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# **Promoting Effective Community Participation in Land Use Planning and Management of Wildlife Conservation Areas**

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#### **Abstract**

The major threat facing conservation of wildlife within and outside protected areas presently is the continuous loss of wildlife corridors and dispersal areas. This is as a result of increase in human settlements and the introduction of land uses which conflict with conservation activities in areas that were once not settled or had minimal human population. This study sought to unveil how sound wildlife conservation and co-existence between humans and wildlife can be promoted with a view of making local communities conserve and benefit from wildlife resources in and out of protected areas. Key issues addressed in the study included resource use conflicts as well as problems that constrain effective community participation. Study findings indicated that wildlife corridors have been invaded by the local community due to population pressure and the search for alternative livelihoods thereby promoting conflicts. There is also minimal involvement of communities in the planning and management of Meru National park, dispersal areas and wildlife corridors. It was further established that lack of direct benefits from conservation hindered active community participation. The study has provided an integrated conservation model and use of zoning as a land use planning approaches to spatial conflict resolution. Intensifying environmental education and multiple resource use approaches such as ecotourism where communities can access the benefits for protecting wildlife and their habitats to meet their needs should also be enhanced.

Keywords: Community; Participation; Dispersal Areas; Land Use; Planning

#### INTRODUCTION

Protected areas worldwide are viewed as a refuge for wildlife and other forms of biodiversity, most of which are currently threatened due to anthropogenic activities and other factors. Consequently, it has been argued that the aim of establishing protected areas includes sustainable use of natural resources, preservation of ecosystem services and integration of broader social development processes along with the core role of biodiversity conservation (IUCN, 1994; Mbote, 2005; Alenka, 2005).

Protected areas were established in Kenya and other parts of the developing world based on the Yellowstone Park model. Such areas represent unique ecosystems that offer humanity diverse services like recreation and ecological functions (Stevens, 1997). Their establishment on the basis of this model was done without adequate consultation and approval of local communities who were traditionally associated with such areas and their resources. Consequently, this approach has over the years resulted in hostility, resentment and mistrust between the neighboring communities and protected area managers. Besides this, protected areas surroundings such as dispersal areas and migratory corridors have in recent years become target areas for settlement and agriculture (Mbote, 2005; Otuoma, 2004). The introduction of crop farming and other incompatible activities such as human settlement, grazing and mineral extractions have not only displaced wildlife and destroyed their habitats, but has also led to competition over declining resources and environmental degradation. In this regard, human-wildlife conflicts have accelerated thus pitying humans against wildlife where it must justify its survival amidst the sea of humans.

Communities living adjacent to Meru Conservation Area and whose socio-economic and political lifelines depend on its resources and biodiversity in general include the Borana to the north and North–East of Meru national park (MNP) and Bisanandi National Reserve (BNR), Tharaka and Kamba to the south and south west borders of MNP and Mwingi National Reserve (MNR) respectively, Tigania and Igembe to the west, and the Oromas to the southern and eastern areas adjacent to Meru national park and Tana river. Each of these communities has unique land use practices, interventions, conservation programmes and activities.

Local communities living around most protected areas in Kenya, consider the government to have grabbed their traditional land which they depended upon for economic and cultural purposes. This is because there was no consultations and involvement of these communities in planning. Instead, they were forcefully evicted without any compensation. In regard to this, protected area surroundings have continuously faced challenges of degradation from these communities who seek for alternative forms of livelihoods. The movement



pattern of wildlife has been affected by reduction in home ranges due to human encroachment and environmental degradation due to unsustainable land use practices within and around the corridors. A past study by Kenya Wildlife Service (KWS, 2007) reveals that as a result of this, numerous cases of human-wildlife conflicts are reported with many wildlife deaths caused by local communities in revenge for damages done to their property.

#### CONCEPTUALIZATION AND PROBLEM STATEMENT

As earlier on reported, establishment of protected areas was done without community consultation. Various decisions concerning wildlife management within and outside protected areas are still done without their involvement. Over the years this has resulted to resistant by the community in supporting conservation initiatives within and around these areas. Continuous loss of forage, breeding areas, scarcity of water due to reduced river water flow and conflicts have been fueled by resource competition between humans and wildlife. Land use practices that are not compatible with conservation such as farming and settlement have replaced the wildlife corridors and dispersal areas.

In view of establishing the extent to which the local communities can be involved in the management of the Meru-Ngaya wildlife corridor and the dispersal areas, the study reviewed various past models that aimed at improving the management of wildlife.

#### a) The Yellowstone Model

The Yellowstone national park was the first protected area that was established in 1872 to preserve spectacular scenery and natural wonders from misappropriation by private interests. This establishment which followed what is today known as the Yellowstone model laid more emphasis on preservation than conservation (Machlis and Tichnell, 1985). It became a template for the subsequent creation of protected areas around the world where conservationist ignored indigenous peoples' territorial claims, contributions to nature preservation, traditional land use, and resource-management systems. In his article Cochran (1998), stated that proponents of the Yellowstone model threatened indigenous identity by advocating resettlement and prohibiting traditional resource use in protected areas. No activities were permitted in the park except tourism and recreation. The model advocated a wilderness ideal that separated humans from nature and viewed settlement in protected areas as incompatible with strict nature-preservation goals.

Despite its registered success in protecting wildlife and other biodiversity from exploitation, the Yellowstone model has over the years faced some setbacks among them challenges resulting from accelerated conflicts due to human encroachment and the introduction of activities incompatible with conservation close to or within protected areas; inadequate funding for conservation activities; and shortage of skilled manpower to manage these areas among other factors (Runte, 1997).

#### b) The People - Park model

Following numerous conflicts and lack of compatibility between conservation goals and human needs, people and parks model was developed (Oates, 1999; Stevens, 1997; Schwartzman et al, 2000). This model sought to reconcile and harmonize conservation in parks and local community development and livelihood needs. The model not only focused on protecting wildlife resources, but also ensured that benefits of conservation were attained through resource utilization. This model encompasses a community-based conservation approach which promotes local involvement in decision-making, conservation and development projects.

In Kenya, the Community Wildlife Service (CWS) was established against the backdrop of human-wildlife conflicts as a mode of implementation of this model. The department established modalities for community partnership in the management through training, establishment of communal projects such as schools, health facilities and water projects in areas inhabited by communities affected by wildlife.

# c) Protected Areas Planning Framework (PAPF) model

The protected areas planning framework (PAPF) model in a new concept developed by KWS after realizing the need to ensure that protected area management plans provide effective and practical guidance and support for wildlife management (KWS, 2007). The development of this model was important in including active planning of wildlife areas and breaking the missing link between the needs of PAs and those of communities living around them as a way of promoting conservation. However, PAPF model which is currently being implemented by KWS continues to face a challenge due to lack of defined community benefits and involvement structures such as direct gains from wildlife on their lands and how they can be partners in management with the conservation agent.

## EFFECTIVE COMMUNITY PARTICIPATION-THE MISSING LINK IN ALL THE MODELS

Effective community participation is hereby defined as the ability to act in the best way possible to provide the intended results in the conservation and management of protected areas, wildlife corridors and dispersal areas. In seeking for more effective strategies that are more innovative and efficient, the role of local communities living in and around protected areas and other biodiversity hotspots should be recognized (Nandita, 2004) since natural resources, people and cultures are fundamentally interlinked (Borrini et al, 2004).



Following the 1992 Rio Conference on Environment and Development, the aims of protected areas now focus on enhancing sustainable use of natural resources, the preservation of ecosystem services and integration with broader social development processes, along with the core role of biodiversity conservation. More attention should be given to respecting cultural values as essential associates of biodiversity conservation and the need to involve indigenous and local communities in making management decisions affecting them.

#### LAND USE CHANGE AND HUMAN-WILDLIFE CONFLICTS

Changing land tenure and land use patterns and activities have persisted in the environs of around the park and the corridor that once connected Meru national park and Ngaya forest. As a result, these changes have led to conflicts which in turn have had a profound impact on wildlife populations and wildlife habitats. To counter this, Kenya Wildlife Service has in recent years adopted various measures to reduce cases of human-wildlife conflicts not only in this specific area but also in all other protected areas by fencing, increasing security surveillance and translocation of problem animals (KWS, 2007).

Considering that up to 70 per cent of wildlife in Kenya is found outside protected areas (Matiko, 2000; Mbote, 2005), it is imperative that this land be considered in wildlife conservation and management plans. The foregoing efforts by KWS to fence the parks, has not yielded the envisaged results in winning humans to conserve wildlife although it is a costly approach. This is because wildlife management in protected areas influences and is influenced by adjacent land tenure systems and land use activities as well as the social-economic values of communities living close to these areas.

#### POTENTIAL FOR ECOTOURISM AS AN ALTERNATIVE LAND USE ACTIVITY

Ecotourism has been described as an alternative, responsible and sustainable tourism activity which has the potential to promote the involvement of local communities in wildlife conservation, tourism and development (Gul and Camal, 2003; Warinda, 1996). It is considered as an alternative tourism since it contains the attributes of ecological and socio-cultural integrity, responsibility, sustainability and participation. Ngaya forest is rich with variety resources that can be promoted for ecotourism activities. If well implemented, it replaces the traditional means of economic livelihood which was removed from local communities through establishment and fencing of protected areas. Conservation cannot be divorced from development issues (Erlet and Gwen 1994). The long-term coexistence of land use activities in Meru national park and that of ecological functioning of the corridor is highly dependent on management practices which address human needs in utilizing unprotected lands which is the community land and conservation needs to maintain their ecological functioning. (Hansen and Defries, 2007). The Protected area will provide a refuge for biological diversity, and also play an equal significant role in changing economic and social basis of local community through their engagement in ecotourism projects (Kreg et al, 1998).

Through engagement in ecotourism as an environmentally sensitive form of tourism, community will become increasingly aware of the adverse socio-cultural and environmental impacts of uncontrolled land use. The income derived from protected areas, and the attachments people form with them often become an important component of their engagement and participation in the conservation of wildlife in their land and their habitats. Hence improving their livelihoods and alleviating resource-use conflicts. (IFAW and KWS, 2002).

#### THE INTEGRATED CONSERVATION FRAMEWORK (ICF) MODEL

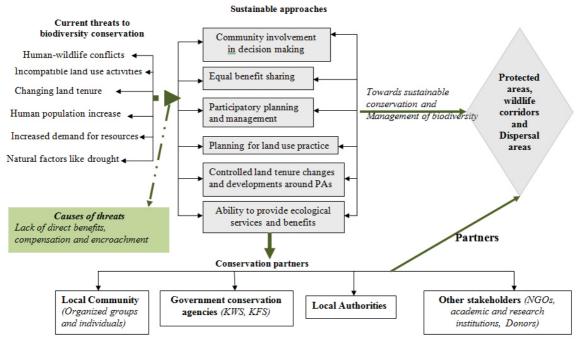
To garner support for conservation of wildlife within and outside protected areas, community-based resource management systems need to be strengthened through land use and land tenure arrangements which accommodate the interests of people living within and around protected areas (Berkes, 2004).

This model which has been developed based on the findings of this study recommends that appropriate steps should be followed in order to achieve a sustainable conservation approach to planning and management of protected areas. It enlightens the protected area managers to adopt modern approaches to biodiversity conservation which have been developed to promote positive interaction between local communities and natural resources to minimize incidences of conflicts.

This is where the local community will be actively involved in the management of protected areas as well as the surrounding dispersal areas and migration corridors. The new model further explores management alternatives that recognize both human needs for using unprotected land that comprises wildlife corridors, dispersal areas, and conservation needs to maintain the ecological functions in protected areas. While emphasizing on community participation and access to benefits, it incorporates the three models (Yellowstone, Park-People and PAPF) to promote conservation of resources alongside enabling local communities to improve their socio-economic welfare through use of wildlife resources they harbor on their lands. e.g ecotourism.



### The Proposed Integrated Conservation Model (ICM)



#### References

Alenka Krek, (2005). Rational Ignorance of the Citizens In Public Participatory Planning. CORP Conference, Vienna.

Berkes. F. (2004). From Community-Based Resource Management to Complex Systems: The Scale Issue and Marine Commons. Natural Resources Institute, University of Manitoba.

Borrini-Feyerabend, G.(2004). Kothari, A. and Oviedo, G. *Indigenous and Local Communities and Protected Areas: Towards Equity and Enhanced Conservation*. IUCN, Gland, Switzerland and Cambridge, UK..

Cochran David M. Jr (1998) Conservation through Cultural Survival: Indigenous Peoples and Protected Areas Journal article by. The Geographical Review, Vol. 88

Defries R. et al. (2007). Land Use Changes Around Protected Areas: Management to Balance Human Needs and Ecological Function. Ecological Society of America.

Erlet Cater and Gwen Lowman. (1994). Ecotourism. A sustainable Option? John Wiley and Sons Ltd. England. Gucu Gul and Gucu Camal Ali. (2003). Is Ecotourism An Appropriate Tool To Ensure Sustainable Mediteranean Monk Seal Conservation In The Cilician Basin, Turkey? An Evaluation Report of the Experimental Ecotourism Application in Bozyasi-Mersin. Middle East Technical University Institute of Marine Sciences.

Halladay and Gilmour D.A (eds). (1995). Conserving Biodiversity outside Protected Areas. The role of Traditional agro-ecosystems.

Hansen, A. J, and R. Defries. (2007). "Ecological Mechanisms Linking Protected Areas to Surrounding Lands". *Ecological Applications Journal*. 17:974-988

IFAW and KWS. (2002). Community Participation Development Study for MCA. Nairobi, Kenya IUCN. (1994). Guidelines for Protected Area Management Categories.

Kameri Mbote. (2005). Land Tenure, land Use and Sustainability in Kenya. Towards Innovative Use of Property Rights in Wildlife Management. IELRC Working Paper. Geneva, Switzerland.

Kiragu S. Wambui, (2002). "Community Participation in Forest Resources Management in Mt. Elgon Forest and Its Environs". M.Phil Thesis, Moi University,.

KWS and AWF. (2008). Wildlife Utilization study. Report No.5. Policy and Institutional. Nairobi, Kenya.

KWS. (2004). Wildlife Conservation and Management Policy. Nairobi, Kenya.

KWS. (2007). Protected Areas Planning Framework: The Planning Manual. 2nd Edition, Nairobi, Kenya.

KWS (2007). Meru Conservation Area Development Plan. Nairobi, Kenya.

Machlis, G.E and Tichnell, D.L. (1985). The state of the World's Parks: An international Assessment for Resource Management, Policy and Research. Boulder, CO, USA: Westveiw press.

Matiko, N. L. (2000). "Perspectives on Sustainable Utilization of Wildlife in Kenya". Msc. Thesis, Durrel Institute of Conservation and Ecology, University of Kent at Canterbury, United Kingdom.

Nandita Jain. (2004). Mobilizing Long-Term Community Support for Biodiversity Conservation. The Mountain



## Institute, USA.

Oates, J.F. (1999). Myth and Reality in the Rain Forest. How Conservation Strategies Are Failing In West Africa. Berkeley, CA, USA: university of California press.

Otuoma John. (2004). Land Use Change Impacts and Dynamics. (LUCID) Project Working Paper. Nairobi, Kenya. International Livestock Research Institute.

Runte, A. (1997). National Parks: The American Experience. 3<sup>rd</sup> Edition. Lincoln, USA: University press.

Schwartzman, S, A. Moreira, and D.S Nepstad. (2000). Rethinking Tropical Forest Conservation: Peril in Parks. *Journal of Conservation Biology*.

Stevens, S. (1997). *The Legacy of Yellowstone. Conservation through Cultural Survival: Indigenous People and Protected Areas.* Island press. Washington DC, USA.

Warinda Enock, (1996). "A Socio-Economic Assessment of The Potential Of Ecotourism In Lambwe Valley Area. Homa Bay district, Kenya". Msc. Thesis. Moi University,

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