

AWF Working Papers



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The African Wildlife Foundation, together with the people of Africa, works to ensure the wildlife and wild lands of Africa will endure forever.



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The AWF Working Paper Series has been designed to disseminate to partners and the conservation community, aspects of AWF current work from its flagship African Heartlands Program. This series aims to share current work in order not only to share work experiences but also to provoke discussions on whats working or not and how best conservation action can be undertaken to ensure that Africas wildlife and wildlands are conserved forever.

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Summary

Can small group ranches where individuals have strong family ties be the way forward for sustainable livelihoods and conservation in the aftermath of group ranch sub-division in the Amboseli area of Kenya? Sub-division of communal group ranches and consequent conversion of land to uses incompatible with conservation is threatening both rural livelihoods and critical conservation areas in the Amboseli system. The African Wildlife Foundation has been working with a group of eight closely related landowners in an area of great strategic importance to wildlife in the shadow of Kilimanjaro, Kenya to develop and implement natural resource management plans that when implemented should result in: enhanced and diversified livelihoods that are compatible with traditional Maasai lifestyles; development and adoption of environmentally sound land management practices and; securing of critical habitat for wildlife to support continuing ecological integrity of Amboseli and Kilimanjaro National Parks.

1. Introduction

As the northeast slopes of Mount Kilimanjaro drop down across the Kenya border the landscape gets progressively drier. Fifty kilometres to the east is the boundary of the Tsavo National Park, Kenya's largest protected area. The same distance northeast, the rolling, wooded, Chyulu Hills rise above the plains, and about twenty kilometres north is Amboseli National Park, a favourite on the Kenvan safari circuit, famous for its elephants and views of the mountain. The land between these features is critical wildlife habitat, serving as a seasonally important dispersal area and forming a corridor that links the two world famous parks. Although Tsavo National Park is very large, Amboseli is tiny by African standards, less than 400 kilometres square. Too small to be a viable ecological entity on its own, it is dependent on land beyond the park's boundary. Without this land it cannot support its characteristically high seasonal density and diversity of wildlife.

That land beyond the park's boundary (and formerly the land within the boundary) has for centuries also been home to Maasai pastoralists. The arid and semiarid rangeland is well suited to traditional pastoralism the system of extensive livestock management that depends on the ability to move herds of cattle and flocks of sheep and goats in response to patchy local rainfall, to take advantage of the resultant surface water and pasture. As the human population has steadily increased in the area, and land formerly used by the Maasai for livestock has been allocated to other land uses, conflict between people and wildlife – and sometimes pastoralists and non-pastoralists - has inevitably increased too.

2. Land Tenure Systems

The land tenure system operating in the area has changed several times since independence. First, in the late 1960s, Kenyan Government's policy was to promote the formation of group ranches. For the first time this gave groups of pastoralist people joint freehold title to large parcels of land. The intention was that it would be collectively managed for the benefit of all the group ranch members, although livestock holdings remained private. The local Maasai communities eagerly embraced the group ranch approach, seeing it as a means of preventing further encroachment on their traditional land. Acquiring legal title also meant they had a tangible asset against which they could borrow to raise funds to improve the ranch infrastructure, such as drilling bore holes or building cattle dips. However, the group ranch system also brought with it real problems as the members struggled to address the thorny, apparently intractable, issue of equitable benefit sharing. All too often powerful elites emerged within the group ranches who came to dominate decision making and grabbed the benefits for themselves. There followed an increasing demand to subdivide the group ranches and allocate individuals with title to the resulting relatively small parcels of land. Initially the intention in the Amboseli/ Tsavo area was to confine sub-division to the wetter parts, such as those higher up the slope, that were best suited to settled farming, but eventually sub-division was extended to include the entire group ranch, including the dry rangeland.

Subdivision of group ranches has major consequences for natural resource management and indeed the viability of the pastoralist lifestyle. On the one hand, enlightened individuals could choose to exercise strict control over their own land to ensure only sustainable, environmentally sound land-use practices were employed. Alternatively they may practice, or at least not prevent, detrimental activities delivering short-term gains, such as uncontrolled charcoal burning, clearing of marginal land for cultivation or poaching of wildlife for the bush meat trade. They may even sell land to outsiders whose land-uses may be environmentally damaging and/or wholly incompatible with wildlife conservation.

Meanwhile, an intriguing alternative emerged. Perhaps landowners could adopt new, pro-wildlife land-use practices, which would be compatible with extensive livestock rearing. This would allow Maasai landowners



to continue to practice their traditional pastoralist lifestyles whilst at the same time deriving tangible benefits from wildlife. Previously the impacts of wildlife had been entirely negative, with the Maasai incurring losses from crop raiding, competition for water and grazing, risk of diseases spreading from wildlife to livestock, predation of livestock and even occasional loss of human life, all with little or no compensation. But to be viable, both extensive livestock rearing and wildlife management require large parcels of land; larger than the individual plots that had resulted from the subdivision of the group ranches.

Fortunately, in 1992, another significant change in the systems of land tenure and use in the area took place, paving the way for wildlife to become an alternative land use. A group of eight brothers and their families, with adjoining landholdings totalling a little over 4,200 hectares, came together with a view to managing most of their land communally. The land comprised an area of relatively well watered foothills, suitable for cultivation, as well as more extensive, lower lying arid and semi-arid rangelands suited to livestock. The eight families formed the Entonet-Elerai Individual Ranches Association, known as Elerai Ranch for short, and registered with the Department of Social Services as a community based organisation. This offered the opportunity to develop and test a new model, one that just might represent an elusive win-win-win solution: enhanced and diversified livelihoods that are compatible with traditional Maasai lifestyles; development and adoption of environmentally sound land management practices; and securing critical habitat for wildlife to

with a private sector company to build and manage the lodge. However the private sector partner pulled out and AWF is currently seeking another private sector partner to manage the lodge. The introduction of the lodge meant that it was necessary to plan carefully how the ranch should be managed so as to avoid potential conflicts between competing land uses and ensure approaches adopted were both sustainable and economically viable. AWF therefore worked with the ranch members on a participatory natural resource management and planning process. The report describes the planning process and its outputs before going on to consider the broader lessons learned from the process and how the Elerai model might be scaled-up.

3. Elerai Ranch

Elerai Ranch is situated close to the Tanzanian border, in Loitokitok division of Kajiado district, Kenya. At the start of the collaboration with AWF, the families' livelihoods were derived from three main sources: livestock rearing and trading, production of crops and leasing of arable land. Over the past decade or so there has been a steady decline in the livestock population on the ranch. Six of the eight families have seen their livestock holdings decrease, in some cases by as much as 70%, and overall the livestock population has fallen by over 30% during this period. This is probably associated with an apparent long-term trend of decreasing rainfall in the area, although it might simply be a downturn in an on-going natural cyclical process. Currently there are about one thousand cattle and 2,500 sheep and goat on Elerai.

support the continuing ecological integrity of Amboseli National Park.

This report describes the process which started in1998 when the landowners who jointly own Elerai Ranch invited a conservation NGO, the African Wildlife Foundation (AWF), to help them develop a programme of interventions to enhance their livelihoods. This resulted in AWF securing grants totalling \$332,000 to enable the ranch to establish the Elerai Conservation Area and diversify its economic activity by creating an ecotourism lodge. Initially, AWF also brokered an agreement





AWF Working Papers July 2005 The land used for crop production is in two parts. All eight families have an allocation of land on the foothills, which has been cultivated for the past twenty years. Two families also cultivate a lower lying area on the edge of the rangeland. Whether the lower portion should remain in cultivation is an issue currently being carefully considered.

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About three-quarters of the land suitable for cropping is leased to tenants from either Tanzania or Kenya, former share-croppers who now pay for the land they lease in cash. The remainder is cultivated by the families themselves. The main crops are rain-fed maize and beans, with smaller amounts of potatoes, peas, wheat and tomatoes. Potential returns from cultivation are much higher than leasing, but the former involves more risk, higher investment and requires more labour. Whilst a minority of the families have increased the area of land they cultivate themselves, overall the proportion of land leased has been more or less constant over recent years.

The majority of the ranch is a mosaic of mixed open shrub land, interspersed with areas of wooded grassland and flood plains. The main shrub and tree species are acacias, with one species of tree, *Acacia seyal*, being especially common. As a result the area takes the local Maasai name for this species, *elerai*. The ranch carries both resident and seasonally migrant animals. Resident species include lion, leopard, gazelle, zebra, giraffe, eland, warthogs, baboons and vervet and Sykes monkeys. During the long rains the ranch is visited by elephant, buffalo and wildebeest. The ranch is also home to a wide range of birds, reptiles and lesser animals.

3.1 The Eco-lodge

Capitalising on its close proximity to Amboseli National Park, superb views of Kilimanjaro and the Chyulu Hills, and the rich biodiversity found on the ranch, an ecolodge is being constructed in the extreme north-west corner of the ranch, the closest point to Amboseli. The facility is a 12 bed luxury lodge uniquely designed for the top end market in Kenya which has facilities such as Elsa's Kopje, Kilalinda, Desert Rose, Loisaba, Borana, Ol donyo Wuas, Kampi ya Kanzi and Rusinga. There will be 6 luxury suites for double accommodation, with explicit local lava and wood effect and these will be furnished with specially made linen, safari chairs, colonial trunks and shelves. The interiors will be marked with large bathrooms, full elegant shower, basin and flush toilet and brass plumbing fixtures.

AWF helped the ranch secure grants totalling US\$ 332,000 (US\$146,000 from USAID and US\$186,000 from the EU) to finance this development whilst the ranch members contributed US\$5,000 in cash, materials and labour. AWF is currently seeking a private

management company that can enter agreement with the ranch to lease and run the lodge for 10 years.

A projected profit and loss account has been used to gauge the short term profitability of the ecolodge. Financial targets and performance indicators show that the venture is viable. It is projected that in year one, 2006, the lodge will not return any profits but that profits totalling US\$26,972 could be realized in year 2, rising to about US\$55,700 by year three. With a projected occupancy of 25% and growing by 10% in the second and third years and a three-year average all inclusive rate of US\$262, it is also projected that direct community benefits¹ from bed night fees will rise to about US\$ 75,600 in year 3. The lodge operations will pay the land owners an annual rent of US\$ 5000 every year as direct compensation for foregoing the use of the conservancy for other uses. Every bed night will generate 25 US dollars to be applied to direct conservation initiatives like game patrols and improving physical infrastructure such as access and game drive circuits and water pans in the conservancy. This is expected to reach or exceed US\$94,500 by end of 2008. Conservation income will guarantee the integrity of the area and ensure that wildlife is protected.

During the construction period, the community are providing labor. It is projected that the community income out of negotiated local labor will be US\$57,692. In addition, once the lodge is operational, local employment opportunities will be created for more than 20 people (60 to 80% of the total workforce) who will jointly earn over US\$30,000 a year.



Completed chalet a the Elerai lodge



4. Application of a Participatory Approach to Natural Resource Management

The participatory planning process took place between April and June 2004. To facilitate the process and provide the key competencies needed, AWF put together a multidisciplinary team of experts drawn from both the public and private sectors. The experts worked closely with the ranch committee and other ranch representatives in carrying out a rapid resource assessment, mapping and participatory business option planning process. The role of team of experts was to make the options clear in terms of resource potentials and constraints but any decisions needed to be made by the ranch members themselves. Appropriate experts were teamed up with ranch members to work on a range of topics including: water; agriculture; livestock; wildlife and tourism; business enterprises; vegetation changes; soil erosion; and socio-economic factors.

The process began with a series of meetings to introduce the team members to each other, clarify the objectives and assign the roles and responsibilities of each member. Three reasons were identified for why the planning process was being carried out at Elerai at this time. Firstly, the ownership of the land by just eight closely related families presented a relatively simple land tenure situation. Secondly, since the ranch was located at the interface between national parks and agricultural land, there were many potential conflicts in relation to natural resource management which needed to be resolved. Thirdly, due to the success of AWF in attracting funding for an eco-lodge, a management plan needed to be developed to ensure the success of the enterprise and mitigate any conflicts with alternative land uses, such as livestock and crop-based agriculture. The objectives of the planning process were also identified. These were: to design a land use zoning plan for the ranch; to identify land use practices for each zone; and to build the capacity of the Elerai Ranch members in relation to natural resource management. The component parts of the planning process are shown in Annex I.

Community members were an integral role in the planning process which was also used to train them on natural resource management. They provided information on their aspirations for the management of their area. They also provided useful information for baseline surveys, resource mapping, rapid resource assessment and business options which was then complemented by information from experts to facilitate zoning using Geographic Information Systems (GIS) and later the development of a natural resource management work-plan.

Initially it proved difficult to ensure that women and young people were represented during the planning process. This was due to conflicting demands on their time, for example the need to collect water or work on the eco-lodge construction site. After an AWF team member emphasised the desirability of having all sectors of the ranch community involved in the participatory planning process, and moving the meeting venue to a more convenient location on the ranch rather than outside, participation by women improved dramatically and in some later gatherings they accounted for more than half of the participants.

4.1 Land Use Zoning

The planning process resulted in the production of a proposed land use zoning map (see figure 2) for the ranch consisting of three key parts: an agricultural zone (513 hectares, 12% of the total ranch area), a livestock/ wildlife zone (2015 hectares, 47%) and a conservation zone (1757 hectares, 41%). For each zone, land use objectives were drawn up together with guidelines for their effective management.

The objective of the agricultural zone is to promote sound agricultural practices and increase both crop yields and income. Guidelines identified for the management of this zone included:

- Reduce level of leasing to tenants and increase land owners' participation
- Promote diversification and intensification of crops to increase yield per unit area of land
- Identify interventions to mitigate human-wildlife conflicts
- Zone of settlement to be planned so as to minimize area taken up by infrastructure
- Promote mixed agro-forestry and soil and water conservation practices
- Promote low input farming techniques such as organic farming
- Explore alternative sources of energy to reduce reliance on natural vegetation.

The objectives in the livestock/wildlife zone is to provide adequate quantity and quality of grazing for livestock, primarily for the land owners benefit but also to a limited extent for use by free-ranging wildlife, and also to improve livestock quality and minimize environmental degradation. Guidelines identified for the effective management of this zone were:

- To ensure livestock numbers are kept within the carrying capacity of the land
- Control grazing by use of rotations or organized spatial movement of livestock
- Improve quality and productivity of livestock through introduction of better breeds and disease control
- Range rehabilitation through soil erosion control measures, reseeding of quality grass species and control cutting of trees/natural vegetation



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• Institute fire control measures by developing and applying a fire management/control plan

- Diversify into other income generating ventures that are compatible with livestock keeping, e.g. bee-keeping.
- Develop control measures against predation of livestock by wildlife.



The objective in the conservation zone is to promote best practices for wildlife conservation and reap benefits from eco-tourism.

Guidelines for the effective management of this zone were:

- Mitigate against negative effects of infrastructure development
- Limit, to the extent possible, use of the area for livestock grazing and other human activities
- Ensure effective system of security for tourists and protect wildlife from poachers
- Devise and implement an environmental management and monitoring system
- Develop a viable, conservation based business venture, i.e. the eco-lodge, to enhance the livelihoods of the families who own the ranch and the experience of visitors
- Provide conditions to encourage wildlife to use the area, e.g. provision of year-round water and artificial salt licks.

4.2 Income Projections

Application of a participatory business option tool, previously developed by AWF, as a component of the overall planning process enabled estimates to be made of the anticipated annual income from the different enterprises on the ranch. This shows that wildlife based

tourism, centred on the eco-lodge, is anticipated to become the largest source of income, eventually contributing 35% of total ranch income. Other sources of anticipated income were, in order of value: livestock trading, representing 31% of total income; women's' and youth enterprises (26%); and crop-based agriculture, including land leasing (8%;). The projected total income for the ranch is more than US\$ 42,000 per annum. There are 248 adult members of the eight families who own the ranch, which equates to an annual income per adult of US\$165. This figure is about half the average per capita income in Kenya.

When the total income of the ranch as projected by the community from the multi land use options using the participatory approach is compared to the projected lodge income alone, we conclude that the community expectations are lower than what has been projected by the projected profit and loss account. This may be due to the lack of expertise and skills among the

community that are required for business planning.

4.3 Outstanding Issues

At the end of the planning process a number of key issues remained that need to be urgently addressed to ensure the success of the overall plan. These were:

- The need for adoption of a zoning plan which includes setting aside sufficient land for conservation purposes
- The possible need to limit livestock numbers in view of the reduced area available for grazing
- The need to reach agreement with neighbours whose livestock currently graze on Elerai Ranch
- Reducing the proportion of agricultural land leased and increasing the proportion farmed by the families to increase returns from agriculture
- A decision on whether cultivation by two families of the additional land on the lower slopes should continue
- The establishment of a clear, equitable system for sharing the benefits accrued from the eco-lodge.



5. Lessons Learned from the Planning Process

The experience at Elerai has demonstrated that a rapid, participatory, natural resource planning process could be undertaken in a relatively short period of time. A process taking less than two months yielded a great deal of valuable information which was used to inform land use zoning and the drawing up of management guidelines. Involvement of women in the process was facilitated by holding the planning meetings at a convenient location on the ranch rather than at a more distant location.

Although the planning process resulted in the development of a proposed zoning map for the ranch and associated management guidelines, some issues proved difficult to resolve. These included an agreement on how large the conservation zone should be, whether it was appropriate to continue cultivation of land on the edge of the rangeland and whether livestock numbers should be limited. The challenge now is to resolve these thorny issues and go on to implement the recommendations made during the planning process. In this regard the fact that Elerai Ranch is owned by just eight closely related families should be a great advantage.

Income projections suggest that the eco-lodge is a viable business venture. In time, income from wildlife tourism is projected to become the largest earner for the ranch, complementing revenue from livestock trading, agriculture and other enterprises. This confirms the view held by most development practitioners that community based tourism should not be seen as a panacea for rural development problems but that it should be seen as a complementary source of income or livelihood to other existing livelihood sources.

To have real impact the model developed at Elerai will need to be replicated elsewhere. Whether this occurs will depend on the interest of landowners, availability of funding, the capacity of the environment to accommodate more eco-lodges and continuing demand from high-end tourists for such facilities. But the participatory planning process utilised at Elerai has proved to be a useful approach to guide the planning of such enterprises and there integration into other livelihood options in pastoralist areas. And working with smaller groups of neighbouring landowners, all from closely related families, appears to be a promising approach to reversing the damaging fragmentation of pastoralist land that occurred when the group ranches were sub-divided.

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Endnotes

¹ The model used is designed for improving livelihoods and advancing conservation objectives by charging direct bed night fees and conservation fees per every bed night as direct expense items in the profit and loss statement.



Activity Category	Participatory NRM Process	Resource People
Baseline Survey Resource Economist	A1. Conduct reconnaissance surveys	Community specialist,Ecologist, Natural
Community Mobilization	B1. Stakeholders analysis and involvement B2. Formulation and constitution of a community NRM core team	Community specialist, Natural Resource Economist
Resource Mapping	C1. Participatory resource mappingC2. Current resource use, potential use and management practicesC3. Participatory livelihood mapping	Community specialistEcologistNatural Resource Economist
Rapid Resource Assessment & Business options	 D1. Determine potential for sustainable resource management (economic & ecological) Agriculture Livestock Tourism Other resources(bee-keeping, gum arabic, aloe production etc) Participatory Business Option Planning 	EcologistNatural Resource Economist
Zoning Process	 E1. Natural resource management zoning process: Resource identification, management requirement objectives & Actions benefit threats, sources of threats, mitigation, cost of mitigation, funding base E2. GIS mapping 	Community specialist, Ecologist, Natural Resource Economist, GIS
Natural Resource Management Work Plan	 F1.Community based NRM plan & approval by stakeholders F2. NRM implementation plan and schedule F3. Evaluation & monitoring indicators, plan and exit strategy developed 	Community specialist, Ecologist, Natural Resource Economist, GIS



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