

MAASAI AGRICULTURE AND LAND USE CHANGE

by Andrew Conroy, Ph.D. Associate Professor, University of New Hampshire, USA

The Maasai are a well-known ethnic group around the world. Photographs of the Maasai are frequently at the center of tourist guidebooks, as well as documentary films about East Africa and its wildlife. Maasai people are often viewed as a nomadic tribe who follows their herds to better grazing lands and water. This is not the case. Seasonal cattle herd migration is usually done by the *morani* (young warriors), while the rest of the family and small livestock remain at the main homestead. The movement of the livestock has always been controlled by elders. They understood the dynamics of the grasslands, as well as, the livestock and wildlife that share it. The traditional Maasai system of livestock and land management has also been admired for its tolerance of wildlife. Maasai herds and flocks are locked in the corral each night, leaving the unfenced grazing areas exclusively to the wildlife. Even during the day wildlife can be seen near the herds of cattle and flocks of sheep and goats.

Livestock have long provided economic security and a way for the Maasai to confront natural disasters, such as frequent droughts and disease, with some form of resilience and flexibility. Livestock can move to areas with rainfall, greener pastures, and away from pests, the agricultural crops do not have this flexibility.

Case Study Area

In 1998 and 1999, with the help of the Maasai people, a case study of land-use change was conducted in the major villages of the Manyara and Kisongo divisions of Monduli district. The Maasai occupy lands critical to the seasonal migrations of wildlife in and out of Tarangire National Park, Lake Manyara National Park, and Ngorongoro Conservation Area, as well as, lands within the Mto wa Mbu Game Control Area (GCA), the Lolkisale GCA, and the Simanjiro GCA.

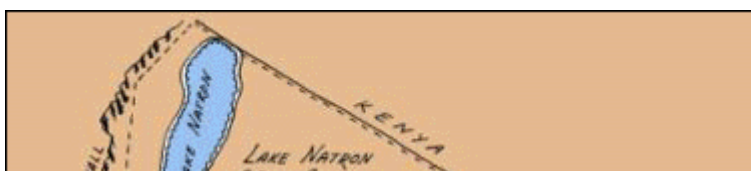


Photo: Andrew Conroy

Maasai Agropastoralism

In this region, the Maasai are changing. Historically, Maasai men avoided growing crops. However, over the last 25 years, they have rapidly converted semi-arid grazing areas to agricultural croplands. Part of their motivation has been to protect their land from encroachment by other ethnic groups, as farmers have more secure land tenure than livestock keepers. In addition, the government has wanted to settle pastoralists for generations. Finally, the adoption of crop growing has also allowed them to capitalize on the cash market for grain, diversifying their income by growing maize and beans, while at the same time expanding the livestock herds.

This case study began by exploring the adoption and use of oxen by the Maasai and its impact on land use. Draft animal power has accelerated the process of sedentarization and crop growing among the Maasai. This has resulted in the loss of grazing areas, as well as, the loss of cultural and communal grazing strategies. In the short term this agricultural development has been economically beneficial to the Maasai. However, ox plowing and cultivation have been adopted with little regard for the environment.



Agricultural and economic sustainability are pressing issues. Crop growing has become troublesome due to a lack of soil protection measures. Large crop

fields can be found with little chance of producing a harvest. Crops fail 2 out of every 5 years. The situation seems to be becoming worse, due to decreasing soil moisture levels. Natural vegetation removed by plowing, has increased soil erosion, water runoff, and greater evapotranspiration. Over the last 35 years, many of the best dry season pastures and watering areas have been converted into wildlife areas, commercial bean, barley and wheat farms (most owned and controlled by white settlers) and small plots controlled by an ever increasing native population. There has been and continues to be tremendous pressure on the land resources. Now, the Maasai men growing crops consider most wildlife species just another agricultural pest. The animals are just one more force working against the Maasai people in their struggle to adapt to a cash based open economy. For wildlife researchers and managers this represents a challenging issue.

The adoption of agriculture by a pastoral people has often been a step down a path from which it has been difficult or impossible to return. Draft animal power has allowed the Maasai to go from cultivating a few hectares to many. This cropland expansion has brought great wealth in terms of cash for crops and larger herds of livestock for some Maasai. Yet, as the herds increase and the grazing areas dwindle, the Maasai tradition of tolerance for wildlife continues to diminish. As Maasai men frequently said in this case study, *"What is more important people or wildlife?"*

In this system, the food production from cattle is less important than their value as an investment and wealth. Farmers grow crops for cash and food and later invest their profits in cattle. Thus the Maasai culture of cattle keeping does not disappear with the growing of crops. Most Maasai continue to try to keep as many cattle, as possible, a part of their cultural survival strategy in a largely uncertain environment.

Agricultural Sustainability

Agropastoralism given these cultural and physical limitations is an ecologically destructive system. It encourages an exaggerated Maasai system of cattle management whereby numbers rather than the quality of the animals is the main objective. What is happening in Northern Tanzania was predictable. The grassland resource base continues to shrink, and with it so do the options for the future with regard to wildlife and livestock. Crop production systems are being adopted, with little attention to sustainable practices, or appropriate soil conservation and water conservation measures. These environmental issues, combined with the cattle culture of the Maasai will continue to pose sustainable development challenges.

According to One Maasai Man in 1999, *"Agriculture is the best thing for us to have development. Cattle can die, but the land cannot die."*

However, the evidence in the field shows that the loss of soil and soil moisture is diminishing the possibility of sustainable harvests of crops or livestock in the future. The Maasai understand the problem, but have had little incentive or encouragement to change, as their land tenure in Tanzania is not secure. Officially grazing land has been viewed as land available for development.

For years development experts have answered the Maasai requests for aid in Kenya and Tanzania, by simply providing things like water sources, health care, and veterinary services. The result was usually quite rapid improvements in those specific areas, but few sustainable improvements in the greater landscape. Simply providing inputs or technical solutions largely ignored the many other aspects of agricultural development inherent to pastoral or agropastoral systems. The integration of information about the ecology of the region, the economic and political situation, as well as, the sociocultural and demographic factors must also be considered.

The Maasai have at their disposal some of the best undeveloped grazing lands in Northern Tanzania. They have water for much of the year, abundant wildlife with which they share their landscape, and easy access to tourist dollars, via the main roadways and national parks in the region. They also have a strong market for their crops and livestock. They have a great many resources at their disposal.

Living with and Benefiting from Wildlife

Most Maasai recognized that there was value in having the wild animals, but benefits rarely trickled down to them as individuals. In the Monduli district they did not describe wildlife as "second cattle", as discussed by Western (1997). To the Maasai the conservation of wildlife is now often viewed as an impediment to their expansion of cropping areas and increasing livestock numbers. Current trends will continue to create animosity toward wildlife.

Ndagala (1998:163) described the wildlife situation in Monduli District like this, *"Grazing livestock in the game areas is not allowed, but pastoral land is not protected from encroachment by wild animals."*

Marauding animals are a permanent threat to human life and to herds, as they compete for available grass during the dry season." Most important to the Maasai, in this case study, was the loss of crops to wildlife, in which they have invested much time and money.

There has been a great movement in East Africa to use some of the Community Conservation Techniques described by Western (1994 & 1997) to address this situation, as has been done in Amboseli National Park in Kenya. However, Western pointed out, sharing revenues and getting Maasai to commit to wildlife conservation has not been easy. Over the course of twenty years there have been many failures, both on the part of the support of Maasai development through tourist monies, and by the Maasai in retaliation to the strict rules placed on their movement of livestock. Throughout Monduli District, in Tanzania, there have been numerous Community Conservation efforts promoted by local NGO's such as Inyuat-e-Maa, with the support of the Africa Wildlife Federation in Arusha. Commercial hunting companies, in the villages of Lendikonya and Selela, use revenue sharing as a means to offer support to the villages through school construction and water development projects. There have also been direct efforts by the Tanzanian government through the Tanzania National Parks (TANAPA) to share revenues with the villages that were most severely affected by wildlife encroachment and crop damage. National policies were formalized in the - Wildlife Policy document (URT-1998) pointing out the importance of local hunting and the sale of wildlife products, as long as it was done in a controlled manner. Thus there are numerous models of improving the lives of the Maasai through local wildlife management and protection. However wildlife management is still not considered as sound an investment as is agriculture.

The concept of participatory planning is central to positive agricultural and wildlife development. To encourage improved soil and wildlife conservation, the people's needs cannot be ignored. Ignoring their wishes did little to conserve wildlife in the early years of the establishment of Amboseli, in Kenya as a protected area (Western 1994 & 1997). As described in African Wildlife News (2000), there have been many concessions made to the Maasai in and around Amboseli in the name of conserving elephant habitat outside the park.

Crop growing is now an important part of the Maasai culture in the Monduli and Manyara area. Concessions will have to be made to allow crop growing to continue (Taylor et al. 1996). More effective integration between grazing livestock, crops and wildlife management will be necessary. To make this possible, it is inevitable that there must be a greater investment in soil conservation, agricultural improvement technologies and land tenure reform. These would help protect the soil and ground cover, encouraging greater production from smaller plots of land. While farmers intensify their agricultural holdings, they could better manage their grasslands through traditional means, and benefit from the integration of wildlife management strategies.

References

- African Wildlife Foundation (AWF). 2000. "Balancing Human, Wildlife Needs in Amboseli-Longido - Striving for Peaceful Coexistence in an AWF Heartland." *African Wildlife News*, Vol. 35, No.2. Spring 2000 issue. African Wildlife Foundation, Washington, D.C. Pp. 1-5.
- Conroy, Andrew Bernard. 2001. *Maasai Oxen, Agriculture and Land Use Change in Monduli District, Tanzania*. Ph.D. Dissertation. University of New Hampshire. Available from UMI.
- Ndagala, Daniel Kyaruzi. 1996. "The Changing Landscape of Agropastoralism in Tanzania." In: *Changing Rural Structures in Tanzania*. Edited by D. Schmied. Munster/Hamburg, Germany. Pp. 129-140.
- Ndagala, Daniel Kyaruzi. 1998. "Tanzania." In: *Custodians of the Commons*. Edited by Charles Lane. Earthscan Publications Ltd. London. Pp. 150-168.
- Sinclair, A.R.E. and Peter Arcese. 1995. "Serengeti in the Context of Worldwide Conservation Efforts." In: *Serengeti II-Dynamics, Management and Conservation of an Ecosystem*. Edited by A.R.E. Sinclair, and Peter Arcese. The University of Chicago Press. Chicago. Pp. 31-46.
- Taylor, Geoff, Lars Johansson, and Anders Tivell. 1996. "Voices from Ngorongoro - The Maasai people in Tanzania are losing their land." Food, Trees and People Project (FTPP), International Rural Development Centre, Uppsala, Sweden.

United Republic of Tanzania (URT), Ministry of Natural Resources and Tourism. 1998. *The Wildlife Policy of Tanzania*. Government Printer, Dar es Salaam.

Western, David. 1994. "Ecosystem Conservaton and Rural Development: The Case of Amboseli." In: *Natural Connections-Perspectives in Community-Based Conservation*. Island Press. Washington, DC. Pp. 15-52.

Western, David. 1997. *In the Dust of Kilimanjaro*. Island Press, Washington, DC.