general enhancement of local level governance, with the Duru-Haitemba process creating “a positive effect on the overall level of community involvement in village management” (IRG, 2000). Residents of Duru-Haitemba have not accrued monetary benefits; however, they are assured of access to the forest and non-timber forest products, as well as an improved environment.

The second crucial outcome from the Duru-Haitemba experiment was that similar initiatives rapidly were undertaken in other forests and woodlands around the country. By 2000 there were reportedly over 600 village forest reserves in various stages of development in Tanzania. Other important pilot projects such as the Migori Forest in Singida District and the Suledo Forest in Kiteto District have taken a similar approach as in Duru-Haitemba, promoting local management and control of forests; and facilitating local development of by-laws and forest management plans.

These developments have in turn had a major impact on the formulation and philosophy of the national forest policy that was released in 1998, and the Forest Act of 2002. The forest policy highlights the need for secure local resource tenure to create incentives for stewardship and support rural livelihoods:

The ownership of land and natural resources, access and the right to use them are of fundamental importance, not only for more balanced and equitable development, but also to the level of care accorded to the environment. It is only when people can satisfy their needs, have control of the resource base as well as have secure land tenure that long-term objectives of environment protection can be satisfied (URT, 1998b).

The aim of the Forest Act is “...to delegate responsibility for management of forest resources to the lowest possible level of local management consistent with the furtherance of national policies” (URT, 2002a). This linking of national law and policy institutions with local experiences and interests has been one of the most important results of the experiment in Duru-Haitemba.

#### **Analysis and Synthesis of Case Studies**

This section examines some of the critical common elements of the case studies in terms of designing poverty reduction policies and strategies that will support the livelihoods of people living in the dry land areas.

### ***1. Local Tenure, Access, and Capacity***

As noted above, livelihood *diversification* and *flexibility* are essential strategies that people living in semi-arid and arid areas traditionally and historically employ to survive in what are fundamentally unpredictable and variable environments. The case studies have shown the value that diversification in these areas can have to local communities for example, new income opportunities from wildlife and tourism in Ololosokwan and in MBOMIPA. The Duru-Haitemba experience highlights the potential to reverse resource degradation and local marginalization by involving and empowering rural resource users with respect to forest management and ownership.

A fundamental issue in all of the experiences reviewed here is the ability of local people to control the lands and resources on which their livelihoods depend. Duru-Haitemba catalyzed not only local improvements but also community-based forest management strategies nationwide primarily because it took ownership of the forest at the village level as its fundamental starting point and aim (Wily et al., 2000). Ololosokwan has become one of the country's leading examples of community-based ecotourism that can generate revenue at a scale bigger than expected because the management of tourism has been fully controlled by the villagers. The securing of a title deed by the village for its lands in the early 1990s provided the basis for it to develop these profitable joint ventures and turn wildlife into a valued community asset, as well as to carry out improvements in natural resource management practices through land use planning and formulation of by-law.

Thus a central lesson is that if rural livelihoods in semi-arid areas are to be strengthened and supported, *land and resource tenure issues* must be placed at the centre of poverty reduction priority issues. Without secure land tenure, and transparent management practices involving all villagers and village assemblies, both diversification and flexibility are undermined. Secure land tenure provides the foundation for further improvements in local capacity and stewardship, such as land use plans and village by-laws. Another lesson is that secure land tenure does not always have to be based on private hands as is often perceived. It can also be at the village level as in Ololosokwan, MBOMIPA, or Duru-Haitemba and still work for the betterment of the people and the environment.

Also, the case studies show weaknesses in the ability of local people to manage natural resources and consequent problems that this weakness creates. In Ololosokwan the village has no formal control over the use of wildlife itself, and conflicts over wildlife uses persist. Complex regulations

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propagated at higher levels of government seeking to regulate development of tourism on village lands only promote insecurity and discourage investment by both communities and the private sector in both enterprise development, as well as resource stewardship. Similarly, in MBOMIPA the communities' earnings have been greatly suppressed by their inability to manage tourist-hunting activities.

Timber sales in Duru-Haitemba, for example, have not been developed as a management option for the community to earn income and generate employment as the villages have not been allowed to conduct such harvesting (Alcorn & Mujuni, 2002). Despite their ostensible ownership of the forest on village lands, the community remain subject to manifold restrictions imposed from central levels, which may not necessarily benefit local attempts at resource management.

Tenure issues over land, wildlife, forests and other resources as a whole, are fundamentally institutional issues related to governance. Policies that advocate the devolution to local communities are not translated into the institutional reforms that would put these objectives into action. Also, sectoral coordination appears limited, as for example, in the forestry sector, on the one hand, and the wildlife sector, on the other, despite being in a single ministry. These institutional issues are fundamental to the ability of the local people living in dryland areas to improve their livelihoods and invest in natural resource management.

### ***2. Macro-Micro Linkages***

The linkage between macroeconomic developments and microeconomic opportunities at the local level is now recognized as a critical issue in terms of rural poverty reduction in Tanzania (URT, 2002c). These macro-micro linkages are prominent issues in all the case studies, and the interaction is dualistic in that the local influences the national in important ways, while national economic policies have profound impacts on local livelihoods.

For example, an important issue in dryland livelihoods has been the removal of subsidies for livestock production that were previously provided in the 1970s. The loss of these outside subsidies has had a negative effect on rural livestock production. Similarly, the economic liberalization policies that have stimulated expansion of farming into areas that otherwise were used for grazing has undermined livestock economy. Cultivation of beans, grains and flowers has reduced land available to livestock keepers, thus affecting communities that depend largely on livestock for their livelihoods in Arusha region.

At the same time, as Ololosokwan's experience shows, the liberalized economic climate of the 1990s can create new market opportunities for rural drylands communities if basic conditions are met. First, high potential for tourism or other investments must exist in that area. Second, local communities must be able to directly access, manage, and exercise control over resources available on their lands that they provide for investment. Ololosokwan's earnings have grown to become a significant contribution to the village economy precisely because the community has been able to act in this way over the investments occurring on its land.

Another critical macro-micro linkage that Ololosokwan, MBOMIPA, and Duru-Haitemba illustrate is the dependence on valuable resources on local management and stewardship. Conservation initiatives in Ololosokwan support management efforts in the Serengeti ecosystem, which in turn helps to attract many tourists and more revenue to the country. Similarly, MBOMIPA communities are protecting key border areas adjacent to Ruaha National Park, which is becoming the central destination on the southern safari circuit, and Duru-Haitemba's resident villages are protecting important forest resources.

National macroeconomic growth depends on sound management of these national resources on communal lands to ensure sustainable resource conservation at the ecosystem level. For communities to have the maximum incentive to conserve these nationally valued resources, it is essential that they derive economic value and benefits from those resources. National policies such as those for forestry and wildlife recognize this fundamental issue, but as the case studies show, the rhetoric of policies is not easily translated into sound mechanisms for implementing their aims. Policies promote devolution to local communities but practices point to the opposite direction.

Another critical macro-micro linkage issue is the question of equity and access to resources. Current policy changes have not provided sufficient equity mechanisms and opportunities to local communities to benefit from the natural resources found in their local areas. Policy interest and focus has tended to favour outside large-scale investors as opposed to local and small-scale investors. This is more prevalent in the tourist hunting business, logging, and mining industry as opposed to meeting the needs of the local communities. Without adequate tenure systems, equity policies, good governance, and adequate support to local people, meeting poverty reduction targets in Tanzania would be very difficult.



## **Conclusion and Recommendations**

### ***Conclusions***

This article has examined three case studies from Tanzania's semi-arid and arid areas in terms of some of the links between rural livelihoods and poverty reduction. In all areas the issues of land and resource rights, access, and ownership are paramount. In all cases the critical element of being able to access these opportunities, and take advantage of macroeconomic developments such as the tourism development is possessing secure land and resource rights at the local level. The village-based management and tenure system is central to the Duru-Haitemba's forestry initiative and now the National Forest Policy and Forest Act of 2002. Where resources are not locally managed and controlled—for example in the case of consumptive safari hunting enterprises—they have little positive impact on rural livelihoods and poverty reduction (AWF, 2001).

This study has also noted that while wildlife is an important resource in Tanzania, the PRS makes no mention of tourism or wildlife management for poverty reduction. In fact, the current PRS is focused primarily on the macroeconomic side of the macro-micro linkages, and does not focus on the rural land and resource management and tenure issues which determine whether or not local people are able to improve their livelihoods from resource-based macroeconomic growth.

Also, this paper has noted that both Ololosokwan and MBOMIPA communities have used their revenue to improve social services. While this is a benefit extended to villagers at a general level, benefits to individual households are limited and isolated. It is also not clear, on the basis of such changes, what forms of social relations have evolved out of this development, and how they shape the overall socio-economic dynamics of the areas concerned.

### ***Recommendations***

The paper makes the following recommendations:

- Land tenure issues needs to be placed at the centre stage in discussions of rural poverty reduction and livelihood improvement. Since the majority of Tanzanians depends on natural resources for their livelihoods, tenure is a very important issue in poverty reduction process. Current focus on growth for poverty reduction is inadequate if tenure, access, and equity issues are not fully addressed.

- Greater harmony among the different land and natural resource sectors needs to be promoted and *enforced*.
- Legislation that provides pro-poor livelihood options is needed, particularly in the wildlife sector. Better monitoring mechanisms are required in terms of linkages -- both positive and negative -- between livelihood impacts, land tenure security, and conflicts over natural resource use and management.
- Investments, which promote local partnership between communities and the private sector, need to be promoted under appropriate policies and legislation. This is central to achieving better macro-micro linkages that will effectively target rural poverty by opening up local market-based opportunities.
- Governance issues are crucial in the livelihood-poverty reduction processes. If significant progress is not made on governance issues then poverty reduction efforts are likely to be undermined.
- Similarly, there is need to build institutional capacity at district and village level to ensure that technical services and advice is provided when needed.

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