



TOWARDS SUSTAINABLE USE OF WILDLIFE MANAGEMENT AREAS (WMAS) IN TANZANIA: POSSIBILITIES AND PROBLEMS

Shemwetta, D.T.K. and Wilfred, P.

Faculty of Science, Technology and Environmental Studies,
The Open University of Tanzania,
P.O. Box 31608, Dar es Salaam, Tanzania

ABSTRACT

Sustainable use of Wildlife Management Areas (WMAs) has become equated with wise exploitation of wildlife resources therein and ownership devolution of WMAs to the local people by the Government. Demand for sustainability is often driven by the severity of over-exploitation of wildlife resources and perceived conflict between the wildlife and other enterprises, especially agriculture. The reason behind having WMAs is to find a solution regarding conservation of wildlife resources outside core protected areas by addressing issues of poverty and right to sustainable use and share benefits accrued from wildlife by local communities. Wildlife utilization, as the primary form of land use in WMAs and one of the main local sources of livelihood for local people in Tanzania, may be a more ecologically sustainable and economically viable option for use of WMAs. However, this is constrained by uncertainty in land tenure system, unequal benefit sharing, procedural difficulties in establishing a WMA, lack of ownership devolution and the conflict of interests. Integrated livelihood improvement and articulation of a clear development vision and strategy that is not restricted to wildlife utilization needs to be a priority in order to ensure sustainable utilization of WMAs.

INTRODUCTION

The importance of sustainable utilization of wildlife in tropical has been underlined

in the last few decades by several researchers (Caperneto and Fusari 2000). Sustainability is the ability to meet the needs of today without compromising the ability to meet the needs of tomorrow (Jones, 2003). It is simply the ability to maintain something undiminished over some time period (Callicott and Munford 1997). In the context of wildlife management, sustainability is a process that integrates the ecological, economic and social/cultural aspects (ED 1997).

Wildlife Management Area (WMA) is an area of communal land in which people have use rights over the wildlife and natural resources which they wish to manage in a responsible fashion as the primary form of land use and from which they are allowed to retain a significant portion of revenue (URT 2005). The size of each area will take into account its ecology, wildlife densities and other natural resources, the proposed form of land use for the area and the cohesiveness of the community. Each area has legal administrative boundaries and can include one or more villages. The area must be leased, entrusted and owned through customary or titled systems of land tenure by villagers who form an Authorized Association (AA). All forms of land use are governed by the land use plan made in consultation with rural communities within each area, these will be exclusive zones for the management of wildlife and other natural resources, as defined in a land use plan and the use of which can be regulated by the laws (Leader *et al.* 1996). The



concept of WMAs offers a solution regarding conservation of wildlife resources outside core protected areas by addressing many problems of wildlife conservation and management in Tanzania. Some of these problems include poverty, biodiversity conservation, human resources levels required to adequately manage wildlife resources, funding for wildlife conservation activities and, most importantly, the right to use and share benefits accrued from wildlife by local communities (Baldus 2001).

The WMAs started as one of the tools towards a new approach in managing wildlife resources and shift of proprietorship from the central government to local communities in early 1990s. According to MNRT (1998), the wildlife ownership will be decentralized to local governments, to the rural communities that are recognized as stakeholders in the new approach of natural resource management. The theory behind WMAs is that when wildlife has economic value for communities, wildlife conservation can compete with other forms of land use such as agriculture or grazing. WMAs encourage communities to manage wildlife so that they can continue to benefit from wildlife in the long term while reducing wildlife losses in Tanzania (Felix 2004). As WMAs become effectively functional, the role of Government alone in conservation of wildlife will be synergized (Severre 2000).

However, the biggest challenge for conservation has always been the trade-off between meeting present needs and the longer term conservation of resources (Luoga *et al.* 2004). Wildlife resources in rural areas are under pressure (Vries 2005), they are threatened by deforestation (Swai and Mbwambo 2004) and unsustainable hunting levels as the demand for bush meat presses local communities to harvest both large herbivores and small antelopes (Felix 2004). In the face of such

conservation drawbacks, a primary question of interest is the extent to which WMAs should be exploited in order to ensure their sustainability. This paper therefore seeks to provide theoretical background on WMAs by reviewing their constraints and opportunities in the context of utilisation so as to recommend practical and reliable ways of enhancing their use for the betterment of present and future generations.

The background on wildlife management areas (WMAs)

The wildlife sector in Tanzania underwent crisis in the 1970s and 1980s, as poaching increased dramatically for both commercial and subsistence uses of wildlife resources. The country lost about half of its elephants and nearly all of its black rhinos (WSRTF 1995). Since much of the wildlife was as well found outside the core protected areas (National Parks and Game Reserves) (URT 1999), it also became increasingly scarce. In response to this crisis, the Government of Tanzania through Tanzania National Parks (TANAPA) and the Wildlife Division (WD) began emphasizing collaboration with local communities as part of its protected areas management strategy. By 1995, the wildlife sector review task force had included the creation of village-based WMAs in order to lay the basis for sustainable management and utilization of wildlife resources at the community level (WSRTF 1995).

The Wildlife Policy of Tanzania (WPT) formulated in 1998 describes the development of WMAs that are managed by the local communities. WPT in its section 3.3.4 states that “*it is the aim of this policy to allow rural communities and private land holders to manage wildlife on their land for their own benefit*”. It further emphasizes in section 5.0 that “*the Government will facilitate the establishment of WMA, where local people*



will have full mandate of managing and benefiting from their conservation efforts, through community based conservation programmes” (MNRT 1998).

From 1998 to 2003, the process of creating WMAs as called for by the WPT stalled. The main reason for this was that the policy required legislation in order to provide for the legal formation of WMAs as a new type of protected area. The Wildlife Conservation Act of Tanzania (WCA) formulated in 1974 provides the basic legalization and legal framework for wildlife management. The law deals with the provision of protected areas as well as the regulation of wildlife use in Tanzania mainland. The law also has several subsidiary regulations which function as additional laws. The most recent is the Wildlife Conservation Regulations (WMA Regulations) that was released in 2002 (Hjert 2006). The legal basis for creating WMAs under the 1974 WCA lies in its provision (PART III Section 28:1&2), which allows the Director of wildlife to grant user rights to any legal entity such as a village council, company, private individual etc.). Such entities, when they have been given user rights to wildlife are referred to in the act as an “Authorized Association (AA)”. Although the WCA provides the basic legal framework for doing this, the Wildlife Division felt it necessary to draft clear procedural guidelines, backed up by new regulations, for how the WMA designation process would operate (Nelson *et al.* 2006).

The basic process for legally forming a WMA is defined by the regulations and guidelines. Communities must complete the following steps (URT 2002):

- The Village Council recommends to the Village Assembly what village land should be used to form a WMA. The Village Assembly may then decide to form a WMA.

- The villages in the WMA must form a representative Community-based Organization (CBO), which must have a constitution and be registered with the Ministry of Home Affairs.
- The CBO prepares a Strategic Plan for the proposed WMA.
- The villages form Land Use Plans including the proposed WMA.
 - This is to be done by Village Councils and Village Assemblies according to the provisions of the Village Land Act of 1999 and following the National Land Use Planning Guidelines. The District Council is to advise on preparation of these land use plans.
 - Villages may need to form joint land use plans as described in the Sixth Schedule.
 - Environmental Impact Assessments (EIA) are to be done on the proposed land use plans.
- The CBO composes a General Management Plan, or as an interim measure (for up to five years), a Resource Management Zone Plan. This zones the uses of different resources within the village lands and within the proposed WMA.
- Following the above steps, the CBO can apply to become an Authorized Association (AA), which means that the Director of Wildlife and the Minister formally gazette the WMA if they approve the application.
- After the WMA is gazetted, the following steps remain for the WMA to develop benefit flows from the wildlife there:
 - The AA applies to the Director for user rights to the wildlife



- The AA may apply to the Director to have a hunting block designated in the WMA
- The AA enters into investment agreements, which the Director of Wildlife must approve, with private sector actors for commercial activities in the WMA. All investment activities should be subject to Environmental Impact Assessments.

The sixteen pilot areas provided for in the WMA Regulations of 2002 include over 135 villages in 16 districts, and a cumulative area estimated at 16,000 km². As of August, 2006, four out of the sixteen pilot WMAs have been officially gazetted.

This gazette notice was published on March 31, 2006, and thereby legally created the following WMAs:

- Ipole WMA, Sikonge District
- Uyumbu WMA, Urambo District
- Burunge WMA, Babati District
- Ngarambe-Tapika WMA, Rufiji District

Figure 1 shows country's protected area network, with 16 pilot WMA sites shown. Yellow squares represent gazetted pilot WMAs; red circles represent pilot sites that have not been gazetted; black circles represent the two pilot WMA sites which are no longer monitored and inactive.

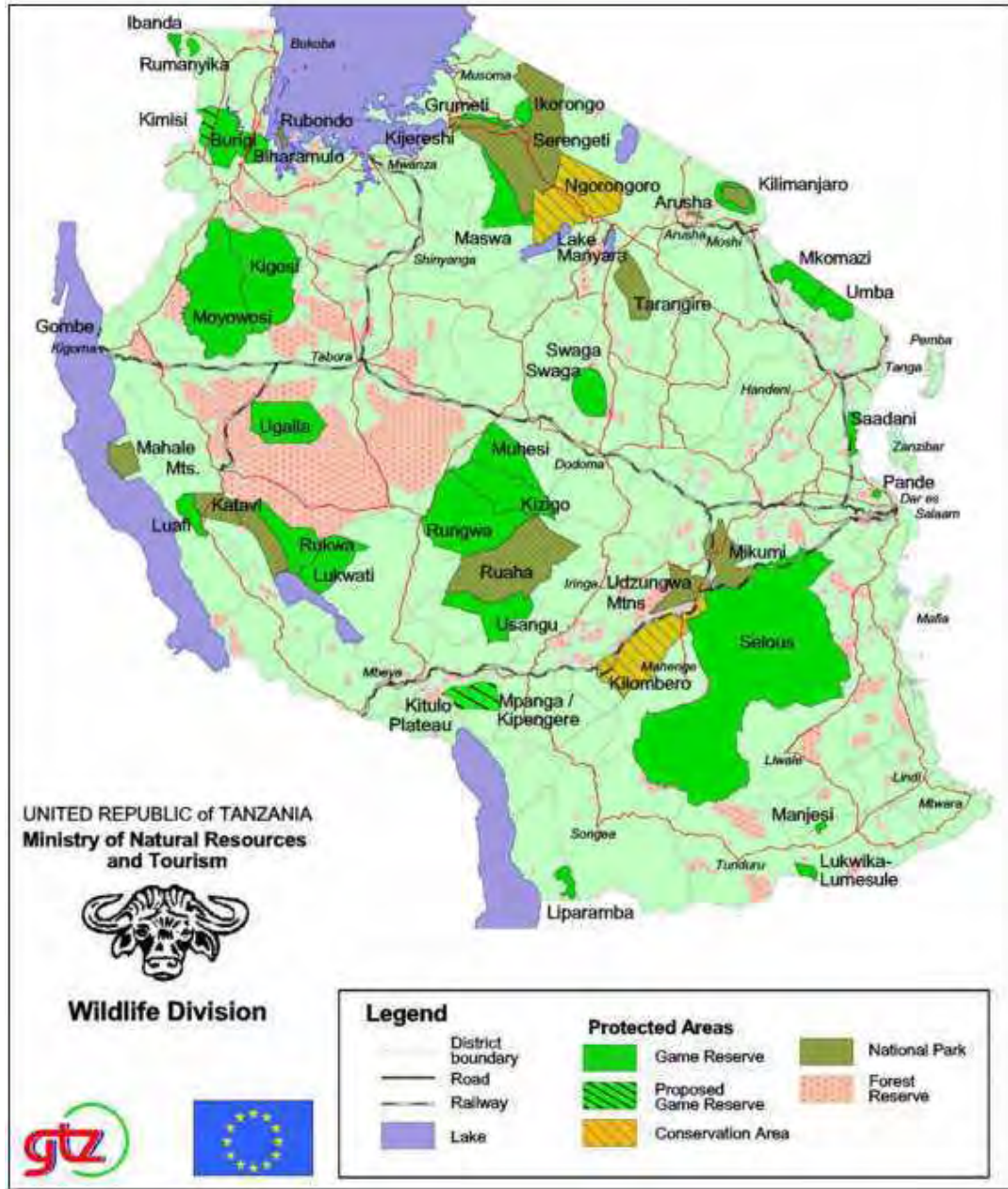


Figure 1: Map of Tanzania showing protected area network with the locations of the pilot WMAs shown (Source: Nelson *et al.* 2006).



Conservation and sustainable utilization of WMAs

Formerly, conservation of wildlife resources was perceived as the protection from any use. Today, on the contrary, it is perceived as a means to ensure future capacity for use. Conservation of wildlife resources is the management of human interactions with the variety of life forms and ecosystems so as to maximize the benefits they provide today and maintain the potential to meet future generations' needs and aspirations (WRI 1992). However, most people living in WMAs are very poor, and derive their livelihoods from a mixture of activities including gathering, wildlife, agriculture and employment (often outside the WMAs) Arntzen (2003), in extreme poverty sustainability goes out of the window (James *et al.* 2002). Most pragmatic conservationists agree that you can't have sustainable utilization alongside endemic poverty-that is politically and socially untenable. Conservation policies work best in practice alongside economic growth, where employment opportunities and income levels are increasing, dependence on wildlife resources is reduced and pressure preventing sustainable use removed (Arnold 2001).

For sustainable conservation of WMAs, villagers need to realize tangible benefits from wildlife resources around them. Wildlife utilization is the primary form of land use in WMAs and is therefore

assumed to be the main local source of livelihood for local people (Arntzen2003). The study on economic opportunities in WMAs by (Kjell *et al.* 2000), showed that devolving the management of wildlife to the local communities under WMA designation will increase the economic well-being of all stakeholders: The Government of Tanzania (GoT), the Districts and the local communities. Among the economic opportunities identified, four of them were analyzed. These are:

- Hunting (tourism/trophy and resident hunting)
- Photographic,non-consumptive tourism
- Improved bee-keeping and collection centers for honey, bees, wax and other bee-keeping by-products established as whole sale markets for the producers and quality control purposes, and
- Natural forest management

The results were based on a hypothetical area of 1100km² and clearly showed that all the criteria for feasibility were met by the opportunities analyzed. The graphs below illustrate revenue that will accrue to stakeholders out of the economic opportunities analyzed (Figures 2, 3 and 4):

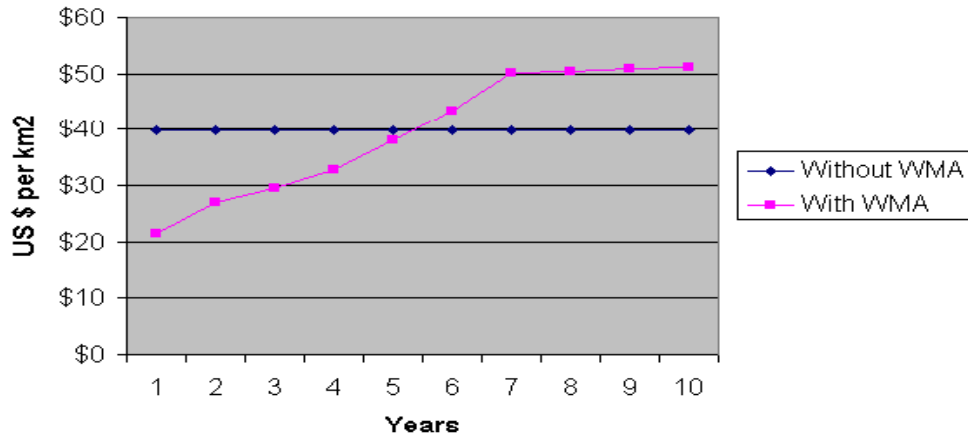


Figure 2: Government of Tanzania revenues generated per km² of Wildlife Management Area (Source: Zacharia and Kaihula, Year unknown)

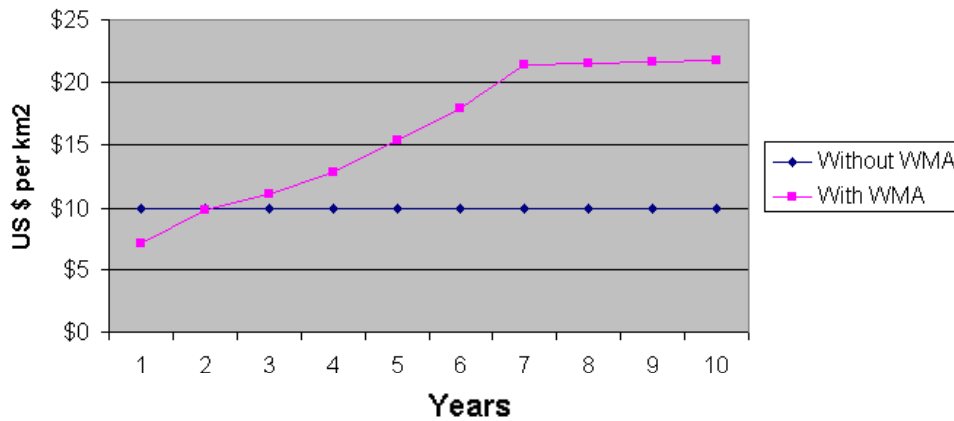


Figure 3: District level revenues per km² of Wildlife Management Area (Source: Zacharia and Kaihula, Year unknown)

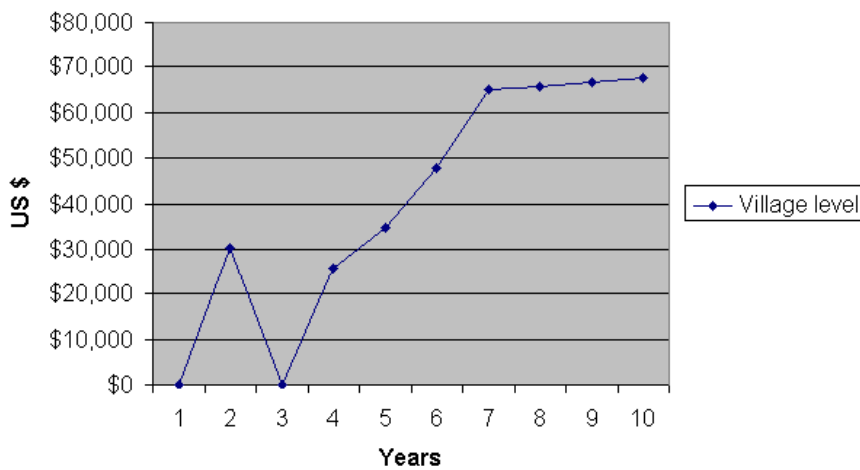


Figure 4: Funding available for village WMA based projects (Source: Zacharia and Kaihula Year unknown)



The revenue will be realized by all stakeholders as more economic opportunities are taken up i.e. wildlife resources, natural forests management, beekeeping etc. However, in most rural communities the capacity for planning and managing business enterprises is very low. Moreover, there is a legacy of failed communal enterprise initiatives in Tanzania. To solve this, the focus should be directed on the structure of the institution that will be mandated to manage wildlife in WMAs. Also, the relevant expertise is crucial and capacity building of local communities is a must. In order to achieve this, AAs should be allowed to hire competent management staff/experts. The initial four to five years will be difficult for the AAs/WMAs, as they will be generating less revenue than is their requirement. At the same time central government will lose revenues in the form of taxes, levies, etc. from the WMAs. Therefore, the Government should seek support to bridge the gap. In order to operationalize a WMA, ground work needs to be done including things such as resource inventories and marketing as well as how to improve the quality of products and infrastructure (Zacharia and Kaihula Year unknown).

Constraints to sustainable use of WMAs

Among the best ways to ensure sustainable use of natural resources is to focus on factors constraining it (Kigenyi *et al.* 2002). WMAs and the natural resources therein are confronted with some challenges as described hereunder.

Land Related Constraints: Customary land rights, known in Tanzania land law as “deemed rights of occupancy” were first recognized in 1928 when the Land Ordinance Cap. 113 (Tanzanian’s basic land law) was amended to include these rights. Since then, and especially from the 1980s on, the position of deemed rights of occupancy has been “clarified” by a series

of decisions by Tanzanian’s superior courts which found them on equal footing in law with the state’s granted rights of occupancy (CAT 1994). Despite the legal status of customary land rights, however, rural lands and particularly pastoral lands, primarily held through deemed rights of occupancy, have been highly susceptible to allocation by the state in favor of outside interests. A prominent threat to customary rights is from wildlife conservation interests; today about 25 percent of Tanzanian’s landmass is in the protected estate. Before being gazetted protected areas, these lands and resources were customarily held and utilized by rural people. Because of active state intervention, many citizens have been dispossessed, and this has resulted in “landscapes of consumption” and not “landscapes of production” (Neumann 1992). This kind of land tenure uncertainty is one of the factors that has been and is believed to be a root cause of accelerated natural resources degradation (Bugwood 2002). It has also acted as a disincentive in having local communities fully involved in any initiative (such as WMAs) aimed at conserving and ensuring sustainable utilization of wildlife resources.

Failure to Devolve Management Authority:

The wildlife is still owned by the Government and no decentralization has ever taken place. Only sometimes the Government is partially has its hands off but eyes on, to ensure that sustainable conservation is attained (Severe, 2000). This situation has limited the chances of local communities to benefit from the wildlife resources. Elsewhere in Africa, projects such as “Communal Areas Management Programme for Indigenous Resources (CAMPFIRE)” and “Administration Management Design Programme for Game Management Areas (ADMADe)” in Zimbabwe and Zambia respectively, the responsibility for sustainable use of wildlife is transferred to the local communities, often causing the



value to be attributed or reattributed to wild animals, which previously were only regarded as competitors for food or even as direct threat to human lives (Kigenyi *et al.* 2002; Baldus and Cauldwell 2004). Without such kind of stronger commitment for conservation from local communities, it is unlikely that the WMAs will realize their potential for conservation.

On Hunting Industry: The WMA Regulations' weakest provisions are those that pertain to tourist hunting. The Regulations maintain authority for block allocation, quota setting and price structures in the WMAs. Nevertheless, the Regulations also state that any hunting carried out in a WMA must be in accordance with an investment agreement with the CBO. There are several key implications for tourist hunting management from this situation. First, there is confusion at present as communities which have been granted WMAs, such as Ipole, are not yet benefiting from hunting carried out in their areas. Second, the regulations grant communities a greater degree of control over photographic tourism than tourist hunting management in the WMAs. This may encourage communities to opt for photographic tourism due to this higher degree of control, and may prevent the emergence of robust private-community partnerships in the hunting sector (Nelson *et al.* 2006).

Elsewhere in Africa, for example in Botswana, villagers in WMAs are benefiting from wildlife resources. Botswana's Wildlife Management Areas (WMAs) date back to 1986 and now cover around 22% of the country. Wildlife utilisation is assumed to be the main local source of livelihood for local people. In most WMAs, government has granted local communities the right to use the wildlife resources subject to government regulations such as the requirement to form a trust, to prepare and adhere to a

management plan for the area and the need to apply for a hunting quota (Arntzen 2003).

Unequal Benefit Sharing: The Government dictates the use of revenue accrued from the conservation activities. The cost, risks and benefit of wildlife conservation are not equally shared as the Government remained to be proprietor of the wildlife (Felix 2004). Much of confusion among local people appear to stem from the reality of having a gazetted WMA, but continuing utilization of the wildlife by hunting operators based on pre-existing lease with the WD (Nelson 2007). So far there is little benefit accruing to the villages from safari hunting. According to the WPT, the villages must benefit directly from the hunting fees if hunting takes place in registered WMAs on the village land. But so far this system has not yet been introduced. The contracts with the hunting safari operators are concluded by the Central Government and the fees are paid there (Baldus and Cauldwell 2004).

There has also been unequal gender participation in wildlife management by the communities in areas where WMAs have been established. In the already gazetted pilot WMAs (Burunge, Ngarambe-Tapika, Uyumbu and Ipole) men have been actively participating in development projects and only few women in rural communities (Felix 2004). Therefore, in for example dealing with utilization and poverty reduction from the perspective of wildlife resources outside core protected areas in the context of gender, the emphasis should also be put on addressing women's participation in wildlife-based development projects.

Institutional Constraints and Conflict of Interests: Creating new institutions is inevitable difficulty, time-consuming, and laden with risks. Relationships governed by accountability take time to evolve-such as village councils and village assemblies,



which have been evolving in Tanzania for over thirty years, now, but which remain weak in many cases. Thus creating the CBO and entrusting it with management for important and valuable resources at the village level is inherently one of the most challenging elements of the WMA process, and one of the most likely areas where the process fail (Hjert 2006).

Conflict of interests has contributed to the negative attitudes towards the realization of wildlife as profitable and viable economic options for human communities. For example, there have been and still there are tensions between wildlife authorities and protected area managers and adjacent local communities. These tensions need not to be dismissed, For example, in Burunge WMA the attitude towards the concerns of Minjingu and Vilima Vitatu villages by district level facilitators is a dismissive one, arguing that the community concerns are not legitimate or reasonable; this is not likely to resolve conflicts in that WMA and is more likely to contribute to the WMA's failure to meet both conservation and rural economic objectives (Nelson *et al.* 2006).

CONCLUSION

The idea of WMAs is new in Tanzania and so far only about sixteen pilot areas are provided for in the WMA Regulations of 2002 and four WMAs namely: Ipole, Uyumbu, Burunge and Ngarambe are legally created as of August, 2006. The reason behind WMA is to give local communities some control over wildlife resources on their lands and enable them to benefit directly from these resources. However, people living in WMAs are still poor, they derive their livelihood from a mixture of activities including gathering, wildlife, agriculture and employment. In addition, they depend on government and donor assistance. The economic opportunities are also very limited. While devolving the management of WMAs to

the local communities is emphasized in order to increase their economic well-being and ensure sustainable management and use of wildlife resources, the Government has been reluctant in empowering local communities and promoting their participation on wildlife conservation in their areas. This is reflected in active Government intervention on land issues, the use of revenue accrued from conservation activities, tensions between wildlife authorities and local communities, complicated procedures involved in the formation of Community Based Organizations (CBOs) and promoting tourist hunting while undermining subsistence hunting.

RECOMMENDATIONS

Basing on this review, the following recommendations are pertinent in ensuring sustainability of Wildlife Management Areas.

- There should be fully decentralization of wildlife ownership and use rights because this has proven to be a direct and efficient way to improve people's livelihoods and ensure sustainable use of natural resources.
- Intangible benefits of wildlife should as well be incorporated in WMAs' project appraisals and evaluations.
- There is a need to ensure that communities know the value of wildlife by species, this allows for capturing more income from the preservation value.
- Livelihood improvement needs to be the overall long-term objective of WMAs' plan. Communities need to articulate a clear development vision and strategy that is not restricted to wildlife utilisation.



- WMA regulations should be integrated with other natural resource sectors, particularly forestry so that communities can take advantage of an integrated set of resources within their land areas.
- The issue of benefit sharing needs to be made clear. There should be a clear explanation of how benefits in WMAs will be divided and what proportion the Community Based Organizations will capture.
- Community Based Organization (CBO) as an institution in the WMA must have the capacity to implement WMAs' regulations guiding sustainable utilization. This capacity refers the requisite financial and human resources including technical, management and administrative.

REFERENCES

- Arnold C., 2001, 'MBOMIPA/Tanzania case study: Wildlife, poverty and livelihood
- Arntzen J.W., 2003. An Economic View on Wildlife Management Areas in Botswana. Occasional Paper No. 10. IUCN/SNV CBNRM Support Programme. Gaborone, Botswana. Pp. 31.
- Baldus, R., 2001. Community Based Wildlife Conservation: principles and experiences from Tanzania. Presented in the 5th International wildlife Ranching Symposium, Pretoria, March 23rd 2001.
- Baldus, R.D. and Cauldwell, A.E., 2004. *Tourist Hunting and Its Role in Development of Wildlife Management Areas in Tanzania*, Community Wildlife Management Program, Dar es Salaam, Tanzania. Pp. 147.
- Bugwood. 2002. Eastern Arc Mountains. [<http://www.easternarc.org>] site visited on 20/9/2007.
- Callicott, J.B. and Munford, K., 1997. Ecological sustainability as a conservation concept. *Conservation Biology* **11**: 32-40.
- Carpaneto, G.M. and Fusari, A., 2000. Subsistence hunting and bushmeat exploitation in Central-Western Tanzania. *Biodiversity and Conservation* **9**:1571-1585.
- Court of Appeal of Tanzania (CAT). 1994. *Attorney General v. Lohay Akonaay*. Civil Appeal No. 31. Dar es Salaam, Tanzania.
- Environmental Defenders (ED). 1997. *Ecological Sustainability: The Purpose of the Integrated Planning Act*. Environmental Defenders Office (Qld) Inc.
- Felix, D., 2004. *What and Why Wildlife Management Areas?* Tanzania Wildlife Defenders [<http://tawide.proboards25.com>]. Pp.1-3.
- Hjert, C.J., 2006. *People vs. Wildlife: Buffer zones to integrate wildlife conservation and development?* Södertörns Högskola, Miljö- och Utvecklingsprogrammet, C-uppsats 10 poäng. Pp. 1-40.
- James, R., Mdoe, N. and Mishili, F., 2002. 'Tanzanian Rural Livelihoods: Towards a More Enabling Environment', *LADDER Working Paper No. 13*, Overseas Development Group, University of East Anglia, Norwich, U.K.
- Jones, A., 2003. *Ecological Sustainability*. Australian Museum, Australia.



- Kigenyi, F., Gondo, P. and Mugabe, J., 2002. *Practice Before Policy: An analysis of Policy and Institutional Changes Enabling Community Involvement in Forest Management in Eastern and Southern Africa*. International Union for Conservation of Nature and Natural Resources. Pp. 54.
- Kjell, C., Hagen, R. and Jambyia, G., 2000. *Economic Opportunities in WMAs*. International Resources Group, Winrock International and Harvard Institute for International Development. pp. 1-78.
- Leader, W., Kayera, J.A. and Overton, G.L., 1996. *Community Based Conservation in Tanzania*. IUCN, Gland, Switzerland and Cambridge, UK.
- Linkages', in Elliott, J., *Wildlife and poverty study*, Report to DFID.
- Luoga, E.J., Balkwill, K. Witkowski, E.T.F., 2004. *Land use cover changes in relation to institutional framework and tenure of land and resources in Eastern Tanzania Miombo woodlands*. Morogoro, Tanzania.
- Mbwambo, L., 2004. *Off-Forest Tree Resources Conservation and Tree Planting in Selected Villages in Tabora Region, Tanzania*. Tanzania Forestry Research Institute (TAFORI), Morogoro, Tanzania.
- Ministry of Natural Resources and Tourism (MNRT). 1998. *Wildlife Policy of Tanzania*. The United Republic of Tanzania. Government Printers, Dar es Salaam Pp.59.
- Nelson, F., 2007. *Emergent or Illusory? Community Wildlife Management in Tanzania*. International Institute for Environment and Development (iied), 3 Endsleigh Street, London WC1H 0DD, UK. Issue paper no. 146. Pp. 1-32.
- Nelson, F., Sulle, E., and Ndoipo, P., 2006. *Wildlife Management Areas in Tanzania: A Status Report and Interim Evaluation*. Final Draft. Tanzania Natural Resource Forum. Pp.1-43.
- Neumann, R.P., 1992. *The Social Origins of Natural Resource Conflict in Arusha National Park, Tanzania*. Ph.D. Thesis, University of California at Berkeley (mimeograph).
- Severre, E.L.M., 2000. *Conservation of Wildlife Outside Core Wildlife Protected Areas in the New Millennium*. Wildlife Division of Tanzania, Dar es Salaam, Tanzania.
- United Republic of Tanzania (URT). 2005. *National Strategy for Growth and Reduction of Poverty*. Dar es Salaam: Vice President's Office.
- URT 1999. *The Land Act No.4*. United Republic of Tanzania. Dar es Salaam, Tanzania.
- URT 2002. *The Wildlife Conservation (Wildlife Management Areas) Regulations, 2002*. Government Printer, Dar es Salaam, Tanzania.
- Vries, D.D., 2005. Choosing your baseline carefully: integrating historical and political ecology in the evaluation of environmental intervention projects. *Journal of Ecological Anthropology* 9: 35-50.
- Wildlife Sector Review Task Force (WSRTF). 1995. *A Review of the Wildlife Sector in Tanzania*,



Volume 1: Assessment of the Current Situation. Dar es Salaam: Ministry of Tourism, Natural Resources and Environment.

Guidelines for Action to Save, Study and Use Earth's Biotic Wealth Sustainably and Equitably. WRI, IUCN, NEP, Washington DC. 244pp.

World Resource Institute (WRI), 1992. The World Conservation Union and United Nations Environmental Program (1992). *Global Biodiversity Strategy.*

Zacharia, M., and Kaihula, (Year unknown). Community Participation in the Conservation and Management of Wildlife in Tanzania. Pp 1-18.